

EDUCATIONAL TELEVISION

HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE HOUSE OF REPRESENTATIVES

EIGHTY-SEVENTH CONGRESS

FIRST SESSION

ON

H.R. 132, H.R. 5099, H.R. 5536, H.R. 5602

BILLS TO AMEND THE COMMUNICATIONS ACT OF 1934 TO ESTABLISH A PROGRAM OF FEDERAL MATCHING GRANTS FOR THE CONSTRUCTION OF TELEVISION FACILITIES TO BE USED FOR EDUCATIONAL PURPOSES

H.R. 645

A BILL TO AMEND THE COMMUNICATIONS ACT OF 1934 TO ASSIST IN THE ESTABLISHMENT AND IMPROVEMENT OF CERTAIN TELEVISION BROADCASTING FACILITIES

H.R. 965 and H.R. 2910

BILLS TO EXPEDITE THE UTILIZATION OF TELEVISION TRANSMISSION FACILITIES IN OUR PUBLIC SCHOOLS AND COLLEGES, AND IN ADULT TRAINING PROGRAMS

S. 205

AN ACT TO EXPEDITE THE UTILIZATION OF TELEVISION TRANSMISSION FACILITIES IN OUR PUBLIC SCHOOLS AND COLLEGES, AND IN ADULT TRAINING PROGRAMS

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EDUCATIONAL TELEVISION

MONDAY, MARCH 20, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND POWER OF THE
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 1334, New House Office Building, Hon. Morgan M. Moulder (chairman of the subcommittee) presiding.

Present: Representatives Moulder, Rogers of Texas, Younger, Avery, and Sibal.

Mr. MOULDER. The committee will come to order.

Today the Subcommittee on Communications and Power is holding its first meeting during this session for the purpose of receiving testimony on educational television legislation. There have been referred to this committee seven House bills.

The first bill, H.R. 132, was introduced by our esteemed colleague on this committee, Mr. Roberts of Alabama; H.R. 645 was introduced by Mr. Boggs; H.R. 965 was introduced by the distinguished chairman of the full committee, Mr. Harris; H.R. 2910 was introduced by Mr. McIntire; H.R. 5099 by Mr. Rogers of Colorado; H.R. 5536 by Mr. McDowell; and H.R. 5602 by our colleague Mr. Moss.

At this point in the record I think it would be appropriate to insert copies of the bills and such agency reports as we have received to date. Other agency reports that we may receive subsequently before the hearings go to the printer will likewise be inserted at this place.

Educational television legislation is not a new subject for this committee. This subcommittee held hearings on ETV bills during the 85th Congress and again during the 86th Congress. Hearings have been held by this committee not only in Washington but also in the field in a number of communities throughout the United States.

During the last Congress the Committee on Interstate and Foreign Commerce reported the educational television bill introduced by our colleague from Alabama, Mr. Roberts, which differed from the bill passed by the Senate primarily in that it provided for matching grants rather than outright grants, and in that it required the preparation by participating States of State plans for the construction of educational television facilities. The bill did not reach the floor because the Committee on Rules failed to grant a rule for this legislation.

The bills pending before the subcommittee this year differ from each other along similar lines—some of them provide for outright

grants and others for matching grants and the preparation of a State plan.

I think it would be worth noting that the total number of educational television stations on the air at present is 54 stations. However, since a total of 268 channels has been reserved for educational television use, the number of activated stations is still about one-fifth of the number authorized and 9 years have gone by since the reservations of these channels were made.

There is no need for the Chair to expand on the provisions of the different bills and the need for this legislation—and may I say incidentally that the Chair firmly believes that there is a great need for this legislation. The witnesses who will appear before the subcommittee during the next 4 days are well qualified to testify on these subjects. Therefore, without anything further I shall call on the first witness this morning, our esteemed colleague, Mr. Roberts of Alabama.

(The bills and reports previously referred to follow:)

[H.R. 132, 87th Cong., 1st sess.]

A BILL To amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title III of the Communications Act of 1934 is amended by adding at the end thereof the following new part:

"PART IV—EDUCATIONAL TELEVISION FACILITIES GRANTS

"DECLARATION OF PURPOSE

"SEC. 390. The purpose of this part is—

"(1) to assist (through matching grants) the several States to survey the need and to develop programs for the construction of educational television facilities, and

"(2) to assist (through matching grants) in the construction of educational television facilities.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 391. (a) There is authorized to be appropriated such sums, not to exceed \$520,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (1) of section 390.

"(b) There is authorized to be appropriated such sums not to exceed \$52,000,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (2) of section 390.

"GRANTS FOR SURVEYS

"SEC. 392. (a) To be approved, an application for funds for carrying out the provisions of paragraph (1) of section 390—

"(1) must be made by a duly constituted State educational television agency;

"(2) must provide for the making of a survey and the development of a program by such State educational television agency in accordance with paragraph (1) of section 390; and

"(3) must provide assurances satisfactory to the Secretary that any grant made by the Federal Government under this section will be matched with an equal amount by the State.

"(b) The Secretary shall approve any application for funds which complies with subsection (a).

"(c) The total amount of the grant made to any State for the carrying out of paragraph (1) of section 390 shall not exceed \$10,000.

"STATE PLANS FOR CONSTRUCTION OF FACILITIES

"SEC. 393. Grants under this part for the construction of educational television facilities in a State shall be made only if the State educational television agency has submitted to the Secretary a State plan embodying a program for such construction. Such State plan shall be so submitted within three years of the date of enactment of this part.

"GRANTS FOR CONSTRUCTION

"SEC. 394. (a) For each proposed project for the construction of educational television facilities there shall be submitted to the State educational television agency, for transmission to the Secretary, an application for a grant, and such application shall contain such information with respect to such project as the Secretary shall by regulation require, including the total cost of such project and the amount of the Federal grant requested for such project, and providing assurance satisfactory to the Secretary—

"(1) that necessary funds to construct, operate, and maintain the educational television facilities will be available,

"(2) that the operation of such educational television facilities will be under the control of (A) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (B) a duly constituted State educational television agency, (C) a college or university deriving its support in whole or in part from public revenues, or (D) a nonprofit community educational television organization, and

"(3) that television facilities will be used only for educational purposes.

"(b) Upon receipt of such application the State educational television agency shall determine whether such project is in accordance with the State plan as originally submitted or as modified, and, if it makes such determination, shall transmit such application to the Secretary.

"(c) Whenever a State educational television agency receives applications for construction grants in an aggregate amount exceeding the amount of Federal funds available for the making of such grants in such State, the agency shall indicate the priority given by it to each of the several applications and the amount recommended by it in the case of each application.

"(d) Upon his determination that any application for a grant for a project for the construction of educational television facilities meets the requirements of subsection (a) of this section, the Secretary may make a grant to the applicant of an amount not exceeding (1) 50 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project, plus (2) 25 per centum of the reasonable and necessary cost, as determined by the Secretary, of any educational television facilities owned by the applicant on the date on which it files such application; except that the total amount of any grant made under this part with respect to any project may not exceed 75 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

"(e) The total amount of grants made to applicants from any one State for the carrying out of paragraph (2) of section 390 shall not exceed \$1,000,000.

"(f) No grant shall be made under this part for any project for the construction of educational television facilities in any State after the expiration of the three-year period beginning on the date of submission of a State plan under section 393.

"DEFINITIONS

"SEC. 395. For the purposes of this part—

"(1) The term 'State' includes the District of Columbia and the Commonwealth of Puerto Rico.

"(2) The term 'construction of educational television facilities' means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment) necessary for television broadcasting (including closed circuit television) and does not include the construction or repair of structures to house such apparatus.

"(3) The term 'Secretary' means the Secretary of Health, Education, and Welfare.

"(4) The term 'duly constituted State educational television agency' means (a) a board or commission established by State law for the purpose of promoting

educational television within a State, or (b) a board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education or higher education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television; and, in the case of the District of Columbia, the term 'Governor' means the Board of Commissioners of the District of Columbia.

"(5) The term 'nonprofit community educational television organization' means a nonprofit foundation, corporation, or association which is representative of elementary schools, colleges, universities, and educational, scientific, civic, and cultural institutions and organizations located in the area to be served by educational television facilities, and which was organized primarily to engage in or encourage educational television broadcasting.

"PROVISIONS OF ASSISTANCE BY COMMISSION

"SEC. 396. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Secretary.

"RULES AND REGULATIONS

"SEC. 397. The Secretary is authorized to make such rules and regulations as may be necessary to carry out this part.

"NO CONTROL OVER TELEVISION BROADCASTING

"SEC. 398. Nothing in this part shall be deemed to give the Secretary any control over television broadcasting."

[H.R. 645, 87th Cong., 1st sess.]

A BILL To amend the Communications Act of 1934 to assist in the establishment and improvement of certain television broadcasting facilities

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title III of the Communications Act of 1934 is amended by adding at the end thereof the following new part:

"PART III—ESTABLISHMENT AND IMPROVEMENT OF TELEVISION BROADCASTING FACILITIES

"SEC. 381. Any State agency or officer, or organization in a State, described in clause (b) (2) of this section, which is establishing or improving television broadcasting facilities, may receive a grant as authorized in this part to cover the cost of such establishment or improvement by—

"(a) making application therefor in such form as is prescribed by the Commissioner; and

"(b) providing assurance satisfactory to the Commissioner—

"(1) that the necessary funds to operate and maintain such facilities will be available;

"(2) that the operation of such facilities will be under the control of (a) the State agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a non-profit foundation, corporation, or association organized primarily to engage in or encourage educational television broadcasting, (c) a duly constituted State educational television commission, or (d) a State controlled college or university; and

"(3) that such facilities will be used only for educational purposes.

"SEC. 382. Upon determining that a State agency or officer or an organization has satisfied the requirements of section 381 of this part, the Commissioner is authorized to make a grant to such agency, officer, or organization in such amount as is determined by the Commissioner to be reasonable and necessary to cover the cost of such establishment or improvement of facilities. A State agency or officer or an organization may receive one or more grants under the provisions of this part, but the total amount of such grants for television broadcasting facilities in any State shall not exceed \$1,000,000. Such grants shall be

made out of funds appropriated for the purposes of this part, and may be made in such installments as the Commissioner deems appropriate.

"SEC. 383. As used in this part the term 'establishing or improving television broadcasting facilities' means the acquisition and installation of apparatus necessary for television (including closed circuit television) broadcasting or the improvement of television broadcasting, and does not include the construction or repair of structures to house such apparatus, the term 'Commissioner' means the Commissioner of Education of the United States, and the term 'State' means the several States, the District of Columbia, and the Territories of Alaska and Hawaii.

"SEC. 384. The Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Commissioner.

"SEC. 385. Nothing in this part shall be deemed to give the Commissioner any control over television broadcasting.

"SEC. 386. There are hereby authorized to be appropriated such amounts as may be necessary to assist the States and certain organizations therein as provided in this part."

[H.R. 965, 87th Cong., 1st sess.]

A BILL To expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated such amounts as may be necessary to assist the States and certain organizations therein to establish or improve television broadcasting for educational purposes, in accordance with the provisions of this Act, by providing for the establishment and improvement of television broadcasting facilities.

SEC. 2. Any agency or officer, or organization in a State, described in clause (b) (2) of this section, which is establishing or improving television broadcasting facilities, may receive a grant as authorized in this Act to cover the cost of such establishment or improvements by—

(a) making application therefor in such form as is prescribed by the United States Commissioner of Education; and

(b) providing assurance satisfactory to the Commissioner of Education—
(1) that the necessary funds to operate and maintain such facilities will be available;

(2) that the operation of such facilities will be under the control of
(a) the agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a nonprofit foundation, corporation, or association organized primarily to engage in or encourage educational television broadcasting, (c) a duly constituted State educational television commission, or (d) a State controlled college or university; and

(3) that such facilities will be used only for educational purposes.

SEC. 3. Upon determining that an agency or officer or an organization has satisfied the requirements of section 2 of this Act, the Commissioner of Education is authorized to make a grant to such agency, officer, or organization in such amount as is determined by the Commissioner to be reasonable and necessary to cover the cost of such establishment or improvement of facilities. An agency or officer or an organization may receive one or more grants under the provisions of this Act, but the total amount of such grants for television broadcasting facilities in any State shall not exceed \$1,000,000. Such grants shall be made out of funds appropriated for the purposes of this Act, and may be made in such installments as the Commissioner deems appropriate.

SEC. 4. As used in this Act the term "establishing or improving television broadcasting facilities" means the acquisition and installation of transmission apparatus necessary for television (including closed-circuit television) broadcasting, and does not include the construction or repair of structures to house such apparatus, and the term "State" means the several States and the District of Columbia.

SEC. 5. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this Act as may be requested by the Commissioner of Education.

SEC. 6. Nothing in this Act shall be deemed (a) to give the Commissioner of Education any control over television broadcasting, or (b) to amend any provision of, or requirement under, the Federal Communications Act.

SEC. 7. No application for any grant under this Act may be accepted by the Commissioner of Education after the day which is five years after the date of enactment of this Act.

[H.R. 2910, 87th Cong., 1st sess.]

A BILL To expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated such amounts as may be necessary to assist the States and certain organizations therein to establish or improve television broadcasting for educational purposes, in accordance with the provisions of this Act, by providing for the establishment and improvement of television broadcasting facilities.

SEC. 2. Any agency or officer, or organization in a State, described in clause (b) (2) of this section, which is establishing or improving television broadcasting facilities, may receive a grant as authorized in this Act to cover the cost of such establishment or improvement by—

(a) making application therefor in such form as is prescribed by the United States Commission of Education; and

(b) providing assurance satisfactory to the Commissioner of Education—
(1) that the necessary funds to operate and maintain such facilities will be available;

(2) that the operation of such facilities will be under the control of (a) the agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a nonprofit foundation, corporation, or association organized primarily to engage in or encourage educational television broadcasting, (c) a duly constituted State educational television commission, or (d) a State controlled college or university; and

(3) that such facilities will be used only for educational purposes.

SEC. 3. Upon determining that an agency or officer of an organization has satisfied the requirements of section 2 of this Act, the Commissioner of Education is authorized to make a grant to such agency, officer, or organization in such amounts as is determined by the Commissioner to be reasonable and necessary to cover the cost of such establishment or improvement of facilities. An agency or officer or an organization may receive one or more grants under the provisions of this Act, but the total amount of such grants for television broadcasting facilities in any State shall not exceed \$1,000,000. Such grants shall be made out of funds appropriated for the purposes of this Act, and may be made in such installments as the Commissioner deems appropriate.

SEC. 4. As used in this Act the term "establishing or improving television broadcasting facilities" means the acquisition and installation of transmission apparatus necessary for television (including closed-circuit television) broadcasting, and does not include the construction or repair of structures to house such apparatus, and the term "State" means the several States, and the District of Columbia.

SEC. 5. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this Act as may be requested by the Commissioner of Education.

SEC. 6. Nothing in this Act shall be deemed (a) to give the Commissioner of Education any control over television broadcasting, or (b) to amend any provision of, or requirement under, the Federal Communications Act.

[H.R. 5099, 87th Cong., 1st sess.]

A BILL To amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title III of the Communications Act of 1934 is amended by adding at the end thereof the following new part:

"PART IV—EDUCATIONAL TELEVISION FACILITIES GRANTS

"DECLARATION OF PURPOSE

"SEC. 390. The purpose of this part is—

"(1) to assist (through matching grants) the several States to survey the need and to develop programs for the construction of educational television facilities, and

"(2) to assist (through matching grants) in the construction of educational television facilities.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 391. (a) There is authorized to be appropriated such sums, not to exceed \$520,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (1) of section 390.

"(b) There is authorized to be appropriated such sums not to exceed \$52,000,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (2) of section 390.

"GRANTS FOR SURVEYS

"SEC. 392. (a) To be approved, an application for funds for carrying out the provisions of paragraph (1) of section 390—

"(1) must be made by a duly constituted State educational television agency;

"(2) must provide for the making of a survey and the development of a program by such State educational television agency in accordance with paragraph (1) of section 390; and

"(3) must provide assurances satisfactory to the Secretary that any grant made by the Federal Government under this section will be matched with an equal amount by the State.

"(b) The Secretary shall approve any application for funds which complies with subsection (a).

"(c) The total amount of the grant made to any State for the carrying out of paragraph (1) of section 390 shall not exceed \$10,000.

"STATE PLANS FOR CONSTRUCTION OF FACILITIES

"SEC. 393. Grants under this part for the construction of educational television facilities in a State shall be made only if the State educational television agency has submitted to the Secretary a State plan embodying a program for such construction. Such State plan shall be so submitted within three years of the date of enactment of this part.

"GRANTS FOR CONSTRUCTION

"SEC. 394. (a) For each proposed project for the construction of educational television facilities there shall be submitted to the State educational television agency, for transmission to the Secretary, an application for a grant, and such application shall contain such information with respect to such project as the Secretary shall by regulation require, including the total cost of such project and the amount of the Federal grant requested for such project, and providing assurance satisfactory to the Secretary—

"(1) that necessary funds to construct, operate, and maintain the educational television facilities will be available,

"(2) that the operation of such educational television facilities will be under the control of (A) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (B) a duly constituted State educational television agency, (C) a college or university deriving its support in whole or in part from public revenues, or (D) a nonprofit community educational television organization, and

"(3) that such television facilities will be used only for educational purposes.

"(b) Upon receipt of such application the State educational television agency shall determine whether such project is in accordance with the State plan as

originally submitted or as modified, and, if it makes such determination, shall transmit such application to the Secretary.

"(c) Whenever a State educational television agency receives applications for construction grants in an aggregate amount exceeding the amount of Federal funds available for the making of such grants in such State, the agency shall indicate the priority given by it to each of the several applications and the amount recommended by it in the case of each application.

"(d) Upon his determination that any application for a grant for a project for the construction of educational television facilities meets the requirements of subsection (a) of this section, the Secretary may make a grant to the applicant of an amount not exceeding (1) 50 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project, plus (2) 25 per centum of the reasonable and necessary cost, as determined by the Secretary, of any educational television facilities owned by the applicant on the date on which it files such application; except that the total amount of any grant made under this part with respect to any project may not exceed 75 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

"(e) The total amount of grants made to applicants from any one State for the carrying out of paragraph (2) of section 390 shall not exceed \$1,000,000.

"(f) No grant shall be made under this part for any project for the constructions of educational television facilities in any State after the expiration of the three-year period beginning on the date of submission of a State plan under section 393.

"DEFINITIONS

"Sec. 395. For the purposes of this part—

"(1) The term 'State' includes the District of Columbia and the Commonwealth of Puerto Rico.

"(2) The term 'construction of educational television facilities' means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment) necessary for television broadcasting (including closed circuit television) and does not include the construction or repair of structures to house such apparatus.

"(3) The term 'Secretary' means the Secretary of Health, Education, and Welfare.

"(4) The term 'duly constituted State educational television agency' means (a) a board or commission established by State law for the purpose of promoting educational television within a State, or (b) a board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education or higher education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television; and, in the case of the District of Columbia, the term 'Governor' means the Board of Commissioners of the District of Columbia.

"(5) The term 'nonprofit community educational television organization' means a nonprofit foundation, corporation, or association, which is representative of elementary schools, colleges, universities, and educational, scientific, civic, and cultural institutions and organizations located in the area to be served by educational television facilities, and which was organized primarily to engage in or encourage educational television broadcasting.

"PROVISIONS OF ASSISTANCE BY COMMISSION

"Sec. 396. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Secretary.

"RULES AND REGULATIONS

"Sec. 397. The Secretary is authorized to make such rules and regulations as may be necessary to carry out this part.

"NO CONTROL OVER TELEVISION BROADCASTING

"Sec. 398. Nothing in this part shall be deemed to give the Secretary any control over television broadcasting."

[H.R. 5536, 87th Cong., 1st sess.]

A BILL To amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title III of the Communications Act of 1934 is amended by adding at the end thereof the following new part:

"PART IV—EDUCATIONAL TELEVISION FACILITIES GRANTS

"DECLARATION OF PURPOSE

"SEC. 390. The purpose of this part is—

"(1) to assist (through matching grants) the several States to survey the need and to develop programs for the construction of educational television facilities, and

"(2) to assist (through matching grants) in the construction of educational television facilities.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 391. (a) There is authorized to be appropriated such sums, not to exceed \$520,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (1) of section 390.

"(b) There is authorized to be appropriated such sums not to exceed \$52,000,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (2) of section 390.

"GRANTS FOR SURVEYS

"SEC. 392. (a) To be approved, an application for funds for carrying out the provisions of paragraph (1) of section 390—

"(1) must be made by a duly constituted State educational television agency;

"(2) must provide for the making of a survey and the development of a program by such State educational television agency in accordance with paragraph (1) of section 390; and

"(3) must provide assurances satisfactory to the Secretary that any grant made by the Federal Government under this section will be matched with an equal amount by the State.

"(b) The Secretary shall approve any application for funds which complies with subsection (a).

"(c) The total amount of the grant made to any State for the carrying out of paragraph (1) of section 390 shall not exceed \$10,000.

"STATE PLANS FOR CONSTRUCTION OF FACILITIES

"SEC. 393. Grants under this part for the construction of educational television facilities in a State shall be made only if the State educational television agency has submitted to the Secretary a State plan embodying a program for such construction. Such State plan shall be so submitted within three years of the date of enactment of this part.

"GRANTS FOR CONSTRUCTION

"SEC. 394. (a) For each proposed project for the construction of educational television facilities there shall be submitted to the State educational television agency, for transmission to the Secretary, an application for a grant, and such application shall contain such information with respect to such project as the Secretary shall by regulation require, including the total cost of such project and the amount of the Federal grant requested for such project, and providing assurance satisfactory to the Secretary—

"(1) that necessary funds to construct, operate, and maintain the educational television facilities will be available,

"(2) that the operation of such educational television facilities will be under the control of (A) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (B) a duly constituted State educational television agency, (C) a college or university deriving its support in whole or in part from public

revenues, or (D) a nonprofit community educational television organization, and

"(3) that such television facilities will be used only for educational purposes.

"(b) Upon receipt of such application the State educational television agency shall determine whether such project is in accordance with the State plan as originally submitted or as modified, and, if it makes such determination, shall transmit such application to the Secretary.

"(c) Whenever a State educational television agency receives applications for construction grants in an aggregate amount exceeding the amount of Federal funds available for the making of such grants in such State, the agency shall indicate the priority given by it to each of the several applications and the amount recommended by it in the case of each application.

"(d) Upon his determination that any application for a grant for a project for the construction of educational television facilities meets the requirements of subsection (a) of this section, the Secretary may make a grant to the applicant of an amount not exceeding (1) 50 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project, plus (2) 25 per centum of the reasonable and necessary cost, as determined by the Secretary, of any educational television facilities owned by the applicant on the date on which it files such application; except that the total amount of any grant made under this part with respect to any project may not exceed 75 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

"(e) The total amount of grants made to applicants from any one State for the carrying out of paragraph (2) of section 390 shall not exceed \$1,000,000.

"(f) No grant shall be made under this part for any project for the construction of educational television facilities in any State after the expiration of the three-year period beginning on the date of submission of a State plan under section 393.

"DEFINITIONS

"Sec. 395. For the purposes of this part—

"(1) The term 'State' includes the District of Columbia and the Commonwealth of Puerto Rico.

"(2) The term 'construction of educational television facilities' means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment) necessary for television broadcasting (including closed circuit television) and does not include the construction or repair of structures to house such apparatus.

"(3) The term 'Secretary' means the Secretary of Health, Education, and Welfare.

"(4) The term 'duly constituted State educational television agency' means (a) a board or commission established by State law for the purpose of promoting educational television within a State, or (b) a board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education or higher education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television; and, in the case of the District of Columbia, the term 'Governor' means the Board of Commissioners of the District of Columbia.

"(5) The term 'nonprofit community educational television organization' means a nonprofit foundation, corporation, or association which is representative of elementary schools, colleges, universities, and educational, scientific, civic, and cultural institutions and organizations located in the area to be served by educational television facilities, and which was organized primarily to engage in or encourage educational television broadcasting.

"PROVISIONS OF ASSISTANCE BY COMMISSION

"Sec. 396. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Secretary.

"RULES AND REGULATIONS

"SEC. 397. The Secretary is authorized to make such rules and regulations as may be necessary to carry out this part.

"NO CONTROL OVER TELEVISION BROADCASTING

"SEC. 398. Nothing in this part shall be deemed to give the Secretary any control over television broadcasting."

[H.R. 5602, 87th Cong., 1st sess.]

A BILL To amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That title III of the Communications Act of 1934 is amended by adding at the end thereof the following new part:

"PART IV—EDUCATIONAL TELEVISION FACILITIES GRANTS

"DECLARATION OF PURPOSE

"SEC. 390. The purpose of this part is—

"(1) to assist (through matching grants) the several States to survey the need and to develop programs for the construction of educational television facilities, and

"(2) to assist (through matching grants) in the construction of educational television facilities.

"AUTHORIZATION OF APPROPRIATIONS

"SEC. 391. (a) There is authorized to be appropriated such sums, not to exceed \$520,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (1) of section 390.

"(b) There is authorized to be appropriated such sums not to exceed \$52,000,000 in the aggregate, as may be necessary to carry out the purposes of paragraph (2) of section 390.

"GRANTS FOR SURVEYS

"SEC. 392. (a) To be approved, an application for funds for carrying out the provisions of paragraph (1) of section 390—

"(1) must be made by a duly constituted State educational television agency;

"(2) must provide for the making of a survey and the development of a program by such State educational television agency in accordance with paragraph (1) of section 390; and

"(3) must provide assurances satisfactory to the Secretary that any grant made by the Federal Government under this section will be matched with an equal amount by the State.

"(b) The Secretary shall approve any application for funds which complies with subsection (a).

"(c) The total amount of the grant made to any State for the carrying out of paragraph (1) of section 390 shall not exceed \$10,000.

"STATE PLANS FOR CONSTRUCTION OF FACILITIES

"SEC. 393. Grants under this part for the construction of educational television facilities in a State shall be made only if the State educational television agency has submitted to the Secretary a State plan embodying a program for such construction. Such State plan shall be so submitted within three years of the date of enactment of this part.

"GRANTS FOR CONSTRUCTION

"SEC. 394. (a) For each proposed project for the construction of educational television facilities there shall be submitted to the State educational television agency, for transmission to the Secretary, an application for a grant, and such

application shall contain such information with respect to such project as the Secretary shall by regulation require, including the total cost of such project and the amount of the Federal grant requested for such project, and providing assurance satisfactory to the Secretary—

"(1) that necessary funds to construct, operate, and maintain the educational television facilities will be available,

"(2) that the operation of such educational television facilities will be under the control of (A) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (B) a duly constituted State educational television agency, (C) a college or university deriving its support in whole or in part from public revenues, or (D), a nonprofit community educational television organization, and

"(3) that such television facilities will be used only for educational purposes.

"(b) Upon receipt of such application the State educational television agency shall determine whether such project is in accordance with the State plan as originally submitted or as modified, and, if it makes such determination, shall transmit such application to the Secretary.

"(c) Whenever a State educational television agency receives applications for construction grants in an aggregate amount exceeding the amount of Federal funds available for the making of such grants in such State, the agency shall indicate the priority given by it to each of the several applications and the amount recommended by it in the case of each application.

"(d) Upon his determination that any application for a grant for a project for the construction of educational television facilities meets the requirements of subsection (a) of this section, the Secretary may make a grant to the applicant of an amount not exceeding (1) 50 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project, plus (2) 25 per centum of the reasonable and necessary cost, as determined by the Secretary, of any educational television facilities owned by the applicant on the date on which it files such application; except that the total amount of any grant made under this part with respect to any project may not exceed 75 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

"(e) The total amount of grants made to applicants from any one State for the carrying out of paragraph (2) of section 390 shall not exceed \$1,000,000.

"(f) No grant shall be made under this part for any project for the construction of educational television facilities in any State after the expiration of the three-year period beginning on the date of submission of a State plan under section 393.

"DEFINITIONS

"SEC. 395. For the purposes of this part—

"(1) The term 'State' includes the District of Columbia and the Commonwealth of Puerto Rico.

"(2) The term 'construction of educational television facilities' means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment) necessary for television broadcasting (including closed circuit television) and does not include the construction or repair of structures to house such apparatus.

"(3) The term 'Secretary' means the Secretary of Health, Education, and Welfare.

"(4) The term 'duly constituted State educational television agency' means (a) a board or commission established by State law for the purpose of promoting educational television within a State, or (b) a board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education or higher education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television; and, in the case of the District of Columbia, the term 'Governor' means the Board of Commissioners of the District of Columbia.

"(5) The term 'nonprofit community educational television organization' means a nonprofit foundation, corporation, or association which is representative of elementary schools, colleges, universities, and educational, scientific, civic, and cultural institutions and organizations located in the area to be served by

educational television facilities, and which was organized primarily to engage in or encourage educational television broadcasting.

"PROVISIONS OF ASSISTANCE BY COMMISSION

"SEC. 396. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Secretary.

"RULES AND REGULATIONS

"SEC. 397. The Secretary is authorized to make such rules and regulations as may be necessary to carry out this part.

"NO CONTROL OVER TELEVISION BROADCASTING

"SEC. 398. Nothing in this part shall be deemed to give the Secretary any control over television broadcasting."

[S. 205, 87th Cong., 1st sess.]

AN ACT To expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is hereby authorized to be appropriated such amounts as may be necessary to assist the States and certain organizations therein to establish or improve television broadcasting for educational purposes, in accordance with the provision of this Act, by providing for the establishment and improvement of television broadcasting facilities.

SEC. 2. Any agency or officer, or organization in a State, described in clause (b) (2) of this section, which is establishing or improving television broadcasting facilities, may receive a grant as authorized in this Act to cover the cost of such establishment or improvement by—

(a) making application therefor in such form as is prescribed by the United States Commissioner of Education; and

(b) providing assurance satisfactory to the Commissioner of Education—

(1) that the necessary funds to operate and maintain such facilities will be available;

(2) that the operation of such facilities will be under the control of (a) the agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a duly constituted State educational television commission, or (c) a State controlled college or university, except that any such agency, officer, commission, college or university may for the purposes of this Act distribute funds received under this Act to nonprofit foundations, corporations, or associations in the same State which are organized primarily to engage in or encourage educational television broadcasting if the operation of the facilities which such funds are used to establish or improve will be under the control of such nonprofit organization; and

(3) that such facilities will be used only for educational purposes.

SEC. 3. Upon determining that an agency or officer of an organization has satisfied the requirements of section 2 of this Act, the Commissioner of Education is authorized to make a grant to such agency, officer, or organization in such amount as is determined by the Commissioner to be reasonable and necessary to cover the cost of such establishment or improvement of facilities. An agency or officer or an organization may receive one or more grants under the provisions of this Act, but the total amount of such grants for television broadcasting facilities in any State shall not exceed \$1,000,000. Such grants shall be made out of funds appropriated for the purposes of this Act, and may be made in such installments as the Commissioner deems appropriate.

SEC. 4. As used in this Act the term "establishing or improving television broadcasting facilities" means the acquisition and installation of transmission apparatus necessary for television (including closed-circuit television) broadcasting, and does not include the construction or repair of structures to house such apparatus, and the term "State" means the several States and the District of Columbia.

SEC. 5. The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this Act as may be requested by the Commissioner of Education.

SEC. 6. Nothing in this Act shall be deemed (a) to give the Commissioner of Education any control over television broadcasting, or (b) to amend any provision of, or requirement under, the Federal Communications Act.

SEC. 7. No application for any grant under this Act may be accepted by the Commissioner of Education after the day which is five years after the date of enactment of this Act.

SEC. 8. (a) Each recipient of assistance under section 3 of this Act shall keep such records as the Commissioner shall prescribe, including records which fully disclose the amount and the disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, and the amount and nature of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

(b) The Commissioner and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipient that are pertinent to assistance received under section 3 of this Act.

Passed the Senate March 21, 1961.

Attest:

FELTON M. JOHNSTON, *Secretary.*

COMMENTS OF THE FEDERAL COMMUNICATIONS COMMISSION ON H.R. 965 AND H.R. 645, BILLS TO ASSIST AND EXPEDITE THE UTILIZATION OF EDUCATIONAL TELEVISION

H.R. 965 and H.R. 645 are similar bills which would authorize the appropriation of funds, not to exceed \$1 million in any State, for establishing or improving educational television broadcasting facilities. Applications for such assistance would be made to the U.S. Commissioner of Education. Although the bills are not identical, the Commission's comments are equally applicable to both bills.

Applicants would be required to provide assurance satisfactory to the Commissioner of Education that necessary funds would be available to operate and maintain such facilities, that such facilities will be used only for educational purposes and that their operation will be under the control of—

- (a) The agency or officer primarily responsible for the State supervision of public elementary and secondary schools;
- (b) A nonprofit foundation, corporation, or association organized primarily to engage in or encourage educational television broadcasting;
- (c) A duly constituted State educational television commission; or
- (d) A State-controlled college or university.

Under these bills, the Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of the proposal as may be requested by the Commissioner of Education. The bills further specifically provide that nothing therein shall be deemed to give the Commissioner of Education any control over television broadcasting (and H.R. 965 continues) or to amend any provision of, or requirement under, the Communications Act. The Commission is most anxious to cooperate in any program which will assist the development of educational television. As we understand this provision, it does not contemplate any change in the present responsibilities of the Commission, and would in no way conflict with the Communications Act.

The Commission, aware of the need for and the potentialities of educational television, has set aside 267 television channels (both UHF and VHF) for non-commercial educational use. However, at the present time, there are only 54 such stations on the air. The Commission is cognizant of the many advantages and benefits of educational television and that it presents opportunities for schools to improve their educational systems; for advanced courses not otherwise available because of classroom and teacher shortages; for increased adult education; and that it afford outstanding teachers and lecturers an opportunity to reach enormous audiences. Educational television is a technique just beginning to make its presence felt, and the Commission is convinced that it could and should play a more significant part in American education.

The growth of educational television has to some extent been inhibited by a lack of funds. It is apparent to the Commission that there is a real need for financial assistance to educational television if it is to achieve its ultimate

potential in the immediate future. However, the question of whether Federal funds should be appropriated to assist the States in establishing or improving educational stations is one of fundamental substantive policy for the judgment of Congress.

The Commission strongly endorses the objectives of H.R. 965 and H.R. 645 but would defer to those responsible for their administration concerning the details of these bills.

Adopted: February 23, 1961.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., May 18, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

MY DEAR MR. CHAIRMAN: This is in reply to your requests for the views of the Bureau of the Budget on H.R. 132, H.R. 645, and H.R. 965. These bills are intended to provide Federal financial assistance to stimulate construction of educational television facilities. We understand that the committee is also considering H.R. 2910 and H.R. 5099 which are related proposals.

H.R. 132 and H.R. 5099 are identical bills which would amend the Communications Act of 1934 to establish a program of Federal matching grants for construction of educational television transmission facilities and for assisting States in surveying the need and in developing programs for construction of such facilities. Federal grants would be authorized not to exceed a total of \$1 million per State for construction projects and \$10,000 per State for surveys. State construction program plans would be submitted within 3 years and no construction grant could be approved for a State more than 3 years after submission of that State's plan. Construction grants would be available for 50 percent of the cost of acquisition and installation of transmission apparatus, including that for closed circuit broadcasting, and also for up to 25 percent of the cost of any educational television apparatus already owned by the applicant on the date of application for a grant. The Secretary of Health, Education, and Welfare, in approving construction grant applications, would be provided satisfactory assurance as to the availability of necessary construction, operation, and maintenance funds.

H.R. 645, H.R. 965, and H.R. 2910 are similar bills which would authorize Federal grants, without matching, for construction of educational television transmission facilities. H.R. 645 is in the form of an amendment to the Communications Act of 1934; the other proposals are in the form of separate legislation. Federal grants not to exceed a total of \$1 million per State would be authorized for acquisition and installation of television transmission apparatus, including that necessary for closed circuit broadcasting. The Commissioner of Education, in approving construction grant applications, would be provided satisfactory assurance as to the availability of operation and maintenance funds for each television facility. H.R. 965 would limit to 5 years the time during which grant applications could be accepted; the other two bills contain no such limitation.

In his message to the Congress of February 20, 1961, President Kennedy outlined major comprehensive proposals to assist American education. Included in these proposals (introduced as H.R. 4970) are grants to States to aid in new programs conducted by school districts to meet special education problems. These programs could include the use of such media as educational television.

The President has recently transmitted to the Congress amendments to extend and expand the National Defense Education Act of 1958 (introduced as H.R. 6774). That act contains a provision under which research and experimentation in educational television is carried out and information concerning television and other new educational media is disseminated. The amendments would remove the ceiling on appropriations for research and dissemination of information on educational media, including television.

It is our understanding that approximately 200 of the Nation's television channels reserved for educational use have not been activated and that a major deterrent to utilization of these channels is a lack of funds for construction of television transmission facilities. The measures already proposed by the President, as described above, could assist in construction of classroom tele-

vision, and would further our knowledge of how to utilize the potential of television for educational purposes. The bills now under consideration by your committee would complement the recommendations of the President by encouraging expanded utilization of educational television, particularly through their emphasis on aid for construction of facilities which could broadcast educational and cultural programs to the general public.

The Department of Health, Education, and Welfare, in its report to your committee, recommends modification of several features of the various pending proposals. The Bureau of the Budget concurs in the modifications proposed by that Department.

Enactment of legislation similar to H.R. 132, H.R. 645, H.R. 965, H.R. 2910, and H.R. 5099, modified in accordance with the recommendations of the Department of Health, Education, and Welfare, would be consistent with the administration's objectives.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, April 20, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives.*

DEAR MR. CHAIRMAN: Your letter of March 21, 1961, requests our comments on H.R. 132 which would establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes.

The bill would authorize appropriations, not to exceed \$520,000 in the aggregate, to assist the States on a matching grant basis in surveying the need and developing programs for the construction of educational facilities. It would also authorize appropriations, not to exceed \$52 million in the aggregate, to assist through matching grants in the construction of educational television facilities. Since the question whether grants of Federal funds should be made for the above purposes appears primarily to be a matter for the Congress to decide, we have no comments to offer concerning the merits of the bill.

Section 394(d) provides that the Secretary may make an grant to an applicant of an amount not exceeding (1) 50 percent of the amount determined by the Secretary to be the reasonable and necessary cost of such project, plus (2) 25 percent of the reasonable and necessary cost, as determined by the Secretary, of any educational television facilities owned by the applicant on the date on which it files such applications; except that the total amount of any grant made under this part with respect to any project may not exceed 75 percent of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

Inasmuch as the grants under this section would be based on the reasonable and necessary cost of the projects as determined by the Secretary, we suggest that there be added to the bill a provision requiring the recipients of grants to keep adequate project cost records and giving the Secretary and the Comptroller General access to such records for the purpose of audit and examination. This could be accomplished by adding a new section to the bill as follows:

"RECORDS AND AUDIT

"SEC. — (a) Each recipient of assistance under this part shall keep such records as the Secretary shall prescribe, including records which fully disclose the amount and the disposition by such recipient of the proceeds of such assistance, the total cost of the project or undertaking in connection with which such assistance is given or used, and the amount and nature of that portion of the cost of the project or undertaking supplied by other sources, and such other records as will facilitate an effective audit.

"(b) The Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access for the purpose of audit and examination to any books, documents, papers, and records of the recipient that are pertinent to assistance received under this Act."

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, May 16, 1961.

HON. OREN HARRIS
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This letter is in response to your requests of February 9, 1961, for reports on H.R. 132 and H.R. 5099, bills to amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes; H.R. 645, a bill to amend the Communications Act of 1934 to assist in the establishment and improvement of certain television broadcasting facilities; and H.R. 965 and H.R. 2910, bills to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs.

These bills would authorize the appropriation of funds to enable the Commissioner of Education to make grants to State or local education agencies, nonprofit educational television organizations, State education television commissions or agencies, and publicly supported colleges and universities, for acquisition and installation of transmission apparatus for educational television facilities. The aggregate of such grants could not exceed \$1 million in any State. In addition, both H.R. 132 and H.R. 5099 would authorize appropriations of \$520,000 for grants of up to \$10,000 per State, to assist State educational television agencies to survey the need and to develop programs for the construction of education television facilities. These two bills also differ from the others in that they would provide for the submission by a State education television agency of a State construction plan to carry out the purposes of the bill, for review of construction project applications by such agency, and for 50-50 matching of the Federal construction funds (up to 25 percent of the cost of existing facilities of the applicant could also be included in the Federal payment, but the total paid with respect to any project could not exceed 75 percent of the cost of the new facilities).

The purpose of these bills—to expedite the development of the educational uses of television, particularly through utilization of the channels reserved and still available for educational uses—is one which this Department endorses. Heartening as progress has been in the development of educational television broadcasting much more needs to be accomplished in order to take advantage of the enormous potential of television for the improvement and extension of educational opportunities in all parts of the country. A major obstacle to the accomplishment of this objective is the high initial cost of equipment and the shortage of funds available for meeting such costs. Accordingly, we are in accord with the objectives of these bills and recommend enactment of legislation along the lines of H.R. 132 and H.R. 5099, with the modifications discussed below.

SURVEYS AND PROGRAM DEVELOPMENT

We believe State planning is vital to the success of any program to effectuate the objectives outlined above. Consequently, we believe that legislation in this field should authorize grants to the States for this purpose. We recommend authorization of appropriations aggregating \$520,000 over a 4-year period for grants to States to cover one-half the cost of conducting surveys and developing programs for educational television installation projects with a maximum Federal grant to any State of \$10,000. The grants should be available for use by States in accordance with applications submitted by a duly constituted State educational television agency and approved by the Commissioner as meeting specified requirements. In order to promote the broadest and most effective use of educational television channels and stations, multistate area or regional surveys and planning should be encouraged, and modification of the requirements otherwise applicable on a State basis to facilitate accomplishment of this objective should be authorized.

PROJECTS FOR CONSTRUCTION OF EDUCATIONAL TELEVISION FACILITIES

There do not appear to be any uniform, objective criteria which can be applied to distribution of Federal funds on a State-by-State basis for construction of educational television stations. Hence, the legislation should authorize grants to be made on a project basis under basic criteria established by regulation and designed to achieve, so far as practicable, the prompt and effective

use of available channels, equitable geographical distribution of facilities throughout the country, and provision of facilities which serve the greatest number of persons in as many areas as possible and which are adaptable to the broadest educational uses.

For this purpose we would recommend that an aggregate of \$25 million be authorized to be appropriated over a 4-year period to pay up to one-half of the cost of approved projects for construction of educational television stations (not including anything with respect to facilities already constructed). This amount of Federal funds, together with matching funds, would, we believe, be sufficient to accomplish the objectives of the proposed legislation. As is customary in this type of legislation we recommend that appropriations for a fiscal year remain available until the end of the following fiscal year.

In any State (or area or region) which has had its application for Federal planning funds approved by the Commissioner, the concurrence of the appropriate educational television agency would be required as a condition to Federal approval of a construction project. If such agency had developed a construction program, the project, to be approved, would have to be included in, or be consistent with that program.

CONSTRUCTION

Funds would be available under the bills for acquisition and installation of transmission apparatus, but not for structures to house the apparatus. We recommend, however, that funds not be available for acquisition or installation of apparatus for closed circuit facilities for transmission within a single school or institution occupying a single site, inasmuch as use of the funds made available under this proposed legislation for this comparatively limited type of facilities would not be effective in accomplishing the objectives of the legislation.

Finally, we recommend that the provisions in the bills for technical assistance by the Federal Communications Commission to this Department be strengthened by providing for close cooperation between the two agencies.

This administration, under the leadership of President Kennedy, is deeply and forcefully committed to Federal action to help improve the quality of American education to the end of strengthening the whole fabric of our society. The administration's proposed Educational Assistance Act of 1961 (title I of H.R. 4970) provides for stimulating and facilitating new programs to meet special education problems. Such programs might include the use of new media such as television. In addition, the National Defense Education Act, which the President on April 25 asked the Congress to extend and improve (see H.R. 6774), includes provisions in title VII which are designed to foster research and experimentation in and to disseminate information relating to the development and evaluation of television and other educational media. H.R. 132 or H.R. 5099, if amended as we suggest, would appropriately complement existing and proposed programs designed to improve the quality of American education.

We are advised by Bureau of the Budget that enactment of legislation along the lines of H.R. 132 and H.R. 5099, with the modifications set forth above, would be consistent with the administration's objectives.

Sincerely yours,

ABRAHAM RIBICOFF, *Secretary.*

GOVERNMENT OF THE DISTRICT OF COLUMBIA,
EXECUTIVE OFFICE,
Washington, D.C., March 16, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR MR. HARRIS: The Commissioners of the District of Columbia have for report H.R. 2910, and H.R. 965, bills to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs; H.R. 5099, H.R. 132, and H.R. 645, bills to amend the Communications Act of 1934 to establish a program of Federal matching grants for the construction of television facilities to be used for educational purposes. H.R. 2910, H.R. 965, and H.R. 645, will be hereinafter referred to as group I; H.R. 5099 and H.R. 132 will be hereinafter referred to as group II.

The purpose of the bills in group I is to authorize appropriation of Federal funds (nonmatching) to assist the States (including the District of Columbia)

and certain organizations to establish or improve television broadcasting for educational purposes. These bills authorize the U.S. Commissioner of Education to make grants for establishing or improving television broadcasting facilities when he is satisfied (1) that the necessary fund to operate and maintain such facilities will be available; (2) that the operation of such facilities will be under the control of (a) the State agency primarily responsible for the supervision of public, elementary, and secondary schools, (b) a nonprofit agency organized to engage in or encourage educational television broadcasting, (c) a duly constituted State educational television commission, or (d) a State-controlled college or university; and (3) that such facilities will be used only for educational purposes. The total amount of such grants for television broadcasting facilities in any one State shall not exceed \$1 million. In addition, one bill in group I (H.R. 965) contains a section providing that no application for a grant may be accepted after 5 years after the date of enactment of the bill. The bills in group I provide that the term "establishing or improving television broadcasting facilities" means the acquisition and installation of transmission apparatus necessary for television (including closed-circuit television) broadcasting and does not include the construction or repair of structures to house such apparatus.

The bills in group II have a declared twofold purpose—

"(1) to assist (through matching grants) the several States [including the District of Columbia] to survey the need and to develop programs for the construction of educational television facilities, and

"(2) to assist (through matching grants) in the construction of educational television facilities."

The bills in group II authorize the Secretary of Health, Education, and Welfare to make grants to States for surveys if application therefor is (1) made by a duly constituted State educational television agency; (2) such application provides for the making of a survey and the development of a program by the State educational television agency; and (3) such application provides assurances satisfactory to the Secretary that any grant made by the Federal Government for such survey will be matched with an equal amount by the State. The total amount of such grants shall not exceed \$10,000 to any one State. It should be noted that this type of grant is not authorized in the bills in group I.

The bills in group II authorize the Secretary of Health, Education, and Welfare to make grants to States for the construction of educational television facilities only if the State educational agency has submitted to him a State plan embodying a program for such construction within 3 years of the date of enactment of the bills. These bills set forth in detail the matters to be contained in an application for a grant for such construction, to be transmitted to the Secretary, and require that the Secretary be satisfied—

"(1) that necessary funds to construct, operate, and maintain the educational television facilities will be available,

"(2) that the operation of such educational television facilities will be under the control of (A) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (B) a duly constituted State educational television agency, (C) a college or university deriving its support in whole or in part from public revenues, or (D) a nonprofit community educational television organization, and

"(3) that such television facilities will be used only for educational purposes."

The total amount of such construction grants to any one State shall not exceed \$1 million.

The bills in group II provide that the term "construction of educational television facilities" means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment) necessary for television broadcasting (including closed-circuit television) and does not include the construction or repair of structures to house such apparatus; and the term "duly constituted State educational television agency" includes (a) a board or commission established by State law for the purpose of promoting educational television within a State, or (b) a board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television; and, in the case of the

District of Columbia, the term "Governor" means the Board of Commissioners of the District of Columbia.

It is to be noted that the grants authorized in the bills in both groups do not include the construction or repair of structures to house educational television apparatus, nor do they include the annual cost of operating such a program. The Commissioners have been advised that initially, the cost of constructing an appropriate building to house such apparatus would cost between \$100,000 to \$300,000 depending upon how large the area of participation would be. Also, the annual cost of operating the television educational program would approximate \$150,000 to \$300,000.

Although neither the Board of Education nor the Commissioners have, at this time, formulated any definite policy concerning the feasibility of utilizing educational television in the District of Columbia, a thorough study is being made of this subject by District of Columbia school officials. Since both groups of bills authorize, but do not require, that the District make application for grants thereunder, the Board of Education and the Commissioners support enactment of a bill in either group, but prefer enactment of a bill in group I, since such a bill would authorize a 100-percent Federal grant.

The Commissioners wish to emphasize that their support of such proposed legislation should in no wise be construed as committing the District of Columbia to the use of educational television in the District of Columbia should any of the subject bills be enacted.

Time does not permit the securing of advice from the Bureau of the Budget as to the relationship of this report to the program of the President.

Yours very sincerely,

WALTER N. TOBRINER,

President, Board of Commissioners, District of Columbia.

STATEMENT OF HON. KENNETH A. ROBERTS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALABAMA

Mr. ROBERTS. Mr. Chairman and members of the committee, it is my feeling that this is one subject that is so well known to this committee that there is no need for my making an elaborate or long statement.

The committee has long been interested in this legislation, and I have introduced bills on the subject in the past sessions of Congress.

Last year, my bill, H.R. 10609, was reported out by the subcommittee, and then by the full committee and, as the distinguished Chairman mentioned a minute ago, it was not acted upon favorably by the Committee on Rules, and we did not take it up during the last session.

My State of Alabama has had a very fine experience with this medium, and it is because of my interest and the interest of my people that I, too, am interested in seeing us pass a fair and reasonable piece of legislation in this field.

I might say that we now have about 200,000 schoolchildren who enjoy the programs from three ETV stations, and we have television sets in operation in 550 schools all over the State.

Now, as the Chairman knows, we have held hearings, we have conducted field studies, and there has been quite a bit of activity by this committee on this particular type bill.

The bill which I am sponsoring before the committee today is H.R. 132, and it differs, I think, in some material respects from the Senate bill, a bill which was passed by the Senate last year, and which has again been introduced by the chairman of the Interstate and Foreign Commerce Committee in the other body, Senator Magnuson, and that same bill, I might say, has been introduced by our distinguished chairman, Mr. Harris of Arkansas.

The Senate bill is an outright grant bill. My bill would contemplate and require matching funds on the part of the States. Further, my bill would set up a fund of \$10,000 to be available to each State, as we do in the Hill-Burton program, for the purpose of making a survey as to whether or not there is this sustaining interest on the part of the State in this type program, as to whether or not the State can finance it and maintain it, and as to whether or not they can submit a plan which the Federal Government would accept and would be willing to make a grant based on the plan of the State which it submitted.

My bill is pretty much, I think, of a compromise nature, and lends itself to the various types of programs that we find already in operation.

We know that originally the Federal Communications Commission set out or allocated about 258 educational TV channels, and that about 20 percent of those channels are in operation at the present time. It would be about 54.

I believe that unless the Federal Government takes the initiative, takes the leadership in this field, that eventually these channels will be dissipated or will be picked up by the commercial interests, and we will lose a very fine opportunity of giving to the educational communities throughout the country a very fine tool, with an extremely good cutting edge, for the teaching of various subjects, which are badly needed in our schools.

My mind goes back to a morning in Birmingham, Ala., when we were there with Mr. Collier and Mr. Rostenkowski, and we observed 9- and 10-year old children learning Spanish, and very effectively.

Now, we have in the State of Alabama only one teacher of Russian that I know anything about, and that is at the University of Alabama, but that teacher makes himself available through weekly broadcasts to all of our high schools throughout the State of Alabama.

That means that the boy and girl out in the rural school building is getting the same—I mean better educational facilities than are afforded in some of the higher institutions of learning.

My bill also ties itself into a local or State operation. You will note that in section 392, the first provision provides that an application for funds—

(1) Must be made by a duly constituted State education television agency. That is further defined in the bill as meaning a board or commission established by State law; that is at the bottom of page 6.

Mr. MOULDER. Page what?

Mr. ROBERTS. Bottom of page 6(4) under section 395 and under "definitions." It means—

a board or commission established by State law for the purpose of promoting educational television within a State.

That is the system we have in Alabama. We have what we refer to as a State educational television commission.

(b) A board or commission appointed by the Governor of a State for such purpose if such appointment is not inconsistent with State law, or (c) a State officer or agency responsible for the supervision of public education or higher education within the State which has been designated by the Governor to assume responsibility for the promotion of educational television.

Now, in breaking this plan of operation down, we have four ways in which these TV facilities can be operated. They must be operated either by (1) and that is at page 4, an agency or officer responsible for the supervision of public education within that State or within a political subdivision thereof; in other words, it could be, under that term, either State, county, or city.

(B) A duly constituted State educational television agency, (C) a college or university deriving its support in all or in part from public revenues, or (D) a nonprofit community educational television organization.

Now, the (D) section lends itself particularly to the operation that I believe we have in the city of New Orleans, La. I think, perhaps, Memphis, Tenn., has a similar type of organization.

My bill also has a provision for recognizing the efforts of States which have pioneered in this field in that they would be allowed to count as credit up to 25 percent of the reasonable and necessary cost of such educational TV facilities as have already been built, provided, however, that the total amount of any grant made shall not exceed 75 percent of the amount determined by the Secretary to be the reasonable and necessary cost of such project.

The absolute maximum under my bill, other than the \$10,000 for the survey, would be up to \$1 million.

I do not have any great pride of authorship in this bill. It is pretty much of a result of hearings which I held and which other members have held, and field studies, and I think that it is a bill that could do the job.

There will be no bricks and mortar provided for under this bill. It provides purely for the purchase of facilities, such as transmission apparatus, which includes towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video-recording equipment.

It would be a one-shot approach, and the time limit under this bill would expire in 3 years after the State makes its application.

I believe that that is a safe provision in that the control of the real estate would be in the hands of the State or local subdivision and, thereby, the final control of what is to be taught and what programs are to be presented would be in the hands of the State authorities, and I think that is highly important.

I have nothing else to add to what I have already said, and I will be happy to try to answer any questions that the committee might have.

Mr. MOULDER. Mr. Rogers of Texas.

Mr. ROGERS of Texas. Mr. Roberts, first I want to commend you for the tremendous amount of work that you have done in this field and the exhaustive hearings that you have held in the past; and further to commend you for your continued activities—

Mr. ROBERTS. Thank you, Mr. Rogers.

Mr. ROGERS of Texas (continuing). In trying to bring this matter to the attention of the public generally.

Now, in your hearings that you have held, Mr. Roberts, has it been your experience that teaching by television can provide a means of meeting the inadequacy of classrooms that we are faced with at the present time?

Mr. ROBERTS. I am glad you mentioned that, Mr. Rogers. We had testimony—I did not attend these hearings, but it is in the record—

that, for instance, in Miami, I believe, the superintendent of education there estimated that the use of educational TV would save Miami at least \$12 million in the next 6 or 7 years.

It is possible, I think, to cut down the spiraling cost of education by this means, because it does lend itself to large groups.

You can have the receivers stationed around various parts of the room. They can be observed by greater numbers than the teacher can handle, and I would like to make this point clear, that to my mind this is not an effort to replace members of the teaching profession.

I look upon it only as a visual aid, as another way of more effective presentation.

You know, being the father of several children, that there is nothing in the world that is more appealing to a child than a TV set. You can hold their attention many times with this fine instrument when, I think, the teacher might fail to hold the attention as well without it.

Mr. ROGERS of Texas. My observation about the children, Mr. Roberts, is this: If we do not start some teaching by television we are going to have a bunch of uneducated kids, because all they want to do is watch television.

Mr. ROBERTS. And with the programs you get on prime time, I think mine are going to want to be cowboys, although I only have girls.

Mr. ROGERS of Texas. Mr. Roberts, in your bill, let me ask you this question—

Mr. ROBERTS. Yes, sir.

Mr. ROGERS of Texas. What seems to be the nucleus of the opposition that you have run into in these hearings that you have held?

Mr. ROBERTS. Mr. Rogers, I held hearings in Raleigh, N.C., I held hearings in Birmingham, Ala., and in Atlanta, Ga., and I can truthfully say that as to the opposition in North Carolina—there was none.

In Atlanta, Ga., I think we had one statement in opposition. We had no witnesses who appeared and opposed it. Even the commercial broadcasters there came in and related their interest in it and their willingness to help put it across.

We had teachers in the public schools who had been using it there in Atlanta in an experiment; we had State extension people, from their extension service, come in and say that it would be a wonderful help to the farmers throughout the State.

All of the Federated Womens' Clubs, the PTA's, they and various other civic-minded groups came in and were sold on this idea. Some even went so far as to say they thought it should be an outright grant proposition by the Federal Government.

But I differ with that because I think that unless there is enough interest on a local level to sustain it, there is no point in the Federal Government putting any money into it, and I would not want to see the Federal Government get into a sustaining program.

But I think that to get uniformity and to get this off the ground the Federal Government has the responsibility and ought to meet that responsibility.

Mr. ROGERS of Texas. Does the record reflect that this medium of education has been used very successfully in Australia, where you have a farflung series of ranches and sparsely settled areas?

Mr. ROBERTS. Mr. Rogers, I am not familiar with that point; I really am not.

Mr. ROGERS of Texas. Well, I think the record ought to show that. I thought it had been developed in previous hearings, but Australia has done a great deal of work in this area.

Mr. ROBERTS. I would like to say that I hope the subcommittee would go down and look at that experiment. I would like to go along. [Laughter.]

Mr. ROGERS of Texas. I was not suggesting that, but it might not be a bad idea.

Mr. MOULDER. Will the gentleman yield?

Mr. ROGERS of Texas. Yes, sir.

Mr. MOULDER. On the question raised a moment ago about the teaching facilities, the proposed educational television legislation would also give the opportunity of presenting some nationally known authorities, specialized teachers, who otherwise would not be available to certain schools; is that so?

Mr. ROBERTS. With the system that would go into each State, I think your ease of operation and the ease of obtaining outstanding people would be very much enhanced over a strictly local statewide program.

I think the States can help each other, and that you would have regional-type programs because many times these programs are beamed across State lines.

Now, I found, for instance, in the Atlanta hearing that there is one whole section of western Georgia which tunes in on our Auburn University programs all the time. Several schools there use the Alabama medium, and the same thing would be true particularly in the smaller Northeastern States.

I think that, too, points up the value of this survey money because you may have some States covered by a signal that would not need a program of their own other than maybe a type of liaison arrangement in a State where the signal was feeding from.

Mr. ROGERS of Texas. Mr. Roberts, you spoke of a number of channels which had been set aside for educational TV. Do you know percentage-wise the number of channels that have been allocated for commercial uses and the number that have been allocated for educational uses?

Mr. ROBERTS. Mr. Rogers, I do not have that information. Could I supply it for the record?

Mr. ROGERS of Texas. The chairman tells me that the number of activated stations is still about one-fifth of the number authorized.

Mr. ROBERTS. I did give those figures. You mean the educational TV channels?

Mr. ROGERS of Texas. Yes. But this does not give the percentage, the difference between the number of stations or channels for commercial purposes and the number that are used or allocated for education television.

Mr. ROBERTS. No.

Mr. ROGERS of Texas. But I think if counsel will get that and put it into the record it should be included.

Mr. Roberts, one other question in relation to or another question in relation to, the situation that you are requiring a State body or authority to handle this.

Now, am I correct in my assumption if there is not a duly constituted State authority created by the legislature in the form of a board

or a commission or authority, that it is your plan that the Governor can, by edict, say that the superintendent of public education in the State of Oklahoma or Texas or wherever it might be, is hereby authorized to handle the educational TV matters, and that that will meet the requirements of your bill?

Mr. ROBERTS. That would meet the requirements for the purpose of filing the application.

Now, that application has to be made by a duly constituted State educational television agency and, as you point out, if there is not such an agency, a board or commission, the Governor could designate, I believe, the superintendent of public instruction or the superintendent of education, whatever the term may be known by, in the State affected.

Mr. ROGERS of Texas. Mr. Roberts, what is the highest amount of money one State could get under your bill?

Mr. ROBERTS. I believe it would be \$1 million, plus the \$10,000 for the survey.

Mr. ROGERS of Texas. It is more or less in keeping with your thoughts of last year about \$1 million per State—

Mr. ROBERTS. I think it would turn out to be much less than that actually.

Mr. ROGERS of Texas. In other words, one State could not come in and have \$10,000, and another State come in and get \$5 million.

Mr. ROBERTS. That is right.

Mr. ROGERS of Texas. You would anticipate that the maximum each State would be allowed would be \$1 million.

That is, as I understand your bill and the matter before the subcommittee last year, to be more or less in the way of money to get the program off the ground, so to speak, and that its continued maintenance from that point on would be the responsibility of the State?

Mr. ROBERTS. Yes, sir.

Mr. ROGERS of Texas. And the State agency.

Now, one other question, Mr. Roberts. There are quite a number, but I do not want to take all the time; on page 6 of your bill under (2) you say—

the term "construction of educational television facilities" means the acquisition and installation of transmission apparatus.

Now, my question is this: Do you intend by that to say that acquisition would also include the leasing or renting of existing facilities already owned by private companies?

Mr. ROBERTS. I think that should be spelled out in the bill, and I would hope that someone would offer an amendment so that where you have existing lines, and most of them are owned by the telephone people, I think certainly that you could avoid duplication by allowing them to lease at a reasonable cost to the station provided the leasing or purchase is economically feasible.

Mr. ROGERS of Texas. You would not want to parallel existing facilities or you would not want to prohibit—

Mr. ROBERTS. That is right.

Mr. ROGERS of Texas (continuing). New educational TV stations, let us say, from utilizing the cheapest method of transmitting these waves, either by wire or microwave?

Mr. ROBERTS. I have some suggested language, but I thought what I would prefer to do would be to put it in the hands of one of the members of the subcommittee for offering at the proper time.

Mr. ROGERS of Texas. I will be very happy to offer it at the proper time, Mr. Roberts.

Thank you very much, sir.

Mr. MOULDER. Mr. Younger of California.

Mr. YOUNGER. Of course, we always welcome you as a colleague of this committee, and you have done great work in this educational television field.

Mr. ROBERTS. Thank you, sir.

Mr. YOUNGER. I cannot see, however, why this process would not reduce the number of qualified teachers.

Is it your intention that if you have a schoolroom that every teacher shall use the television system to instruct her or his own class?

Mr. ROBERTS. Well, the gentleman from California, of course, knows I am not an expert in the field of education. But there are some subjects that the educational professional people believe can be better taught this way than in any other way.

For instance, if you, in teaching science to a high school group and need models—we know that models are very expensive for each school to have to put out, say, \$30 to \$100 for, perhaps, a model of an animal or something where they teach the various parts of bone structure, but with educational television, one model would serve everybody within reach of that signal.

Languages lend themselves quite well to teaching in this way because of the scarcity of people who are learned in languages.

For instance, I mentioned the fact of a teacher of Russian. Well, the same thing is true of a teacher of Greek or the teacher of other languages who are hard to obtain. I think I saw a statement the other day that only about 2 percent of our students in this country now have access to teachers of Russian. There is one place where your cost would be reduced a great deal, and where the qualified people would be spread out, so to speak, to many thousands who would not otherwise have any information.

There are other fields. The teaching of English literature, Shakespeare and the theater part of it can be done very well this way, and it is a lot more interesting presentation than you would get simply by going through "Hamlet" or "The Merchant of Venice" or some of those other plays just by reading and trying to explain. But if you have the pictures and use certain models it is much more attractive, and I think this is where you would save a great deal.

Mr. YOUNGER. Well, isn't it true that this system would make available for instructional purposes absolutely the best qualified teachers? You might have one very fine teacher in a college on chemistry, and that one excellent instructor could instruct all the classes in chemistry?

Mr. ROBERTS. That is correct; and it also does this: they advocate a followup session. They will put a TV teacher on the screen for maybe 15 or 20 minutes, and then the class is opened up for questioning and for followup. So if the students do not understand what they have seen, the teacher in the homeroom can straighten that out for them. So it is really a double method of instruction.

Mr. YOUNGER. Now, on this question which Mr. Rogers raised, would you be willing to accept an amendment of this type:

That the funds provided for under this bill may be used to purchase or lease the interconnecting facilities between broadcasting stations and transmitter locations or between locations on a closed circuit television network.

Mr. ROBERTS. Well, of course, I would accept whatever this subcommittee does with this bill, but I do think that that language should be in the bill because it makes it clear that you will not insist on duplicating lines that are already in existence, and that can be obtained on an economically feasible basis.

Mr. YOUNGER, you do no actually mean that you would accept anything that the committee would do with this bill?

Mr. ROBERTS. Well, I would have very little control over not accepting it.

Mr. YOUNGER. You would not want us to turn it down?

I mention this because in the State of California, the University of California, with all of its branches all over the State, in using the closed circuit could certainly have ample opportunity to lease existing transmitting methods.

That is all, Mr. Chairman.

Mr. MOULDER. Mr. Avery?

Mr. AVERY. Thank you, Mr. Chairman.

Mr. Roberts, as you know, you and I have slightly different viewpoints on educational television. I can agree with most everything you say about the benefits, but I have not been able to understand why it should become the responsibility of the Federal Government.

If it saves all of the States as much money as witnesses submit that it has, then it would seem to me that any particular State could not afford not to have educational television systems. I want to pay tribute to your State of Alabama because you have been pioneers in this field, and you have been getting along so well actually that I fail to understand why you are praying for the Federal Government to intervene, and maybe by the actual intervention by the Federal Government it might even work less satisfactorily than it has proven to work in your State, in the State of Florida, the State of California, as well.

There is a related matter. Is there any prohibition against an application being approved by the Secretary for a private school?

Mr. ROBERTS. For a private school?

Mr. AVERY. Or any non-State-supported school.

Mr. ROBERTS. No. I think the bill limits itself to either schools—page 4, line 10, where we say, where we tie it into the educational system, either State, county or city, then—

(B) a duly constituted State educational television agency. (C) a college or university deriving its support in whole or in part from public revenues.

Mr. AVERY. Where are you reading from now?

Mr. ROBERTS. Page 4, starting at line 9:

Or (D) a nonprofit community educational television organization.

And then (3), with the further provision—

that such television facilities will be used only for educational purposes.

I do think, if there is a private institution they would probably have to come in as a greater area group; that is, going in with other groups.

I think that pretty well is true in the New Orleans situation, where you have a communitywide effort that is participated in by all faiths, as a matter of fact, and the term at page 7, section 5, part 5, where you say:

The term "nonprofit community educational television organization" means a nonprofit foundation, corporation, or association which is representative of elementary schools, colleges, universities, and educational, scientific, civic, and cultural institutions and organizations located in the area to be served by educational television facilities, and which was organized primarily to engage in or encourage educational television broadcasting.

Then you go back to the application, and that certainly has to be handled through a State agency.

Mr. AVERY. Well, it has to be handled, it has to be processed by a State agency.

Mr. ROBERTS. That is correct.

Mr. AVERY. But, referring back to subsection 2, on page 4, I do not read that section (2) as meaning that all (A), (B), (C), or (D) of those qualifications have to be met. I read that as an "or" between them, with the effect of being an "or" between each one of the letters.

Mr. ROBERTS. I think it would be either one of those types. But I do think that a purely private institution would have to go in with another group. It has to have the aspect of public support, public revenue, as I understand.

Mr. AVERY. Well, that would not be my interpretation of the language. Frankly, I have not any fixations about this issue. I am not trying to make that point. I think it is a question that we are going to have to face before this matter is disposed, and I am not suggesting that you should state your views any further than you have, but I think it ought to be abundantly clear precisely what authority is contained in the bill.

Mr. ROBERTS. Well, my personal feeling about it is that it should be limited to institutions that either in whole or in part receive public revenues for their support.

Mr. AVERY. I certainly thank the gentleman. I was not insisting that he make that last statement. But the point I was trying to make is I think we have got to understand precisely what authority is written into the bill. I want to be realistic about the future of this bill, although my view remains pretty much the same as it was 2 years ago.

Thank you, Mr. Chairman.

Mr. MOULDER. Mr. Sibal. Do you have any questions?

Mr. SIBAL. Mr. Roberts, as you know, I am a new member of this committee and, therefore, my background is not very broad in terms of what has gone on before, so these questions may be a little bit elementary. I hope you will bear with me briefly.

I was concerned about the possibility of this type of education leading to a lower standard in some instances, that is, the getting as far away as we can in the old Mark Hopkins tradition and reaching a kind of a national denominator rather than stimulating those students who have a motivation and natural endowments to permit them to go at a faster rate and encompass more.

I was very happy when you referred to the fact that there would be followup sessions in all probability, with teachers in the classroom to answer the questions of those who are further motivated as well as those who did not understand.

But I find that somewhat inconsistent with your reference to the fact that people in western Georgia tuned in on the Alabama programs. Could you clarify that for me?

Mr. ROBERTS. One of our stations is located near the State line at Auburn University and, of course, that signal feeds out not only in Alabama but in parts of Georgia and, possibly, parts of Florida, and some of the Georgia educational people, as brought out in the hearing, have been using the station for teaching as an aid to teaching in the Georgia schools.

My only point there was that in order to get the best results you are going to have to have more uniformity and more coordination because that will bring these various groups together and give better programming. It will keep the programming, I think, on somewhat of an agreed basis between the school authorities, and in many cases may eliminate the necessity for building stations where those sections are already covered by other States.

Now, you come from an area, I think, particularly that would benefit by action in any State in your area, because the signal strength would feed out in many cases; in small States, they might be covered with a station from your State or by nearby States.

If you see what has happened in the small number of these channels that have been activated, it seems to me that during this time when we believe that we have a lag in certain fields, scientific and language fields, that this is a very fine way in which to see that this gap is quickly caught up.

Mr. SIBAL. This would require coordinating between State boards of education and various local boards of education, would it not?

Mr. ROBERTS. That is right.

Mr. SIBAL. But the technique which we have in mind here, I assume, is basically the classroom technique, that is, the television expert, we will say, the person who is particularly qualified to lecture in a given area, augmented by the teacher in the classroom, and it is contemplated that the students will be in class where they receive this instruction.

Mr. ROBERTS. That is correct.

I do not contend that every educator believes that this is the best way of teaching. I do not know how you get a nose count, but I will say in the hearings that I have attended, and there have been a good many of those, that invariably the most highly placed people in the educational field think this is an unusually fine medium of teaching. They say, at the same time, that there is no substitute for the home room or the classroom of the teacher, and I agree with that.

But I think that we are, by failing to give some leadership to this proposition, perhaps, denying the children a new medium that has come into being in our lifetime that we ought to take advantage of.

Mr. SIBAL. Thank you very much.

Mr. MOULDER. Mr. Rogers.

Mr. ROGERS of Texas. Mr. Roberts, in order to clarify the record on the question I asked a minute ago, counsel has furnished me with this information: that there are 2,209 television channels available, 674 VHF, and 1,535 UHF.

Now, out of that 2,209 television channels, only 268 channels, television channels, 88 VHF and 179 UHF, have been set aside for educational television.

Now, that shows that there are only 12 percent of the channels that have been set aside for educational television in the spectrum which belongs to the public as such.

Mr. ROBERTS. That is a very fine point, and I am glad that is in the record.

I am going to pass up this amendment, too, Mr. Rogers, that we talked about in connection with the leasing facilities that are available.

Mr. ROGERS of Texas. Thank you, sir.

Mr. MOULDER. Mr. Younger has another question, I believe.

Mr. YOUNGER. Of course, this brings up the question of Federal aid to education, whether the Federal Government should go into this field.

Isn't it true that this has a little different aspect than straight Federal aid to education in that the channels are governed by the Federal Government and that the localities and the local schools must come to the Federal Government?

Mr. ROBERTS. It is the only place they can obtain an educational TV channel.

Mr. YOUNGER. And it is a field of which the Federal Government already has control.

Mr. ROBERTS. I think that is very well said, and I think it means that if they are to have this program the Federal Government is the only one that can do it.

Mr. YOUNGER. That is all, Mr. Chairman.

Mr. MOULDER. Mr. Roberts, we want to commend and thank you for your very able, clear, intelligent presentation of your bill, H.R. 132. I also want to compliment you for the fine work you have been doing in this field since you have been in Congress.

Mr. ROBERTS. Thank you.

Mr. MOULDER. Thank you very much, sir.

The committee will now hear our distinguished colleague, Mr. Boggs of Louisiana.

STATEMENT OF HON. HALE BOGGS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. Boggs. Mr. Chairman and members of the committee, I have a prepared statement I would like permission to file, and just to, if I may, make a few comments.

There is very little that I can add to the most comprehensive statement which has been made by my colleague, Mr. Roberts from Alabama.

The only thing I can do is to give the committee some details about the operation of our television station—WYES—in New Orleans, which is a community endeavor in every sense of the word, and which has been operated now for almost 4 years, and has been made possible without any assistance from any Federal or State agencies whatever.

This station, since it went on the air, has done much to broaden the education of the children in our public, parochial and private schools, and to give them a greater grasp of many subjects in their curriculums.

It also has provided university courses for viewers and other adult informational programs through the aid of various departments,

and various professors at the two principal universities in New Orleans—Tulane and Loyola.

In short, the leaders in my community who founded this station, with the aid of local contributions and the various school systems, contributions from the parochial schools, from the public schools, from the universities, and from the public at large—this station has provided New Orleans and the surrounding parishes with a fine vehicle for the educational and cultural enlightenment of children and adults alike.

The station has expanded its broadcasting hours so that it is now on the air from 9 o'clock in the morning until 10 o'clock at night Mondays through Fridays, with the exception of 2 hours 15 minutes during the afternoon from 3 o'clock until 5:15. This means that the station broadcasts almost 11 hours per day. About 75 percent of its programming is produced by school and station officials as live programming.

Of the total 54 hours of broadcasting each week, a full 30 hours are presented as in-school classroom instruction, for elementary and secondary school pupils.

Another 4 hours are devoted to children's after-hours programs, and the remaining 20 hours per week to adult programs at night.

These programs include university lecture series and other informational programs of national and local interest.

The fact that I have praised WYES for having done a fine job in its first nearly 4 years of operation—it will have been on the air 4 years next month—does not mean there is not room for improvement because there is.

As a matter of fact, the station operates on a budget of \$200,000 provided jointly by the city's universities and colleges, its public and parochial school systems, and a few local foundations and civic-minded citizens.

I feel confident that my community will continue to raise this operating money each year. But it is often a tight squeeze to reach this minimum operating goal.

The station operates with only about 25 full-time employees, and the rest of the employees are college students who use this for training purposes in television and are only paid a minimum wage.

Mr. MOULDER. How wide an area does this cover?

Mr. BOGGS. This covers approximately seven counties or parishes, as they are known in Louisiana.

This is where we would be helped by some type of assistance. I talked to Mrs. Abramson, who is on the board of the station and who is the coordinator of the station, and she said that any Federal grant would be used to increase the power of the transmitter so that WYES would have a broadcast radius greater than its present 40 miles; that is what it covers, 40 miles; and, consequently, would reach more schools than it now does in the seven parishes. This would give the station a much stronger signal and an improved coverage, and so on.

I could expand on that at great length. But this is an operating station and one which we consider highly successful. I think it is quite effective, and it has made quite an impact upon the community. I believe that any program which is adopted should make stations of this character eligible.

It has been my hope in the legislation which I introduced, which is a companion measure to Mr. Roberts' bill, except I provide a paragraph in my bill which would make it possible for these grants to be channeled directly to these nonprofit foundations such as the one which operates WYES in New Orleans.

Mr. Roberts has amended his bill to make these stations eligible, but the money would first have to be funneled through a State department of education. I would hope that that would not be necessary.

Mr. MOULDER. Do you think then on page 7, paragraph 5, of section 395 does not cover that?

Mr. BOGGS. Well, it covers it, as I understand it, if the money first goes to a State department; isn't that right, Mr. Borchardt? That is my impression of what it does. My bill would make it possible for the grant to go directly to the foundation. I am sure it does that, Mr. Moulder. I heard Mr. Roberts talking about it just a few minutes ago.

Mr. MOULDER. Have you finished your statement?

Mr. BOGGS. I have, sir.

Mr. MOULDER. Any questions?

Mr. ROGERS of Texas. I think the record should also reflect here that the gentleman from Louisiana, Mr. Boggs, has made a tremendous contribution to the utilization of this medium that has come into our hands in the past several years for education, and I think he is to be highly commended—

Mr. BOGGS. Thank you very much.

Mr. ROGERS of Texas (continuing). For the work he has done on it and his continuing activity and vigor in this field.

Now, Mr. Boggs, the television broadcasts to which you refer are not a closed circuit?

Mr. BOGGS. No, no.

Mr. ROGERS of Texas. It is open?

Mr. BOGGS. Anybody can look at it.

Mr. ROGERS of Texas. Anybody can look at it.

Mr. BOGGS. Right; and, incidentally, it has a very large audience.

Mr. ROGERS of Texas. Yes.

Mr. BOGGS. The evening programs.

Mr. ROGERS of Texas. I think this: I think one of the greatest things about this medium is that education begets education, and I think when people begin to view this sort of thing the audience will increase.

With relation to the use of the funds for leasing of existing facilities for transmission, would you have any objection to use of the funds for that purpose?

Mr. BOGGS. Not at all. You mean this would be a purchase deal, with an existing television station?

Mr. ROGERS of Texas. Yes, where the telephone company has a line, not to require the new agency to put up any parallel line or put up—

Mr. BOGGS. No, I think that would be sensible.

Mr. ROGERS of Texas. Thank you, Mr. Boggs.

Mr. MOULDER. Mr. Younger.

Mr. YOUNGER. Do I correctly interpret your statement, Mr. Boggs, that you are not advocating operational funds?

Mr. BOGGS. No, no; not at all.

Mr. YOUNGER. It is the purchase and supply of equipment?

Mr. BOGGS. Purchase of equipment, modernization; no operation.

Mr. YOUNGER. The same as Mr. Roberts?

Mr. BOGGS. Exactly; no operational funds at all.

Mr. YOUNGER. Was there any statement that Mr. Roberts made—you heard them all—that you disagree with in connection with this field?

Mr. BOGGS. Well, I did not hear everything that Mr. Roberts said, and I seldom find myself in disagreement with Mr. Roberts, but I would rather not just give him a blanket approval, if you don't mind.

Mr. YOUNGER. I want to concur with Mr. Rogers in complimenting you for your activity in this field.

Mr. BOGGS. I am very devoted to Mr. Roberts, and I think he has done a magnificent job in this field, believe me, I do. He brought his subcommittee to New Orleans and had some hearings there which were very helpful to us.

Mr. YOUNGER. I was just only trying to shorten the questioning so as not to ask the same questions that I have already asked Mr. Roberts—

Mr. BOGGS. Surely.

Mr. YOUNGER. If you will agree with him, then we would not have to cover the same subjects.

Mr. BOGGS. Well, I think I have answered that question.

Mr. YOUNGER. That is all.

Mr. MOULDER. Mr. Sibal.

Mr. SIBAL. I just have one question, Mr. Boggs. In Louisiana, do you have any credit courses so far as educational TV is concerned?

Mr. BOGGS. Not to my knowledge. You mean whether someone gets university credit by participating in a course which is conducted over all TV?

Mr. SIBAL. Yes.

Mr. BOGGS. I do not know, but I do not think so.

Mr. ROBERTS. On that point, if the chairman would let me say one thing, we have a system in Alabama whereby a disabled veteran, for instance a paraplegic, who is not able to attend school, can get high school credit for his educational television work, and he will be given a certificate of graduation by the high school that he applies to on the successful completion of whatever courses it is necessary to take.

Mr. MOULDER. Will the gentleman yield for a comment at this point?

Now, many schools do conduct what they call correspondence courses to a large number of people. Do you know of any instances where that has been used in connection with television? It has been used in connection with the correspondence courses where credit is given.

Mr. BOGGS. Mr. Chairman, I do not know. I do know that this station is used almost exclusively by the universities and the secondary and primary school systems. Now, what arrangements they have insofar as credit is concerned, I am not prepared to say. I just do not know.

Mr. MOULDER. Thank you.

Can you give us any statement—your statement has been most informative and interesting—can you give us any more information about the question asked a moment ago about the educational courses conducted on this station?

Mr. BOGGS. Certainly, I can give you a full statement.

Mr. MOULDER. Thank you.

Mr. BOGGS. Thank you.

(The prepared statement of Mr. Boggs follows:)

STATEMENT BY CONGRESSMAN HALE BOGGS, DEMOCRAT, OF LOUISIANA

Mr. Chairman and members of your committee, I am happy to appear once again before you to speak in behalf of the improvement of educational television broadcast facilities throughout our country. This is an important aspect of our present-day education, and I am pleased to be asked to do what I can to shed some light on the need for expanding educational television for the benefit of our children.

Mr. Chairman, the latest figures I have show that today there are 54 educational TV stations on the air in our country, and 10 more such stations are presently under construction, and some of these will be in operation by the end of this year. In other words, only about one-fifth of the channels designated by the Federal Communications Commission for educational TV stations have been utilized. It has been 9 years since the FCC first reserved about 12 percent of all its channels for noncommercial educational use, and I think many more educational stations would be on the air today if communities had had a helping hand from the Federal Government to pay for the establishment of these facilities. The basic problem has been a lack of funds with which to establish the stations. I understand that experience has shown that once an educational TV station has been built, then the State government, or the city government with the aid of the local school systems, of local foundations and of the general public have been successful in raising the necessary money to pay for the operating costs to keep the station on the air.

I don't think I have to sell the members of this committee on the present value—and more important—the future potential of educational television as a means of providing our Nation with a versatile medium to present instruction to our children—both graphically and dramatically. Among the many uses that colleges and secondary and elementary schools are making today with educational television include: in-school instruction; in-service education for teachers; out-of-school programs for children; programs for preschool children; and the presenting of essential administrative information for large groups, such as library orientation, testing procedures, and others; providing high school and college telecourses for adults, and other programs for the general education of the community—these are some of the things which our schools are doing to provide greater education for both children and adults.

But, Mr. Chairman, I think we could help expand the number and the effectiveness of educational television stations across the country by providing Federal support to those communities in those States which can show that they are willing and able to provide the necessary operating and maintenance costs once the station is established. Although many communities—such as my own, New Orleans—have raised enough money without Government funds to establish their own station (WYES-TV), and to continue to operate it, the Federal Government could do much to increase the number of educational TV stations by helping those communities—through the State governments, or a State educational TV agency, or through a nonprofit corporation or association formed for the primary purpose of presenting educational TV programs—to establish these facilities in the first place, or to improve those already in operation.

My bill—H.R. 645—would provide Federal grants of up to \$1 million in each of the 50 States and the District of Columbia for the establishment of or the improvement of educational television broadcast facilities within any State. In order to be eligible for receipt of this Federal aid, a State agency or a private organization properly constituted to engage in the presentation of educational TV broadcasting, must obtain this authorization by, and I quote from my bill—

“(a) Making application therefor in such form as is prescribed by the commissioner; and

“(b) Providing assurance satisfactory to the commissioner—

“(1) That the necessary funds to operate and maintain such facilities will be available;

“(2) That the operation of such facilities will be under the control of (a) the State agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a nonprofit founda-

tion, corporation, or association organized primarily to engage in or encourage educational television broadcasting, (c) a duly constituted State education television commission, or (d) a State controlled college or university; and

"(3) That such facilities will be used only for educational purposes.

Mr. Chairman, my bill is explicit in stating that the Federal grants would be provided for "establishing or improving television broadcasting facilities"—for the "acquisition and installation of apparatus necessary for television * * * broadcasting or the improvement of television broadcasting; and does not include the construction or repair of structures to house such apparatus, * * *"

Furthermore, it provides that the Federal Government will have no control over the educational television stations even though they were constructed with these Federal grants.

I would like to say at this point that I think it is very important that nonprofit foundations or associations be included as eligible to receive Federal grants for the establishment and the improvement of educational stations. In my own city—New Orleans—WYES-TV was established by a group of public-spirited citizens representing the educational, cultural, civic and business interests in that metropolitan community. The point I wish to make here is that I do not feel the Federal funds for educational TV—whether in the form of outright grants or on a matching fund basis—should be provided only through the State Governments or through a State educational TV agency, or the State public school superintendent's office. I think that Federal grants should also be made available to nonprofit corporations, or associations, formed for the specific purpose of providing educational television to the citizens (children and adults alike) of a community, without any supervision or direction from the State government. In other words, that the Federal money could go directly to such a nonprofit corporation as the one which established WYES-TV, without having to be channeled through the State government, or a State agency, which was to supervise the proposed station's programing.

Two years ago when I testified before your committee, I remember there being some questions raised about proper safeguards to insure that nonprofit corporations or associations—not connected with the State government—would utilize the Federal funds for educational TV purposes in the right manner.

Well, I think the Department of Health, Education, and Welfare, and the FCC, would see to it that only a fully competent, properly formed nonprofit corporation or association—with the primary or sole purpose of providing educational television broadcasting to the children and the adults of a community—would be eligible to receive Federal grants to establish or to improve an educational TV station.

In the case of WYES-TV in New Orleans, the stated purpose of the Greater New Orleans Educational Television Foundation, Inc., licensee of the station, is as follows:

"To construct and operate a noncommercial educational television station to be used for transmitting educational, cultural and informational programs not normally available to the viewing public, and also to make available to educational institutions the facilities and trained personnel of the station for the formal instruction of students at various age levels, including adults." I think that is a pretty clear, definite statement of purpose, Mr. Chairman.

I might say that I am very proud of the achievements of WYES-TV over the past 3½-plus years (in fact, it will be 4 years this April) since the station went on the air. It has done much to broaden the education of the children in our public, parochial, and private schools, and to give them a greater grasp of many subjects in their curricula. It also has provided university lecture series for viewers, and other adult informational programs through the aid of various departments and professors at Tulane University, Loyola University, and other institutions of higher learning. In short, these devoted leaders in my community—who founded this station with the aid of local foundations, the various school systems, the colleges and universities, and the public at large—have provided New Orleans and the surrounding parishes with a fine vehicle for the educational and cultural enrichment of children and adults alike.

Furthermore, WYES has expanded its broadcasting hours so that it is now on the air from 9 o'clock in the morning until 10 o'clock at night Monday through Friday, with the exception of a 2-hour-and-15-minute period between 3 p.m. and 5:15 p.m. each day. This means the station broadcasts almost 11 hours per day; about 75 percent of its programing is produced by WYES and school officials as

live programing. Of the almost 54 hours of broadcasting each week, a full 30 hours is presented for in-school classroom instruction for elementary and secondary school pupils; another 4 hours is devoted to children's after-school programs, and the remaining 20 hours to adult programs at night, ones offering university lectures and other informational programs of national and local interest.

The fact that I have praised WYES for having done a fine job in its first nearly 4 years of operation, there is still no question but that a Federal grant to this station, and to many other already established stations over the Nation, would be of great help in permitting it to expand its facilities, and consequently improve its programing. At present, WYES-TV has an operating budget each year of something over \$200,000, which as I have said, is provided jointly by the city's universities and colleges, its public and parochial school systems, a couple of local foundations and civic-minded citizens of the whole community. I feel confident that my community will continue to raise this operating money each year, but it is often a tight squeeze to reach their minimum operating goal. The budget is always close, and there is little money to spare. The station operates with only 26 or 27 full-time employees, and upward to a dozen part-time college students who work for a nominal wage. Thus, the total expenditures of WYES are minimal in comparison to those of any commercial TV station.

What, you ask, would WYES do with a Federal grant to expand and improve its facilities, and thus improve the quality and scope of its programing?

Mrs. Marion Abramson, who is on the station's board of trustees and serves as coordinator for the station, has told me Federal money would be used to increase the power of the transmitter so that WYES would have a broadcast radius greater than its present 40 miles, and consequently would reach more schools than we now do in the present seven parishes. This would give the station a stronger and an improved signal. She said the station also would like to buy the equipment required for a mobile unit which would enable the station to increase its flexibility in programing by presenting for the classroom dramatic civic events and affairs.

Duff Browne, who was the station's first general manager for nearly 4 years and has just gone with the National Educational TV and Radio Center, told me in my office last week that other expansion would include the opening of a second studio and the expansion of the control room facilities. Mr. Browne explained to me that the station plant, which was constructed at cost, was built so that the large room now being used as a storeroom adjacent to the present single studio could quickly become a second studio with very few renovations required. This second studio would be almost as large as the present one, and was built just for that future eventuality. This concludes my statement, Mr. Chairman.

Mr. MOULDER. The next witness is our colleague, the Honorable Clifford G. McIntire. Mr. McIntire, we will be glad to hear you at this time.

STATEMENT OF HON. CLIFFORD G. MCINTIRE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MAINE

Mr. MCINTIRE. Mr. Chairman and members of the committee, my legislation, H.R. 2910, and other such legislation designed to assist educational institutions in the purchase of TV facilities represents an effort to tap a truly dynamic educational potential and to provide a monumental national benefit. This is so because TV, by its very nature, poses as an excellent medium for projecting education to a broad range of the public. It would serve, in effect, to tie together the educational efforts within and between States, thereby making education comprehensive and national in nature.

Of course, it should be recognized immediately that television education cannot, at this time, serve as a replacement for classroom education. The classroom is the very core of our Nation's educational system. It can, however, be utilized as a splendid supplement to education in the schoolroom.

There is, Mr. Chairman, an avid desire for educational TV abroad in the land, with only a shortage of dollars frustrating the satisfaction of this yearning. Legislation such as H.R. 2910 would, through providing modest financial assistance to the States, bring this desire closer to realization.

The benefits associated with educational TV are prominently apparent, for this type of transmission would bring to both students and adults alike an opportunity to deepen and broaden their educational opportunities. Values would be generated that defy measurement in dollars and cents, and there would be rewards that would more than compensate for the costs associated with TV educational development.

Under my legislation a grassroots educational television development at the State level would become possible, availing education the same advantages that presently come to business and industry through the electronics mass media. We would then be making available to education the identical facility that has contributed so very much to the progressive nature of the commercial complexes in our economy.

In my State of Maine, Mr. Chairman, we are already getting off the ground with educational TV, for the University of Maine and other educational institutions such as Bates, Colby, and Bowdoin are already particularly active in this regard. Educational TV legislation such as is now before this committee would undeniably lend an impetus to the efforts of educational institutions in Maine and throughout the other States. It would enable such institutions to proceed at a faster rate in the direction of a comprehensive and effective system of educational TV that would bring enhanced educational benefits to all of the citizens of America.

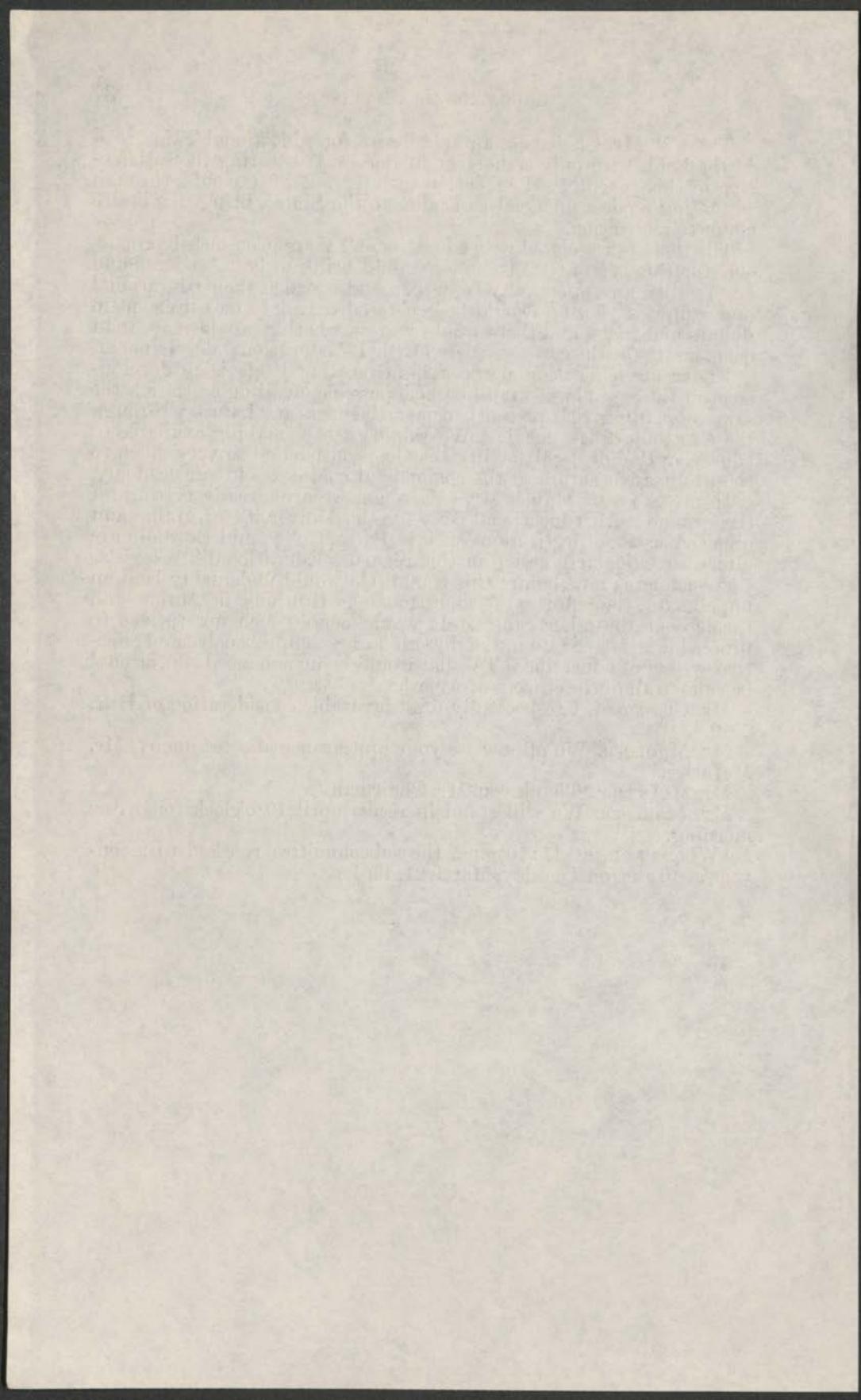
Mr. Chairman, I respectfully urge favorable consideration of H.R. 2910.

Mr. MOULDER. We appreciate your appearance and testimony, Mr. McIntire.

Mr. McINTIRE. Thank you, Mr. Chairman.

Mr. MOULDER. We will stand in recess until 10 o'clock tomorrow morning.

(Whereupon, at 11:10 a.m., the subcommittee recessed to reconvene at 10 a.m. on Tuesday, March 21, 1961.)



EDUCATIONAL TELEVISION

TUESDAY, MARCH 21, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND POWER OF THE
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 1334, New House Office Building, Hon. Morgan M. Moulder (chairman of the subcommittee) presiding.

Mr. MOULDER. The subcommittee will be in order.

We are honored by having as the first witness the distinguished chairman of our committee, Mr. Harris.

STATEMENT OF HON. OREN HARRIS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARKANSAS

Mr. HARRIS. Mr. Chairman and members of the committee, I do not necessarily want to be considered as a witness as the term implies. But I did want to have a brief word to say at the outset, in order to express some feelings that I have had with reference to the subject matter which the subcommittee has under consideration, and that is, a Federal program to give emphasis to the educational television throughout the United States.

I have had some reservations in the past with reference to the Federal Government becoming involved with the financial responsibility for this kind of a program. However, the fact is that these frequencies which constitute a valuable resource are not being utilized as it was intended when the Federal Communications Commission set aside a certain number of channels in the United States for educational television.

These circumstances, it seems to me, should be recognized, and I am now of the opinion that we ought to work out something in some way that would give added emphasis to this program and get these channels into the service for which they have been reserved.

I want to compliment the subcommittee for holding hearings and giving consideration to this legislation. I should be glad to give my cooperation to the subcommittee.

As chairman of the full committee, I shall be glad to arrange for whatever program might be necessary in order to enable this subcommittee to work out something that would be appropriate to go to the floor of the House.

I would like to add this: I introduced a companion bill to the bill which passed the Senate last year. I did so at the request of the chair-

man of the sister committee on the other side, since we are partners in legislating in this field.

I might say, in all frankness, however, Mr. Chairman, that I am not thoroughly satisfied with the program that has been worked out by the other body and which was passed last year and which, apparently, is on its way again this year.

Our committee held hearings last year and worked out a bill. That bill was reported and the Rules Committee failed to give us a rule. I went along with it, as the members of this committee know, but I was not satisfied with that legislation and I am not satisfied with it today.

The reason why I am not satisfied with that bill or the Senate bill is that I do not think it has been explored sufficiently just what the results will be under the proposed program and how far the States will go in making use of Federal grants for educational television.

I am not satisfied that this committee received enough information in its hearings on this program in the last Congress to determine adequately just what the States will do with it. We did undertake to send members of this committee to various places throughout the country. The record does not show, however, with regard to many of these States whether or not they would utilize this program insofar as their own State operations are concerned.

For many States we did get that information. North Carolina and Alabama are examples, and many others. But in the case of many of the States we have no information whatsoever on whether they will set up an educational television program in their State and utilize Federal grants toward that end.

And for that reason I am not satisfied with what the committee did during the last Congress in connection with this program. And I want here to request this subcommittee to get the best information we can from every State in the Union as to what each State can do and will do under his program if we will provide Federal funds for it. And I think that this is important if we are to get anything through this Congress which will assist the Federal Communications Commission in the efforts which the Commission has made over many years in connection with educational television, and if we are to help the many Members of Congress who have tried to do something in this field.

A basic question has to be resolved, and, that is, will the States cooperate with the Federal Government and what can we expect from them? And until we get that answer I am not going to be satisfied with the program.

And I come here for the purpose of throwing out this challenge to the people who are most interested. What this committee needs is not only testimony from some organizations that have members, laudable as that may be, but actual information as to what we can expect from the States that we must depend upon to carry out this program. That is precisely the purpose of my coming down here to make this statement instead of making it from up there. I think it is important.

Mr. MOULDER. Thank you very much, Mr. Harris.

Mr. Hemphill, we will be glad to have you make your statement now.

STATEMENT OF HON. ROBERT W. HEMPHILL, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF SOUTH CAROLINA

Mr. HEMPHILL. Thank you, Mr. Chairman, and members of the committee.

I would like to make a short statement. And to file my complete statement with the permission of the committee.

Mr. MOULDER. You may do so.

Mr. HEMPHILL. Mr. Chairman and members of the committee, last year when this legislation was being considered by our committee, I received a great deal of communications from the people in South Carolina who had been conducting the experiments in educational television in my State. At the time I did not endorse the legislation nor did I oppose it because I wanted to seek some more information about it.

Since that time the success of the program in my State has been of such a nature that I felt it my duty to come here and endorse the program, which I have done, and I do today.

In view of what my distinguished and beloved chairman has said, who preceded me here, I will be glad to personally get the information from South Carolina and furnish the information for this record as to statistics, utilization, costs, or anything else that this committee may desire.

My endorsement stems from a number of facts. One is that like other States we in South Carolina have a limited source of revenue for overall school purposes. We have managed to assume our responsibility in the school construction field because we have a sales tax. But we have a problem of underpaid teacher salaries. We have problems of overcrowded classrooms, not that there is such a shortage but that because we are unable to pay the teachers, we are unable to get the teachers and we are unable to raise the money.

And this particular media of communication to my way of thinking would go a long way in solving some of our problems. And in my testimony I have attempted to emphasize the fact that I could not support this legislation unless provisions were included to adequately insure that the programs are run under State control similar to the dispensation of funds and control of the Hill-Burton funds in our hospitalization programs in South Carolina.

I would not buy and I could not endorse today any program which would give the Federal Government control over either the educational facilities used or any of the programs which the schools utilized in trying to emphasize or supplement a particular subject by the use of educational television.

With permission of the subcommittee, I would like to include in my statement certain excerpts from the newspapers which I think would be of interest to the subcommittee and certain letters which I received which would give the committee information about this experiment.

Thank you very much.

Mr. MOULDER. That will be inserted at this point in the record.

Mr. HEMPHILL. They are together with my statement, which has been handed to the gentleman taking the testimony.

That is all I have to say unless you have some questions.

(The paper and attachments follow:)

STATEMENT OF ROBERT W. HEMPHILL, FIFTH DISTRICT OF SOUTH CAROLINA

Mr. Chairman, and members of the subcommittee, I appear today in support of H.R. 132 (by Mr. Roberts of Alabama), and related bills sponsoring an increase in educational television, at a State level, through the use of Federal grants and/or loans.

I do so with the limitation that any participation by the Federal Government be on a basis comparable to that upon which the Hill-Burton funds have made available funds for the building of many fine hospitals in my State, assuring at the same time, local control and State supervision, without Federal control and regimentation. Unless such State control is included in the legislation, I would violently oppose it.

I am happy to report that my own State has been eminently successful as a pioneer in educational television and I enclose as part of my remarks an article from The State, Columbia, S.C., newspaper of January 26, 1961, commending South Carolina and its educators, and deservedly so, for the "creative enterprises," and planning ahead as was done in South Carolina's experiment in educational television, which was needed to revitalize education in our State.

"EURICH PRAISES STATE—SOUTH CAROLINA TERMED REAL PIONEER IN EDUCATIONAL TELEVISION

"'Creative enterprises' and planning ahead—such as was done in South Carolina's experiment in educational television—are needed to revitalize American education.

"Dr. Alvin C. Eurich, educational authority, made this statement here yesterday in a highly laudatory speech regarding educational television in general.

"PLAN AHEAD

"He also asked that a group to 'plan ahead,' a Commission on Educational Development, be set up to continue a probe of the 'educational frontier.'

"Dr. Eurich was addressing more than 700 State officials, educators, and members of the general assembly who turned out in Hotel Wade Hampton to hear the educator and Dr. Wernher von Braun, outer-space rocket expert.

"The proposed commission would sponsor new experiments, disseminate information about new educational developments, promote adoption of successful developments, and recommend necessary legislation.

"Dr. Eurich, vice president of the Ford Foundation and director of its Educational Advancement program, took issue with the concept that classes must be small for quality education.

"We need to examine critically the fixed teacher-student ratio (1 teacher to 30 students in elementary school, 1 to 25 for high schools, and 1 to 13 for colleges.)

"... A half century of experimental work does not support this ratio. Students do as well on examinations, and in many cases better, if taught in larger classes by superior teachers.

"It should be self evident . . . that the quality of the teacher is the paramount consideration. It is hard to imagine anything more stultifying than a bad teacher in a small class.'

"This, he said, is merely transmitting 'mediocrity in an intimate environment.' 'Television teaching, he stressed, should not be used exclusively, but it is a device that helps to communicate to the student effectively, he said. All devices to aid teaching should be used, he added.

"Results of previous demonstrations indicate that, in general, students learn as well or better by instruction over TV as they do in traditional classroom work,' he said.

"A Florida county saved \$3 million in school construction in 3 years and \$300,000 a year in teacher pay through the use of television, he said.

"OUTLINES BENEFITS

"Educational television provides, he said:

- "1. Able teachers.
- "2. Allows the use of instructional resources, such as eminent guests, motion pictures, and scientific equipment that cannot be used in individual classrooms because of a cost factor.

"3. Holds attention of pupils because the teacher can look directly into the eyes of every listener.

"4. Top instruction can be preserved on tape for future use.

"5. Higher quality instruction at lower cost per pupil.

"6. Makes better use of physical facilities of schools, such as auditoriums which are often vacant.

"7. Helps educate teachers and future teachers for the techniques of the best teachers can be viewed by all.

"8. Practically assures better instruction preparation in that every teacher who appears on TV will be witnessed by other teachers and will be open to their criticism.

"9. Allows schools to provide instruction in important areas for which few teachers are prepared, such as foreign languages.

"10. Forces a revision of curriculums to cut out the nonessentials and focus upon the significant substance of learning.

"SOUTH CAROLINA CHARTING COURSE

"Dr. Eurich said, 'South Carolina is clearly charting a new course for a genuine Statewide system of education.

"The eyes of every other State are focused upon you with more than casual interest. You have here a proving ground for educational television which is urgently needed.

"Only through such creative enterprises will we push forward the educational frontier.

"Only by testing thoroughly the new means of teaching and learning can we develop a school and college system adequate for the 20th century.

"In my view, the success of your venture is already assured in a measure incalculable today.

"Future generations will be ever grateful for your pioneering work in making the best teachers available to all the children,' he said.

"Agriculture, industry, science and technology have forged ahead of education,' he stated. 'The explosion in education must be dealt with constructively, imaginatively, and on a scale that matches its magnitude,' he told his audience.

"We have expanded the curriculum, often without any particular order, logical or psychological sequence, or even point of view.'

"HOLLINGS, CAUTHEN PRAISED

"Dr. Eurich also lauded Governor Hollings' 'forward step' in appointing a committee on higher education to take a look into the future.

"Solomon Blatt in a brief address credited John K. Cauthen with being the 'father of educational TV in South Carolina.'

"Gov. E. F. Hollings introduced Dr. von Braun and Lt. Gov. Burnet R. Maybank introduced Dr. Eurich, Superintendent of Education Jesse T. Anderson introduced special guests, and the Rev. George E. Meetze, senate chaplain, gave the invocation.

"Guests included: Gen. Mark W. Clark, The Citadel; Dr. Robert L. Sumwalt, University of South Carolina; Dr. Robert C. Edwards, Clemson College; Dr. Charles S. Davis, Winthrop College; Dr. H. Wright Spears, Columbia College; and Dr. Marshall W. Brown, Presbyterian College.

"Others included: A. L. M. Wiggins, Hartsville, chairman of the Governor's Committee on Educational Advancement; Miss Harriett Mason, president of the South Carolina Education Association; Brown Mahon, president of the South Carolina Association of School Boards; Guy L. Varn, vice president of the South Carolina Education Association; Henry Sneed, president of the South Carolina School Administrators' Association; R. M. Jeffries, Jr., chairman of the South Carolina Educational Television Commission; Mrs. J. A. Henry, president of the South Carolina Parent-Teacher Association; public school superintendents and principals from all parts of the State, and many other department heads, deans, and officials from colleges and the State department of education.

"The Armed Forces were represented by Maj. Gen. H. D. Ives, commanding officer of Fort Jackson; Maj. Gen. Thomas G. Ennis, commanding officer of Parris Island Marine Base; Col. G. J. Dix, commanding officer, Shaw Air Force Base, and Capt. Harry Cox, representing Rear Admiral McManes, commandant of the Sixth Naval District, Charleston Navy Yard.

"State officials included Adjutant General F. M. Pinckney, retired Adjutant General James C. Dozier, State Treasurer Jeff B. Bates, Comptroller General E. C. Rhodes, State Auditor J. M. Smith, Chief Highway Commissioner S. N. Pearman, Attorney General Daniel R. McLeod, retired Marine Corps Gen. L. G. Merritt, director of the legislative council, and others.

"John K. Cauthen, of Columbia, was chairman of the special committee sponsoring the program."

I enclose also as part of my remarks another article which appeared in the Greenville News, Greenville, S.C., Tuesday, December 29, 1960, as follows:

"SOUTH CAROLINA CLOSED-CIRCUIT TV IS FIRST IN THE WORLD

"Dr. William L. Bowden from the Southern Regional Education Board, which works closely with the Southern Governors Conference, recently spent an entire day studying the South Carolina educational television system. One of Dr. Bowden's principal assignments for several years has been to survey ETV programs throughout the South.

"'You have overwhelmed me,' Dr. Bowden declared at the end of the day. 'A miracle has been performed in South Carolina. My whole concept of the use of television will have to be substantially changed.'

"TWO KEY PHASES

"His enthusiastic conclusions were based largely on two key phases of the South Carolina program:

"1. The total application of the closed-circuit system, except for supplementary open-circuit cooperation from stations WNOK-Columbia and WUSM-Charleston.

"2. Total use of video tape to prepare all lessons in advance and to preserve what may be desired for repeated use in future years.

"Most other States, starting their experiments ahead of South Carolina, went naturally into the prevailing method of open-circuit as used in commercial television. Where closed-circuit has been used in other States, it has been largely within the confines of a single school or college, such as at Clemson College in this State.

"South Carolina advocates saw at once that open-circuit TV would be forever limited to just one channel, meaning that there could never be more than 12 half-hour subjects a day, and that since there are 12 years of school, there could be an average of only one subject a day for each class.

"This was, however, not the only open-circuit dead-end, because the Federal Communications Commission, which absolutely controls open circuits, had allocated only four educational channels to this State—a VHF channel at Charleston, with half of the coverage area being over the ocean, one UHF in Columbia, and two UHF channels in the Piedmont, with an effective coverage at best of only 20 to 25 miles. Moreover, there was no guarantee as to what the FCC might order in the future with channels under its supervision. In essence this would cover approximately one-third the area of the State.

"CLOSED-CIRCUIT PLAN

"So, then, what about closed-circuit broadcasting?

"It was in this field that South Carolina became a pathfinder as evidenced by Dr. Bowden's conclusions. It was known only that closed-circuit TV would allow as many channels with as many subjects as might be desired with perfect reception at every point.

"Closed-circuit facilities are the property of private enterprise telephone companies, and these companies already had extensive existing facilities, with eventual complete microwave coverage of the State in future plans.

"The principal difficulty was that there was no closed-circuit educational network anywhere in the Nation, and no telephone company anywhere had cost figures. In short, ETV advocates in South Carolina were looking for information which did not exist.

"This problem, however, was to become a challenge to Walter G. Edwards, general manager of Southern Bell Telephone in South Carolina, and the other top men in the telephone organization. A force of engineering, maintenance, and cost experts began a concentrated study which lasted 4 weeks. These experts worked day and night pioneering in areas which had not been explored any-

where else in the world. State Superintendent of Education Jesse T. Anderson and Dr. C. B. Seaborn of the State department, cooperated in the preparation of special maps of every county, locating precisely every high school in the State.

"The result was that the legislature could be shown that every high school in the State could be served with three channels of broadcasting, offering 36 regular daily subjects, at a total per pupil cost for the whole television project of only \$12.67 a year, or a grand total of \$3,800,000 a year. This cost also includes the 3 summer months, which could be used for whatever purposes may be desired with no more TV costs.

"The legislature was so impressed that it appropriated all that was asked for the 1960-61 school year—\$643,000, which made possible expansion of the experiment into 30 schools in 11 counties via closed-circuit, and the inclusion of over 60 other schools which volunteered to receive parts of the program over the co-operating open-circuit commercial stations.

"Thus did South Carolina begin the establishment of the first statewide closed-circuit ETV system anywhere in the world."

In previous considerations of this legislation, I have been somewhat reluctant to endorse anything that smacked of Federal aid to education, but I recognize the benefits received in certain areas of my State from impacted areas' legislation, and while we have had the Federal money, we have not had the Federal control. I will, therefore, work to make sure the legislation has a provision against Federal control, or I will not support it. I have here a letter from Mr. R. Lynn Kalmbach of Dreher High School, Columbia, S.C., a prominent educator in my State, formerly a fine athlete at the university, and a schoolmate of mine at the University of South Carolina. This was in connection with the legislation last year, but it is the same legislation which we have this year.

Let me make it plain, since the communications facilities, including the newspapers, will probably carry this statement, that, since last year I have studied at some length the educational productiveness and potential in my State and I am determined that closed circuit educational television under local or State control offers a great opportunity in this day of crowded classrooms, difficulty in getting teachers, and the problems which plague us because of underpaid teachers.

This is not an endorsement of Federal aid to education generally, but an endorsement for a program which has produced. The letter from Mr. Kalmbach is as follows:

SOUTH CAROLINA EXPERIMENT IN
CLOSED CIRCUIT EDUCATIONAL TELEVISION,
Columbia, S.C., February 29, 1960.

HON. ROBERT W. HEMPHILL,
House of Representatives, Washington, D.C.

DEAR BOB: It has been my privilege to be associated with the South Carolina Experiment in Closed Circuit Educational Television since its inception over a year ago. I have been amazed at the tremendous possibilities exhibited by this media. It is my belief that the educational level of South Carolina can be raised considerably over a short period of time if this new tool is properly utilized. I believe, therefore, it would be in the interest of South Carolina for you to support the legislation presented by Representative Kenneth A. Roberts of Alabama. This bill is H.R. 10609.

It is my hope that you will stop by our studio in Columbia at an early date and allow us to present some of our findings to you.

With my kindest personal regards, I remain,

Yours very truly,

R. LYNN KALMBACH.

I also enclose other letters I received last year which spurred my interest in the possibilities of this media of education:

STATE OF SOUTH CAROLINA,
DEPARTMENT OF EDUCATION,
Columbia, January 25, 1960.

HON. ROBERT W. HEMPHILL,
*Congressman, Fifth District,
House of Representatives, Washington, D.C.*

DEAR MR. HEMPHILL: Your letter of January 19, asking that I write you relative to my thoughts and position on educational television, has been received.

We have, as you no doubt know, had an experiment in South Carolina in

closed-circuit television operated in the Columbia city schools or at Dreher High School for the past 2 years. This experiment, set up by the general assembly in charge of a lay committee, is operated under the supervision of the Columbia school system. While there has been no direct connection with the State department of education, I have had two members of my staff working with the school committee on invitation of the school superintendent, Mr. Guy L. Varn; Miss Elizabeth Ketchen and our high school supervisor, Mr. David Stoney until last July and since that time, Mr. E. M. Morrow.

The results of the experiment thus far are encouraging. We feel that it has potentialities in the educational field, but I doubt that the experiment has gone far enough to justify the State's trying to enlarge the project to take care of the State of South Carolina with our limited prospects for tax funds.

Then another project that is being tested out in other areas of South Carolina is the North Carolina project developed with Ford Foundation funds which is piped into South Carolina and used in high schools from Spartanburg on around to Florence and Kingstree. Through the assistance of the TV station in Florence, any school is able to get the instruction in history and science for a 30-minute period each, each day at a nominal cost of \$10 per year for instructional plans. I have noted that, in my hometown of Florence, all of the high schools, including the Negro high school, are using the television instruction for half of the periods.

I have mentioned both of these for the reason that I have not come to any conclusion as to whether television would be most economical and advantageous through closed circuit or open circuit. Most of the experimental projects that are going on throughout the Nation are financed by the Ford Foundation, but South Carolina has never sought any foundation money.

As you know, I am not an advocate of Federal aid to education, but such aid has been most satisfactorily handled in various areas of education—vocational training, school lunch, and now the National Defense Education Act. I see no reason why it could not be equally well handled in implementing the expansion of the use of television for educational purposes if the Congress should see fit to do so. I do feel, however, that such aid to be most effective should be channeled through the authorized State agency for education as have the Federal programs I have just mentioned. Since supervision of instruction is a part of the responsibility of State departments of education, any money from the Federal Government which is to be applied to improving instruction should be handled by the State departments of education.

With the low salaries that are being paid to school teachers generally, many children under our present program are not being taught by outstanding teachers while, with the possibilities of utilizing television, it is possible for all students to have a part of each period under an excellent teacher; and, even though television will not take the place of the teacher, I believe that it is not only a great aid in our school program but is a wonderful agency for the education and enlightenment of our adult population.

You will probably recall that Miss Elizabeth Ketchen of my staff invited you before Christmas to visit the closed-circuit experiment in Columbia but you were prevented from doing so because of a previous engagement. I hope that the first time you are in Columbia you will look in on this and also give some consideration to the open-circuit use that is being made of the North Carolina program by the counties bordering North Carolina.

With good wishes, I am,
Sincerely yours,

JESSE T. ANDERSON,
State Superintendent of Education.

DEPARTMENT OF EDUCATION,
CHESTER COUNTY,
Chester, S.C., February 3, 1960.

In re education television.

HON. ROBERT W. HEMPHILL,
*Representative, Fifth District, South Carolina,
House Office Building, Washington, D.C.*

DEAR ROBERT: This will acknowledge receipt of your letter of January 19 in regard to education television. I have given this matter considerable thought since receiving your letter, and, while I am not too familiar with the subject, there are certain observations that I would like to make as follows:

I feel that there is a real future in television for educational purposes. Quite a bit of study has been given by a committee of the South Carolina Teachers Association on this subject, and while no final report has been made, it is the feeling of the committee that education television can be used as a tool in furthering quality education.

I am happy to find that the Federal Government is interested in this field and hope that continued study will be undertaken to determine how this tool might be best used in the schools.

I am not at all familiar with the various proposals for distribution of funds for this subject. However, I agree with you that whatever proposals are made, that the States should be absolutely free to control the distribution within its area and there should be no Federal control of money after it reaches the State level.

In fairness to all States, I feel that part of the money, perhaps half, should be distributed on the basis of school enrollment. The other half might be distributed perhaps on the basis of so much per State.

I would appreciate anything that you can do to further the cause of education from the national level, and I further appreciate this opportunity to communicate with you in regard to this particular subject.

With best wishes, I am,

Cordially yours,

C. B. BLAKELY,
County Superintendent of Education.

CHESTERFIELD COUNTY DEPARTMENT OF EDUCATION,
Chesterfield, S.C., January 26, 1960.

Re educational television.

HON. ROBERT W. HEMPHILL,
Congressman, Fifth South Carolina Congressional District, House Office Building, Washington, D.C.

DEAR MR. HEMPHILL: In connection with your letter of January 19, 1960, I would say that television is here to stay as a teaching aid and as a means of strengthening the educational program. As you know the question of Federal aid to education is a controversial one; however, Federal aid is coming into all of the schools through the school-lunch program, the vocational program, and National Defense Education Act funds; therefore, it seems to me that if Federal funds can be had with controls no greater than the vocational program or the National Defense Education Act funds, it would be well to use them to strengthen our educational setup.

The local school districts and counties are experiencing difficulty matching National Defense Education Act funds and are unable to use, in some instances, the maximum amount available, due to the inability of the districts financially to match the Federal money, and I believe the districts and counties would experience the same difficulty trying to match Federal funds for educational television.

Here in Chesterfield County we are operating with a rather high tax mileage with an extreme need for additional funds to maintain the educational program at status quo. I am sure that all school officials would welcome the added impetus that educational television would give to the curricula, but would experience financial difficulties or even the weakening of the program in other areas if it were necessary for local funds to be made available for the matching of Federal support. Since we have no desire of weakening the program in any respect, but to make progress instead, I believe the Federal funds for educational television would be most advantageous in the form of a grant.

I hope that the comments I have made will be of some value to you in the forming of your opinion on this matter.

Your continued interest and help in the area of education is very greatly appreciated, and I assure you of my interest and cooperation in all matters for the improvement of Chesterfield County and South Carolina.

With every good wish, I am,

Yours very truly,

J. H. C. DALRYMPLE,
County Superintendent of Education.

During the recess of this Congress and upon returning in January, I made a study of our State educational system. I found certain deficiencies which seem to exist all over the Nation. I think we can cure these deficiencies in part by the use of this new opportunity in teaching.

I do not mean to replace the present methods of teaching. My ambition is only to supplement those teaching methods because I realize that in the fields of geography and science, and many other fields, we can have video tapes which we can pass around to various schools or on closed-circuit television, which will give us such a wide coverage that we can impress the children—who look at television anyway—with the possibilities and opportunities of life ahead.

In the field of chemistry and science, the progress and developments are so vast and so sensational that it is almost impossible to conceive.

These are only some of the fields. In the field of languages, the potential of quick and proper emphasis on phonetics is almost unlimited.

Last year I watched a class in Russian being presented here over the television. While I did not take the course, because of limited time, I talked with some of those who did and the results were magnificent.

It is my sincere belief that the use of this medium as a supplement to education will make it possible for us to increase the capacity of the teacher and thereby make available funds for teachers skilled in using the supplemental aids to such a degree that we can upgrade his or her salary and meet that problem.

Recently I have been reading of the experiment of the Chicago Junior City College, which resulted in their finding that the average child can be taught exclusively by television. If that is true, we have a great opportunity on our hands as legislators on this matter.

I hope the bill will be reported with the limitations of local and State control.

Mr. ROGERS of Texas. I want to commend the gentleman from South Carolina for the great contribution he always makes. His remarks on this subject—which I think is a most important subject, one that ought to have the views of everyone before we go too far—are most important. And I think it is an area in which I think we should make a great deal of progress over the years.

I am sure that you have a great interest in it and I thank you for your remarks, and for the fine job you have done in this respect, as well as others.

Mr. HEMPHILL. Thank you, Mr. Rogers.

Mr. AVERY. Of course, I desire to join with my friend from Texas in his remarks to Mr. Hemphill for giving us the advantage of his thinking.

Knowing something of the general philosophy of the gentleman from South Carolina, whom I respect very much, I was not quite sure how he translated his philosophy of being able to support this aid to educational television and why Federal assistance to education in other areas, such as school instruction, becomes a problem.

Would you elaborate on that.

Mr. HEMPHILL. I will be happy to.

In the field of school construction, as I pointed out to the subcommittee, we have a sales tax which gives us a source of revenue. Unfortunately, for educational needs in South Carolina, as in many other States, the Federal Government has preempted so many sources of revenue that we have a very limited field of revenue for our school purposes. And we are doing a magnificent job with what we have.

This program which has been carried on in experimental television has been a pilot program which we have found as a supplemental program; not a substitute for the ordinary means of teaching but as a supplement to the ordinary means of teaching which has been a great help to us and has raised the level of knowledge and the impact of the subject matter on the students themselves.

If we could get some help, either by matching grants or loans or whatever else the bill may include at the end of the deliberation of the subcommittee, then we would have some funds with which to expand this which we greatly desire to do.

And I might tell the gentleman from Kansas that I have just come from a briefing in which I was exposed to information about the education of this Nation in the field of English composition, in the field of social sciences, and I find there is an overall deficiency, to some extent, in the knowledge of too many high school graduates in the United States in those particular areas.

And I am not talking about the average—I am talking about the high school student who is in the upper part of his class.

The subject has been so interesting to me that during the last year I conducted a personal investigation in connection with some of my appointments to the academies because I wanted to know why I was having certain difficulties. And as a result of that and the study of what has been done and what can be done, I felt that it was only my duty to come here and endorse the idea, not necessarily legislation in form, but the idea of trying to be of some help.

I think we have an opportunity that we should not miss. I think the Federal Government can give the impetus. And I think so long as there is local or State control, it can do so. And that is my endorsement.

Mr. AVERY. I am not quite sure that I caught the distinction between this kind of Federal aid and the aid for school construction.

Mr. HEMPHILL. I did not attempt to make any comparison.

Mr. AVERY. Then I misunderstood your testimony.

Mr. HEMPHILL. I did not mention Federal aid for school construction.

Mr. AVERY. But if you do feel that this comes in the same general category, though, as the Federal aid for school construction, I have no further questions. I felt that the gentleman was trying to separate the philosophy of Federal aid for educational television from the concept of Federal aid to education.

That is what I am trying to understand, the difference.

Mr. HEMPHILL. I think the gentleman misunderstood me entirely. I was pointing out to the gentleman, which I have done on the floor of the House of Representatives on many occasions when the gentleman was present, what my State had done in the field of school construction. I am proud of it.

When you go into the field of Federal aid to education, there are a good many facets. For instance, there is the impacted area legislation for which I have consistently voted because I felt it was a very fair thing and the Federal Government has not taken control as everybody thought it would.

There is a general field of Federal aid to education which many people either support or oppose on the issue of whether or not the Federal Government shall control or would take control.

I am as much opposed to the Federal Government taking control as the gentleman from Kansas. And I know his views and I admire him along that line; but in this particular area, as I said in my testimony, if provision is made—and I think there has been an attempt to make provision—it is not an accomplishment—of making provision

in the legislation for the local or State government to control it such as Hill-Burton funds, then I think that is an area of agreement and an area of opportunity that I cannot afford to sit idly by and not support.

Mr. AVERY. Are you suggesting that there should be further refinement in the bill to set out guidelines to the FCC, or merely let them exercise control under general law, under the FCC Act of 1934 as amended?

Mr. HEMPHILL. I think there should be guidelines. I think it should be a help to them and protection to those of us who seek the protection of State-local control rather than Federal control. And I think they would welcome it. And we ought, I think, if the bill comes up for debate on the floor of the House of Representatives, to make the record clear that it is the intent of Congress that this shall be administered by the states, similar to the Hill-Burton funds which are administered by the State on a State level.

So far as I can determine, there has been no Federal control which would interfere with the State administration of its hospitals and its health programs under the Hill-Burton Act.

Mr. AVERY. Thank you very much. I would like to thank the gentleman from South Carolina.

Mr. HEMPHILL. I thank you for your questions.

Mr. AVERY. And for the clarification you have given.

Mr. HEMPHILL. Thank you.

Mr. MOULDER. Thank you very much.

Mr. HEMPHILL. Thank you again.

Mr. MOULDER. The next witness is the Honorable Newton M. Minow, Chairman of the Federal Communications Commission.

We are pleased to have you with us, Mr. Minow, and glad you can be here to appear before the committee.

Mr. HARRIS. I would like to interrupt at this moment, if I might be permitted, Mr. Chairman, in joining the chairman of this subcommittee in extending a cordial welcome to Mr. Minow to this committee.

I would like to note that this is his first appearance, I believe, before a committee on this side, and certainly, before this committee, since he has taken over as Chairman of the Federal Communications Commission.

The Federal Communications Commission had its birth in this committee. And all legislation which he is called upon to administer, comes from this committee.

That fact, of course, is well known to the new Chairman of the Federal Communications Commission. And I am sure that this committee will have many other occasions of having Mr. Minow with us with reference to problems which he and his colleagues will encounter in administering the laws which the Congress enacts in the field of communications.

I note, also, that he has with him Mr. Ford, who is the immediate past Chairman of the Federal Communications Commission. And so this committee should be able to receive the full benefit of the thinking of the Federal Communications Commission.

STATEMENT OF HON. NEWTON N. MINOW, CHAIRMAN, FEDERAL COMMUNICATIONS COMMISSION, ACCOMPANIED BY FREDERICK W. FORD, COMMISSIONER; D. W. PINCOCK, ASSISTANT GENERAL COUNSEL; AND HYMAN GOLDIN, CHIEF ECONOMIST, FEDERAL COMMUNICATIONS COMMISSION

Mr. MINOW. It is a great pleasure for me to be here for the first time in my new capacity as Chairman of the Federal Communications Commission.

I am particularly pleased that I shall be here today in support of the objectives of the legislation which you are considering.

H.R. 132 and H.R. 5099 would amend the Communications Act of 1934 by authorizing appropriations of Federal funds of \$10,000 for each State to survey the need and to develop programs for the construction of educational television facilities therein.

These proposals would further authorize the appropriation of up to \$1 million for applicants from any one State to assist (through matching grants) the construction of educational television facilities.

They further provide that the Federal share of the total cost of construction of any such television facility will not exceed 50 per centum thereof.

Both the approval of funds for the survey and the making of the matching grant would be made by the Secretary of Health, Education, and Welfare.

H.R. 645, H.R. 965, and H.R. 2910 would authorize the appropriation of funds not to exceed \$1 million in any State, for establishing or improving educational television broadcasting facilities. Applications for such assistance would be made to and approved by the U.S. Commissioner of Education.

Under these proposals, applicants would be required to provide assurance satisfactory either to the Secretary of Health, Education, and Welfare or to the Commissioner of Education, that necessary funds would be available to operate and maintain such facilities, that such facilities would be used only for educational purposes, and that their operation would be under the control of an agency or officer responsible for supervision of public education within the State or a local subdivision thereof, or a nonprofit educational television broadcasting organization, or a duly constituted State college or university, or one deriving its support in whole or in part from public revenues.

Under these bills, the Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of the proposal as may be requested by the Secretary of Health, Education, and Welfare or the Commissioner of Education.

They further specifically provide that nothing therein shall be deemed to give the Secretary of Health, Education, and Welfare or the Commissioner of Education any control over television broadcasting, or to amend any provision of, or requirement under, the Communications Act.

The Commission is most anxious to cooperate in any program which will assist the development of educational television. As we understand these provisions, they do not contemplate any change in the present responsibilities of the Commission and would in no way conflict with the Communications Act.

The Commission has long been aware of the need for and the potentialities of educational television and has set aside 268 television channels (both UHF and VHF) for noncommercial educational use. However, at the present time, there are only 54 such stations on the air.

The Commission is cognizant of the many advantages and benefits of educational television and that it presents opportunities for schools to improve their educational systems; far advanced courses not otherwise available because of classroom and teacher shortages; for increased adult education; and that it affords outstanding teachers and lecturers an opportunity to reach enormous audiences. Educational television is a technique just beginning to make its presence felt, and the Commission is convinced that it could and should play a more significant part in American education.

The growth of educational television has to some extent been inhibited by a lack of funds. It is apparent to the Commission that there is a real need for financial assistance to educational television if it is to achieve its ultimate potential in the immediate future.

However, the question of the whether Federal funds should be appropriated to assist the States in establishing or improving educational stations is one of fundamental substantive policy for the judgment of Congress.

The Commission strongly endorses the objectives of these proposals, but would defer to those responsible for their administration concerning the details of the bills.

Attached as an exhibit are tables showing the current status of educational television.

Commissioner Rosel H. Hyde has already transmitted to the committee by letter his personal views in support of the objective of these proposals.

I also have a statement of my own views concerning educational television which I will be glad to present at this time. Because I feel strongly about this, I should like to make a statement, as my colleague, Mr. Hyde, did, of my personal views.

In urging the use of Federal funds for educational television, I believe that a widely available, adequately financed noncommercial educational television service is vitally necessary to improve our educational communications system.

As the distinguished chairman, Mr. Harris, stated this morning, the television airwaves are a precious natural resource. I feel that they should be used to educate and elevate, as well as to entertain. And I feel that the Government of the United States should assist through an educational service so that our Nation could have an unparalleled opportunity for experimental programing, for real diversification of program fare and for cultural advancement as well as for education.

In view of the present lack of funds in many areas to meet station construction costs, I believe the Federal aid is needed, particularly to advance the date of construction and to permit extensive rather than minimal operation.

I recognize, of course, that the amount of funds to be allocated to this project, as against other worthwhile legislative programs, is a matter for the judgment of the Congress. But I do wholeheartedly endorse the use of Federal funds to aid in improving or establishing educational television broadcasting facilities.

Thank you, Mr. Chairman. I will be pleased to try to answer any questions.

(The attachments follow:)

APPENDIX

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C.

NONCOMMERCIAL EDUCATIONAL TELEVISION

The following tables present data on:

(a) Number and total percent of TV assignments reserved for noncommercial educational purposes (table 1).

(b) The additions and deletions of noncommercial assignments since the sixth report and order (table 2).

(c) The total demand for educational channels (based on all authorized stations plus pending applications) (table 3).

(d) The present status of noncommercial stations showing the number on the air; authorized but not yet on the air; and the number of pending applications (table 4).

(e) A list of the communities in which any change in the educational reservation has been made since the sixth report and order (attachment A).

(f) A list of the individual educational institutions which already have noncommercial stations on the air; authorized but not on the air; and pending applications (attachment B).

(g) A list of educational institutions operating commercial TV stations (attachment C).

TABLE 1.—Total number of assignments in assignment table and number and percent which are reserved for noncommercial educational television, Feb. 4, 1961

	VHF	UHF	Total
Total (commercial and noncommercial).....	679	1,543	2,222
Noncommercial educational reservations:			
Number.....	90	178	268
Percent.....	13.2	11.5	12.1

TABLE 2.—Changes in the number of noncommercial educational television assignments between April 1952 (6th report and order) and Feb. 4, 1961

	VHF	UHF	Total
As of April 1952 (6th report and order).....	80	162	242
Changes since 1952:			
Added.....	+14	+22	+36
Deleted.....	-4	-6	-10
Net change.....	+10	+16	+26
As of Feb. 4, 1961.....	90	178	268

NOTES

A: Does not include channel changes in the educational reservations which were made within the VHF band or within the UHF band.

B: See attachment A for list of individual communities where educational reservation changes were made.

TABLE 3.—Number and percent of total educational reservations which have been granted or for which applications are pending

	VHF	UHF	Total
Total educational reservations (Feb 4, 1961).....	90	178	268
Total demand as of Feb. 4, 1961: ¹			
Number.....	46	28	74
Percent.....	51.1	15.7	27.6

¹ Includes all authorized stations plus pending applications. See table 4 for breakdown including stations utilizing commercial channels.

TABLE 4.—Noncommercial educational TV station data, as of Feb. 4, 1961

	VHF	UHF	Total
Authorized stations:			
On the air.....	¹ 39	² 15	54
Not on the air.....	³ 8	⁴ 12	20
Total authorized.....	47	27	74
Pending applications.....	2	5	7
Total authorized stations and pending applications.....	49	32	81

¹ Includes station WMSB, Onondaga, Mich., which is operating noncommercially on a share-time basis with a commercial station.

² Includes stations WNED-TV, Buffalo, N.Y.; KOKH-TV, Oklahoma City, Okla., and KRET-TV, Dallas, Tex., which are operating noncommercially on commercial channels.

³ Includes two stations (Waycross, Ga., and Mayaguez, P.R.) which will operate noncommercially on commercial channels.

⁴ Includes station in Tacoma, Wash., which will operate noncommercially on a commercial channel.

NOTE.—Station KTHE, Los Angeles, which operated between August 3, 1953, and September 10, 1954, ceased operation and requested cancellation of its construction permit on February 9, 1955. Station WKAR-TV, East Lansing, Mich., which operated, between January 13, 1954, and June 28, 1958, noncommercially by Michigan State University on a commercial channel, requested cancellation of its construction permit on July 21, 1958, prior to its switch to a VHF channel on a share-time basis. Two construction permits (Ann Arbor, Mich., and Albany, N.Y.) were canceled in 1960 at the request of the educational institutions before stations were constructed.

ATTACHMENT A

LIST OF COMMUNITIES WHERE CHANGES WERE MADE IN EDUCATIONAL RESERVATIONS BETWEEN APRIL 1952 (SIXTH REPORT AND ORDER) AND FEBRUARY 4, 1961

Group I: Educational reservation changed from UHF to VHF:

Evansville, Ind.	Reno, Nev.
Carbondale, Ill.	Fargo, N. Dak.
Lincoln, Nebr.	Lubbock, Tex.

Group II: Educational reservation changed from VHF to UHF:
University, Ala. College Station, Tex.

Group III: Educational reservation added, VHF:

Andalusia, Ala.	Appleton, Minn.
Munford, Ala.	Lexington, Tenn.
Monroe, La.	Sneedville, Tenn.
Alpena, Mich.	

Group IV: Educational reservation added, UHF:

Andalusia, Ala.	Escanaba, Mich.
Birmingham, Ala.	Houghton, Mich.
Demopolis, Ala.	Kalamazoo, Mich.
Dothan, Ala.	Marquette, Mich.
Florence, Ala.	Mount Pleasant, Mich.
Munford, Ala.	Bowling Green, Ohio
Opelika, Ala.	Pittsburgh, Pa.
Tuscaloosa, Ala.	Cookeville, Tenn.
Amherst, Mass.	Crossville, Tenn.
North Adams, Mass.	Milwaukee, Wis.

Group V: Educational reservation deleted from community, VHF
Eugene, Oreg. Weston, W. Va.¹

¹ VHF reservation added June 11, 1954, deleted Jan. 30, 1957.

ATTACHMENT B
Noncommercial educational television stations and applicants, Feb. 4, 1961

State	City	Call letter	Channel No.	Educational institution	Date		Application pending
					Granted	On air	
Alabama	Andalusia	WAIQ	2	Alabama Educational TV Commission	Mar. 9, 1955	Aug. 8, 1956	
	Birmingham	WBIQ	10	do	Oct. 13, 1954	Apr. 28, 1955	
	Montgomery	WCIQ	26	do	June 2, 1954	Nov. 28, 1954	X
	Murfreesboro	KAET	7	do	June 2, 1954	Jan. 30, 1961	
Arizona	Phoenix	KAET	8	Board of regents of the universities and State colleges of Arizona	July 16, 1958	Mar. 8, 1959	
	Tucson	KUAT	6	University of Arizona	July 22, 1953	Apr. 2, 1954	
	San Francisco-Oakland	KQED-TV	9	Bay Area Educational TV Association	July 30, 1958	Mar. 2, 1959	X
California	Sacramento	KVIE	6	Central California Educational Television	July 1, 1953	Jan. 30, 1956	
	San Bernardino	KRMA-TV	24	San Bernardino Valley Joint Union Junior College District	do	do	
	Denver	WCTB	6	School District No. 1 in city and county of Denver	Jan. 29, 1953	Jan. 30, 1956	
	Bridgport	WEDH	71	Connecticut State Board of Education	do	do	
	Hartford	WEDH	24	do	do	do	
	Norwich	WCTN	63	do	do	do	
Florida	Gainesville	WUFT	5	Board of Control, for and on behalf of University of Florida	Apr. 16, 1958	Nov. 10, 1958	
	Miami	WTHS-TV	2	The Board of Public Instruction of Dade County	Nov. 12, 1953	Aug. 1, 1955	
	Jacksonville	WJCT	7	Educational Television, Inc.	Feb. 27, 1957	Sept. 10, 1958	
	Tallahassee	WFST-TV	11	Florida State University	Oct. 22, 1959	Sept. 13, 1960	
	Tampa-St. Petersburg	WEDU	3	Florida West Coast Educational TV, Inc.	Sept. 19, 1957	Oct. 27, 1958	
Georgia	Athens	WGTV	8	Regents of the university system of Georgia	Sept. 5, 1956	May 23, 1960	
	Atlanta	WETV	30	Board of Education of City of Atlanta	Mar. 21, 1956	Feb. 17, 1958	
	Savannah	WEGA-TV	9	Georgia State Board of Education	Feb. 17, 1960	do	
Illinois	Waveross	WXGA-TV	18	do	Apr. 9, 1959	do	
	Carbondale	WSIU-TV	8	Board of trustees of Southern Illinois University	Nov. 19, 1959	do	
	Champaign-Urbana	WILJ-TV	12	University of Illinois	Nov. 4, 1953	July 14, 1955	
	Chicago	WTTW	11	Chicago Educational Television Association	Nov. 5, 1953	Sept. 6, 1955	
	Des Moines	KDPS-TV	11	Des Moines Independent Community School District	Dec. 12, 1955	Sept. 14, 1959	
	Manhattan	KSAC-TV	8	Kansas State University of Agriculture and Applied Science	July 24, 1952	do	X
Iowa	Lawrence	WFPK-TV	11	University of Kansas	Jan. 3, 1958	Sept. 8, 1958	
	Louisville	KLSE	15	Board of trustees, Louisville Free Public Library	Dec. 14, 1955	Mar. 9, 1957	
	Monroe	WYES-TV	13	State Department of Education, State of Louisiana	Feb. 16, 1955	Apr. 1, 1957	
	New Orleans	WGBH-TV	2	Greater New Orleans Educational TV Foundation, Inc.	July 15, 1953	Jan. 10, 1955	
	Boston	WGBH-TV	8	WGBH Educational Foundation	July 14, 1954	Aug. 10, 1955	
Massachusetts	Detroit	WTWS	56	Detroit Educational TV Foundation	Sept. 3, 1958	Mar. 15, 1959	
	Onondaga-East Lansing	WMSB	10	State board of agriculture	do	do	
Minnesota	St. Paul	KTCA-TV	2	Twin City Area Educational TV Corp.	June 20, 1956	Sept. 2, 1957	
	Kansas City	KCSB-TV	19	School District, Kansas City	Mar. 24, 1960	do	
	St. Louis	KELN-TV	4	St. Louis Educational TV Commission	May 6, 1953	Sept. 13, 1954	
Nebraska	Lincoln	KLNH-TV	11	University of Nebraska	Oct. 15, 1952	Nov. 1, 1954	
	Durham	WENH-TV	11	University of New Hampshire	Oct. 1, 1958	June 22, 1959	

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New Jersey	WTLV	New Brunswick	19	New Jersey Department of Education.	Dec. 3, 1952	May 1, 1958	
New Mexico	KNME-TV	Albuquerque	5	Regents of University of New Mexico.	Oct. 23, 1957		
New York	WQTV	Binghamton	46	University of the State of New York.	Aug. 13, 1952	Sept. 8, 1959	
	WNET-TV	Buffalo	17	Western New York Educational TV Association.	July 24, 1952		
	WTVF	Ithaca	23	University of the State of New York.	Jan. 7, 1953		
	WJET	New York	14	do.	Aug. 13, 1952		
	WREG	Rochester	25	do.	July 24, 1952		
	WROH	Syracuse	21	do.	Sept. 17, 1952		
	WHTV	Syracuse	43	do.			
North Carolina	WUNC-TV	Utica-Rome	25	Consolidated University of North Carolina.	Sept. 30, 1953	Dec. 17, 1954	X
Ohio	WCET	Chapel Hill	4	Greater Cincinnati TV Educational Foundation.	Dec. 2, 1953	July 29, 1954	
	WOSU-TV	Cincinnati	48	Ohio State University.	Dec. 22, 1953	Sept. 19, 1955	
	WGTE-TV	Columbus	34	Greater Toledo Educational TV Foundation.	Apr. 27, 1957	July 1, 1960	
	WUOB-TV	Toledo	30	The president and trustees of Miami University.	July 18, 1956	Oct. 14, 1959	
Oklahoma	KETA	Oxford	13	Oklahoma Educational Television Authority.	Dec. 12, 1953	Apr. 8, 1956	
	KOKE-TV	Oklahoma City	14	Independent School District No. 89 of Oklahoma County.	Feb. 11, 1953	Jan. 26, 1959	
Oregon	KOPD-TV	Tulsa	11	Oklahoma Educational Television Authority.	July 21, 1954	Jan. 12, 1959	
	KOAC-TV	Corvallis	10	State of Oregon, State Board of Higher Education.	May 1, 1957	Oct. 17, 1957	
Pennsylvania	WHYY	Portland	16	WHYY, Inc.	Sept. 8, 1956	Jan. 30, 1957	
	WQED	Philadelphia	35	do.	Mar. 28, 1956	Sept. 19, 1957	
	WQEX	Pittsburgh	10	Metropolitan Pittsburgh Educational TV Station.	May 13, 1953	Mar. 19, 1957	
Rhode Island		Providence	36	Board of Education, State of Rhode Island and Providence Plantations.	Nov. 12, 1958	Mar. 20, 1959	X
South Dakota	KUSD-TV	Vermillion	2	University of South Dakota.	Mar. 30, 1960		X
Tennessee	WKNO-TV	Nashville	2	Nashville Educational TV Foundation.	Nov. 25, 1955	June 25, 1956	
Texas	KERA-TV	Memphis	10	Memphis Community TV Foundation.	July 30, 1958	Sept. 11, 1960	
	KLFB-TV	Dallas	13	Area Educational TV Foundation.	Aug. 20, 1952	May 8, 1953	
	KXUT-TV	Houston	8	University of Houston.	May 21, 1958		
	KMET-TV	Lubbock	23	Texas Technological College.	Aug. 3, 1960	Feb. 29, 1960	
	KLGN	Richardson	18	Richardson Independent School District.	Sept. 28, 1960		
Utah	KWGS-TV	San Antonio	17	Southwest Texas Educational TV Council.	Mar. 9, 1960	Oct. 3, 1960	
	KUTB	Utah	7	Utaher County School District.	Dec. 12, 1956	Jan. 6, 1958	
Washington	KCTS	Salt Lake City	7	University of Washington.	Dec. 23, 1953	Nov. 18, 1954	
	KPEC-TV	Seattle	56	Clover Park School District No. 400, Pierce County.	Oct. 22, 1958	Apr. 1, 1960	
	KTPS	Tacoma	62	Tacoma School District No. 10.	Jan. 13, 1960	Mar. 26, 1954	
Wisconsin	WHA-TV	Madison	21	University of Wisconsin.	Oct. 7, 1953	Oct. 28, 1957	X
	WMVS-TV	Milwaukee	10	Board of vocational and adult education.	June 6, 1956		
Puerto Rico	WIPM-TV	Mayaguez	3	Department of Education of Puerto Rico.	Feb. 3, 1959	Jan. 6, 1958	
	WIPR-TV	San Juan	6	do.	Feb. 2, 1955		

1 Will operate noncommercially on a commercial channel.
 2 Operating noncommercially on a share-time basis with a commercial station.
 3 Operating as a noncommercial educational station on a commercial channel.
 4 Operating as a noncommercial educational station on a commercial channel.
 5 Operating as a noncommercial educational station on a commercial channel.
 6 Will operate noncommercially on a commercial channel.
 7 Will operate noncommercially on a commercial channel.

ATTACHMENT C

Commercial television stations operated by educational institutions, Feb. 4, 1961

State	City	Call letters	Channel No.	Educational institution	Date on air
Indiana	South Bend	WNDU-TV	16	University of Notre Dame	July 2, 1955
Iowa	Ames (Des Moines)	WOL-TV	5	Iowa State College	Feb. 21, 1950
Louisiana	New Orleans	WWL-TV	4	Loyola University	Sept. 7, 1957
Missouri	Columbia	KOMU-TV	8	University of Missouri	Dec. 21, 1953
Texas	Beaumont-Port Arthur	KPAC-TV	4	Port Arthur College (50-percent ownership)	Oct. 22, 1957
Wisconsin	Green Bay	WBAY-TV	2	Norbertine Fathers (St. Norbert College)	Mar. 17, 1953

Mr. MOULDER. We certainly thank you and I want to say we appreciate your coming before the committee this morning.

Mr. MINOW. Thank you.

Mr. MOULDER. You have made a very fine statement.

Mr. MINOW. Thank you.

Mr. MOULDER. Mr. Rogers of Texas.

Mr. ROGERS of Texas. Mr. Minow, do you feel that the allocation of 12 percent of the available television channels for educational purposes is fair under the circumstances?

Mr. MINOW. Well, there is a lot of history involved here, as you know, Congressman Rogers.

I think that if we could fully utilize the UHF part of the spectrum, where a lot of the stations reserved for education are, I think it would be fine. I think there would be room for adequate nationwide television networks.

Mr. ROGERS of Texas. Do you think that the 12 percent is sufficient to meet the requirements of the needs of the Nation insofar as educational TV is concerned?

Mr. MINOW. I would think so. Do you want to comment on that?

Mr. FORD. That depends. At the present time the 12-percent allocation is more than has been taken up.

The question is how it develops in the future.

I doubt, seriously, whether that is going to be adequate.

One of the committees of the National Association of Educational Television Broadcasters is presently in the process of a study as to how much more they might use.

And I would think that it might develop that considerably more than 12 percent could be used very profitably by the educational community in the United States. Presently, of course, the 12 percent is more than adequate.

Mr. ROGERS of Texas. That fact, of course, is before us. The reason that the present 12-percent allocation is not being used is due, in large part, to lack of funds on the part of those groups that would engage in educational TV; is that correct?

Mr. FORD. That is not entirely true, because we have got this UHF-VHF problem.

Mr. ROGERS of Texas. Yes.

Mr. FORD. And as you know, we have this all-channel receiver legislation we are hoping will solve that problem. And to me this is one of the essential ingredients in getting educational television off the ground and a nationwide system in operation.

We have the authority, of course, at the present time to assign additional channels to educational television as are needed. And the Commission has indicated no hesitancy at all to do that where they are requested.

Mr. ROGERS of Texas. Mr. Minow, in relation to the contribution of funds, the use of Federal funds, do you look upon that, insofar as this bill is concerned, as more of a practice of the Federal Government moving in and trying to help develop a matter that is solely under Federal jurisdiction, as opposed to some back-door Federal-aid-to-education program?

Mr. MINOW. Well, I feel that it is really the first. Nobody other than the Federal Government can regulate television. And we do not have any State facilities nor could we have every State take over the regulation of television.

So I would think that this is consistent with the former.

Mr. ROGERS of Texas. That is all, Mr. Chairman. Thank you.

Mr. MINOW. Thank you.

Mr. MOULDER. Mr. Younger, of California.

Mr. YOUNGER. We are glad to have you before us.

Mr. MINOW. Thank you.

Mr. YOUNGER. How are those 54 educational channels now divided between the VHF and UHF?

Mr. MINOW. We have a table, Congressman Younger, attached to the statement. It works out 39 of them are VHF and 15 are UHF.

Mr. YOUNGER. Would there be any advantage to try and utilize more of those channels that are not now used in the UHF?

Mr. MINOW. Yes, it certainly would. The Commission is taking steps to do that, sir.

Mr. YOUNGER. Would it be possible to put all of the educational channels into that spectrum and release the reservations of the VHF for commercial use?

Mr. MINOW. It would really depend. Those educators that have VHF now as that where I come from, in Chicago, where there is one educational channel, which is a V, would be very reluctant to give it up.

A real answer to your question would have to await what we can use on the full UHF part of the spectrum.

If we could use all of them, then it might be feasible but I would certainly hesitate to say that any of the educators who have V's now would be willing to surrender them.

Mr. YOUNGER. You will have to make some adjustments some day on this.

Mr. MINOW. Yes.

Mr. YOUNGER. We have to have both. If we are starting in on a new program of educational TV, would it not be better for the Government to compensate these stations that are now in the VHF, have them transferred over, so as to make all of the channels available for commercial use in that field, in that spectrum?

Mr. MINOW. I think if we ever could have the all-channel receiver, so that everybody in the country could receive the UHF as well as the VHF, and if the educators ever completed the network plan, that that might be a feasible solution. But I would hesitate to commit us now to take any position on it.

Mr. YOUNGER. Thank you. That is all.

Mr. MOULDER. Mr. MOSS.

Mr. MOSS. At that same point, if we were to change all to UHF operation at this time, we would impose additional penalties on many of the viewers, because of the cost of conversion; would it not?

Mr. MINOW. Well, except any plan to use all of that would have to be done over a period, so that everyone could make the adjustment as painlessly as possible.

Also, the cost of the conversion now, in our judgment, is not so great as it was years ago. And we feel that this should not prevent anyone from being able to receive both the UHF and VHF service.

Mr. MOSS. My point goes to the conversion of educational television stations.

Mr. MINOW. On the UHF?

Mr. MOSS. Lacking an all-channel receiver.

Mr. MINOW. This would be a hardship.

Mr. MOSS. Many of these stations are supported by subscription, voluntary subscriptions.

Mr. MINOW. Yes.

Mr. MOSS. By their viewers.

Mr. MINOW. Yes.

Mr. MOSS. That is the case of my own home community. It would impose an additional burden, which may be less than a few years ago, but it would still be a penalty on the viewers who wish to participate in the television program.

Mr. MINOW. Yes, I think it would.

Mr. MOSS. It would be about \$15 to \$30 a set.

Mr. MINOW. That is right.

Mr. MOSS. I am interested in the proposal of legislation to require all-channel sets. Do we not run into an interesting constitutional question in that legislation?

Mr. MINOW. I am told that even the lawyers for the industry realize it is constitutional.

Mr. MOSS. You have to license manufacturers to require that.

Mr. MINOW. What you do—the proposal we have in mind would simply be to prohibit the shipment in interstate commerce of sets which are not equipped to receive all channels which, I think, would be on sound constitutional grounds.

Mr. MOSS. There is no precedent for taking jurisdiction in that fashion.

Mr. MINOW. Our purpose, sir, is to try to put the U's and the V's on the same basis, so that people would be able to receive both.

Mr. MOSS. I think it is most commendable. I regret that it was not done when we first had licensing of television. And not creating this imposition where the V is used by everybody and the U has been neglected; and as a result, we have not had the development we should have had.

And I think many who foolishly invested their money in UHF stations lost a great deal when V's were licensed in the same area.

Mr. MINOW. We are making some progress, as in several recent actions of the Commission in California, which goes a long way toward making use of U stations. You will be interested in that.

Mr. MOSS. That is all.

Mr. MOULDER. Mr. Avery.

Mr. AVERY. Mr. Minow, we are glad to have you with us for the first time this year.

Mr. MINOW. Thank you.

Mr. AVERY. I presume that we will be seeing you more throughout the session. It will be a pleasure, I am sure, to continue the informal and friendly relationship between the Commission and the legislative branch.

I have read quite a number of statements you have made, Mr. Minow. I have tried to familiarize myself with your general philosophy as a Commissioner. And I regret that I have not had the opportunity to discuss it with you personally, so that I might be better informed, but I have gained the distinct impression that you, personally, are concerned with the responsibility of the Commission in the way of evaluating programing. Is that a fair statement?

Mr. MINOW. I am, sir.

Mr. AVERY. You feel that the regulatory jurisdiction of the Commission not only clothes you with the authority but with the responsibility and to make such adjustments as you feel are in the public interest in television programing generally?

Mr. MINOW. Well, I think it would be more accurate, Congressman Avery, to put it this way: I feel that when the Commission makes a choice in awarding a license, the licensee promises to do certain things in operating in the public interest. When his license comes up for renewal, I feel very strongly that the Commission should check to see whether, in fact, he has lived up to his promises. And if he has not, then I feel that the Commission should take appropriate action.

Mr. AVERY. All right. That is, generally, what I tried to cover; that is what I had in mind.

Do you feel that that same responsibility would fall true in the field of educational television?

Mr. MINOW. We would never be concerned with what is taught, that is, you know, what subjects, or what time it is on or anything like that, but what we would be concerned with is that anyone who is awarded an educational channel would truly be a noncommercial station and would be involved in noncommercial educational programing. That would be the extent of our concern.

Mr. AVERY. Are you saying, Mr. Minow, that your only consideration is whether they are noncommercial then?

Mr. MINOW. Well, we have a regulation—

Mr. AVERY. Yes; I am aware of that.

Mr. MINOW. What we would do—

Mr. AVERY. That is about the only regulation, I might add, that I am familiar with, dealing exclusively with educational TV.

Would you have questions beyond that (noncommercial aspects) when this licensee comes back to renew his application, for television broadcasting in education, would there be any other aspects of his log or his programing that would attract your attention other than just the commercial or noncommercial aspect of the programing?

Mr. MINOW. I would think, no; we would not be interested at all in what was taught, what subjects or anything of that nature. All we would care about there was no advertising and was it being conducted as an educational station.

As you know, under some of these bills before you, other departments of the Government would be involved in some of the State

plans for the use of the channels, but I would not regard this as being within the province of the Federal Communications Commission.

Mr. AVERY. That would be largely administrative?

Mr. MINOW. Right.

Mr. AVERY. As to programing, if I understand you correctly.

Mr. MINOW. Right.

Mr. AVERY. We grant a certain amount of responsibility to the licensee under section 315, for example. Are you saying that you would not be concerned as to the way a licensee conducts himself?

Mr. MINOW. Yes. We are vitally concerned with equal time provision; that they give candidates for political office what the law requires, absolutely.

Mr. AVERY. Then there would be an aspect other than commercial and noncommercial?

Mr. MINOW. Yes. Insofar as our general regulatory powers of the FCC Act are concerned, I think they would all carry over to the educational, as well as the commercial station.

Mr. AVERY. I think that is a very important point. We have just a few pilot projects. And as far as implementing any Commission authority over educational television programing, we do not have 25 years of experience, nor any precedent for that. Although I do not believe we can write that in the legislative history, nevertheless, I think it would be important that some of these are brought out, rather than putting them in the legislative history.

I was interested in your presentation and what brought it to my attention was on page 3, where you state there in the second sentence that:

They further specifically provide that nothing therein shall give to the Secretary of Health, Education, and Welfare or the Commissioner of Education any control over television broadcasting, or to amend any provisions thereof, or requirement under the Communications Act.

Of course, as I construe that, and correct me if I am wrong, the responsibility of performance under the license to an educational broadcaster, the responsibility for the performance will rest solely with the FCC?

Mr. MINOW. Under its general directives.

For example—

Mr. AVERY. And the responsibility of the Department of Health, Education, and Welfare will terminate as soon as they have finished their administrative directive under this bill for the allocation of funds? They are completely out of the picture?

Mr. MINOW. That is my understanding.

Mr. AVERY. The responsibility from that point on is solely in the FCC?

Mr. MINOW. That is correct.

Mr. AVERY. And you will be concerned, under all of the terms of the act and Commission rules, for broadcasting plus the noncommercial provision that applies specifically to educational stations?

Mr. MINOW. Exactly, exactly. For example, we would be concerned, as everyone else, with character qualifications, financial qualifications, and so on, but we would just carry over our regular policies and directive and add to it the noncommercial policy.

Mr. AVERY. I think that will need further development. I think we have laid a foundation for a mutual understanding. I think with my colleague here we can go into that later. Thank you.

Mr. MINOW. Thank you.

Mr. MOULDER. Mr. Sibal.

Mr. SIBAL. I have no questions.

Mr. MOULDER. Mr. Minow, we certainly thank you for coming before the subcommittee and we have enjoyed having you with us.

We will be glad to have you stay with us during the rest of the session.

Thank you very much.

Mr. MINOW. We thank you. I will be here.

Mr. MOULDER. I have a letter addressed to me from Commissioner Hyde which will be made a part of the record.

(The letter follows:)

FEDERAL COMMUNICATIONS COMMISSION,
Washington, D.C., March 21, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN MOULDER: I refer to the bills before your subcommittee proposing Federal aid to educational television. The Federal Communications Commission has submitted a statement favoring the objective of the proposed legislation but stating that the question of whether Federal funds should be appropriated to assist the States in establishing or improving educational stations is one of substantive policy for the judgment of Congress. I agree with this statement, but I would recommend that Congress provide financial aid for educational television as a means of expanding our educational facilities and as a manner of improving our national communications system. I believe that this recommendation is consistent with the action heretofore taken by the Commission in allocating television station assignments for operation of noncommercial educational television stations.

The establishment of educational television stations throughout the United States would provide service from a different basis than the commercial services now available. This would provide real diversity as to approach and a more meaningful choice than is now usually available to the public. This, I believe, would conduce to improvement in the quality of all broadcast services.

Respectfully submitted.

ROSEL H. HYDE, *Commissioner.*

Mr. MOULDER. The next witness is Mr. T. E. Tyler, chairman of the Arkansas State Committee To Study Educational Possibilities of Television.

(No response.)

Mr. MOULDER. Mr. Edward C. Lambert is next.

(No response.)

Mr. MOULDER. Mr. Raymond Hurlbert, general manager of the Alabama Educational Television Commission. We are glad to have you with us.

STATEMENT OF RAYMOND D. HURLBERT, GENERAL MANAGER, ALABAMA EDUCATIONAL TELEVISION COMMISSION

Mr. HURLBERT. Alabama educational television is in its seventh year, and we operate the first educational television network in the Nation.

We have felt that from the beginning this was an opportunity for a State with one of the lowest per capita incomes in the Nation to afford an equal opportunity to every boy and girl and every stu-

dent in the State. Not only does this medium, we feel, afford and is proving to be, an opportunity for the best instruction for everyone, for where else can you find a medium that can provide the highest type of instruction for every boy and girl in the State?

Not only is this a matter of being afforded to all of the public schools and all schools in the State, but it is an opportunity for doing such work as rehabilitation.

I would like to read into the record here a letter from a student who remains in his home because of paralysis and is here telling some of the benefits he has received.

He is taking a ham radio course, and he says:

I am still weak in the code but I am progressing, I hope. I have been listening in for 3 weeks and using my handbooks, not the same as you specified—

meaning that he could not afford those books—

and a little study correspondence from the University of Alabama and that is time-consuming. Last week I got nothing except a simple "E.T." and so forth. And I did not put them down in the quiz. However, this week I am making my first attempt at copying it, not too good but better. One thing that slows me down is my cerebral palsy handicap and my trying to copy the typed sending of this code and trying to remember two or three characters ahead of myself, missing some and so on. However, I will not think about not doing it. I am going to be able to copy eventually. And, also, send not with my hands and fingers, but with my toes and feet.

This is an unusual case, I am sure you will understand. But here is a youngster who is learning to send and receive the code with his toes and feet.

We have heard much testimony, and probably you will hear a great deal more on the in-school and the value of this medium as an instructional aid and supplement to teaching.

Mr. YOUNGER. Are you reading from your statement?

Mr. HURLBERT. No, sir; I was adding to that.

Mr. YOUNGER. Do you want your statement published in full in the record and then you want to make this explanation, or do you want to make the explanation and then read your statement, too?

Mr. HURLBERT. I would like the statement and material with it included in addition to my statement here, if you please.

Mr. ROGERS of Texas. Without objection, your statement as furnished to the committee will be included in the record together with such attachments as are attached to it, consonant with the rules of the House of Representatives, and with the approval of the Chair, and the ranking minority member.

You may proceed.

Mr. HURLBERT. I understand that you will include that as part of the record as fits the ruling; is that correct?

Mr. ROGERS of Texas. That is right. There are some publications that cannot go into the record as such, but those will be deleted and will be included in the files of the committee.

Mr. HURLBERT. Thank you.

Mr. ROGERS of Texas. According to the rules.

Mr. HURLBERT. Thank you.

I would like to stress some of the many other phases of educational television, some of the types of programing that we sometimes or too often pay too little attention to, and I am going to list such programs.

At the present time over our State network we are having a program produced by the Internal Revenue Service and the certified public accountants in the State of Alabama, which is for the specific purpose of helping people to understand how better to fill out their income tax forms.

And we have a letter—I have one here—from the Director of IRS, stating that since we have instituted this type of program the quality of the returns on the income tax forms have improved immeasurably. And he gives considerable credit to the fact that over educational television we are giving this kind of instruction.

Mr. ROGERS of Texas. You mean they are getting better information or more money?

Mr. HURLBERT. The Director seems to feel that they are having less trouble with the blanks as they come in. I don't know what the financial statement is.

We have other programs that deal with such matters as literacy. At the present time we have a literacy program in progress wherein we are teaching adults how to read and write.

Recently, Governor Patterson, of Alabama, received a Christmas card from an adult in Alabama, in this literacy program, and the Governor so stated to the press that it was the most valuable Christmas card he received. This adult had mailed this card as the first communication that he had ever written in his life.

We have hundreds involved in this literacy program at the present time.

We have YMCA programs; we have Better Business Bureau programs; AAUW programs; Girl Scout programs; art museum and civic symphony programs, sports, secondary and higher education, AFL-CIO programs, PTA programs, and so on.

All of these community-type programs contribute to a more complete picture of educational television, service, in addition to inschool and continuing education.

We have an opportunity through ETV to serve humanity and upgrade education and such culture as has not been done before in history. It provides a chance for our Government to rapidly remedy a condition that is not only necessary, but is so expedient in preventing such waste of the Nation. We have an opportunity to educate by television, and to actually raise the academic level, as well as the cultural level of the entire Nation.

I want to call your attention to the lady who said that she had an awfully good doctor and that if she could not afford the operation, he touched up the X-ray plate. We have an opportunity here to look at the educational X-ray in its true perspective and we don't need to be artificially touching it up at this hour when the Nation needs all of the educational upgrading that we can have.

I might close with the statement that in Alabama we feel that this is something we cannot afford to pass up. It is an essential, it is necessary, and, particularly, for a State where we have had so many hurdles to make to reach a level of educational standing such as we now have. This is in part due to the assistance of educational television.

Thank you.

Mr. ROGERS of Texas. Thank you.

Mr. Moss, do you have any questions?

(The paper and attachments follow:)

COMMENTS ON THE ROBERTS EDUCATIONAL TELEVISION BILL, H.R. 132, BY RAYMOND D. HURLBERT, GENERAL MANAGER, ALABAMA EDUCATIONAL TELEVISION COMMISSION, BIRMINGHAM, ALA., MARCH 21, 1961

A NATIONAL RESPONSIBILITY

Federal support is desperately needed to develop and extend ETV. Because of the magnitude of the job to be done and the lateness of the attention, ETV development becomes a national problem. Priming the pump for a more rapid instructional program is imperative if this providential instrument is to serve in as comprehensive a way as we know it can so well do. The world closes in on us while we struggle with slower learning procedures. The electronic know-how is available, and unless we seize this moment, our advantage will pass to people of other nations. Whenever and wherever has such an opportunity been afforded for instructing all the people with the best? Master teaching can now, as never before, be the privilege of all. This miracle machine can democratize educational opportunity and it behooves our country to put it to work fast. There is no better, quicker, or more efficient way of making linguists of elementary schoolchildren. Topflight scientists reach the most remote areas with the best in education. Children can now actually have their rightful educational heritage for there is available this fantastic means of keeping them abreast of the world. All of our citizens must have an even break, and the universal nature of ETV can help America retain its preeminent place in the sun. The assumption that all of the people should have ETV services presumes that there should be an adequate number of ETV broadcasting stations in operation. It is obvious that without sales income ETV has no source of funds for capital outlay and consequently has great difficulty in overcoming this inertia. This is where the Federal Government can take out educational insurance against intellectual, cultural, academic, and scientific poverty which is, in truth, national self-preservation. This assistance can set in motion a series of sequences vital to our national perpetuation and defense. Here is a great opportunity to think big and wisely in turbulent times. Let it be said that with our characteristic foresight and courage we were true to our forebears and to our children, for we know that vision is imperative to survival.

May we suggest that Federal provisions for future development of ETV also include retroactive matching of previous capital investment. Such stations now broadcasting have overcome serious obstacles to achieve their pioneering success. All national localities had the same rugged ETV pioneering opportunities. Those who did begin early and whose successful endeavors established a beachhead should be commended and encouraged with such financial recognition. It is entirely reasonable to assume that certainly at least as much new development might be expected from such encouragement of the existing operations as could be expected from yet unproven efforts. It seems most fitting that as a criteria the parable of the talents is here most timely. Where can the Government expect the best return on its investment other than where it has found proven ability, courage, and intention?

Alabama is proud to have pioneered with the first and even yet the largest State ETV network. Alabama will continue to strive toward better ETV service for all its people. Federal help can serve a great purpose in Alabama's ETV growth now when it is so sorely needed and when it would be so greatly appreciated.

EDUCATIONAL TELEVISION IS A PROVIDENTIAL INSTRUMENT

We are on the threshold of a population explosion. It will be increasingly more difficult, if not impossible, to obtain sufficient and adequate instruction for the youth of our Nation unless advantage is taken of known electronic teaching devices. Educational television has arrived at an hour it had to arrive at if we are to meet America's growing problem in public education. As late as it is, we yet have time to use this new medium in education in order to make universally available what is so imperative in instruction, "equal opportunity." We must keep abreast of the world. Some examples are here noted of this instrument's capabilities as it is now used in the State of Alabama and in many other places.

Most of us have felt the fascination of television. "I'm watching TV" stops short many a phone call. "We have to get back for a program" cuts into many an activity. After marriage the TV set in the living room has become as much a part of family life as kids, cars, and mortgages. TV personalities have made sensational impressions upon the public. The popularity of one comedian is such that he commands a mere \$25,000 per week, approximately equal to 6 years' salary for an Alabama teacher. TV's magnetic appeal for our children has affected their home and school life. Reliable tests have shown that children learn from TV as well or better than from the traditional class instruction. None can doubt the permanent role of television in national and international events, such as a presidential campaign, election, or an inauguration. Some people have even gone so far as to suggest that a prerequisite for a political candidate should be televisability.

Television's impact upon American life is a sobering phenomenon to the thinking people in our country. We do not as yet know what effect television will have upon our total cultural pattern. However, we do recognize that, as a medium for mass communication, its potentialities are unlimited. We know its universal magnetic appeal. The direction and effect of its power depends upon who uses it and what they do with it.

There is a definite demand for more positive, constructive TV programs and herein lies the appeal of educational TV. Some people have refrained from buying TV sets because they wanted more available programs of an educational type to justify the investment of their time and money. In order that television may serve in just such a manner, the FCC has allocated one-tenth of all available channels to noncommercial educational television—245 in number. The progress of educational TV in just 9 years indicated that many lay Americans are working toward establishing ETV stations in their communities. About 60 applications for stations have been filed with the FCC; some 50 stations are now in operation. The programs over most of the 50 stations already in operation are reflecting the will, the interests, and the needs of the people of the community and are bringing a wide variety of information to all. This allotment came about because of the foresight and wisdom of many educators and civic-minded citizens who believed that this great tool of modern times is the rightful heritage of all the people of our land. This new venture presents us with an unprecedented challenge.

Educational TV is believed by many to be the most significant development in the history of education since the advent of printing. It is more and more being realized that, once our citizens see the possibilities of educational TV for upgrading our citizenry and its unique suitability for community service, they enthusiastically support ETV just as they have other worthwhile community endeavors.

ETV is already increasing the general education and culture of the masses of the American people and adding strength to American democracy. Its services are helping our people keep pace with the demands of modern life. It is closing the gap between the knowledge of the few and the understanding of the many. It is opening to great viewing audiences the treasures of museums, laboratories, and libraries; the places Americans are visiting and the happenings and events that are taking place. Television is being used for integrating the efforts of worthwhile institutions and organizations into the community.

The public as well as the educators have found that they cannot afford to let go by default this providential opportunity for extending American education to all the people. Educational television provides educational agencies with the means for doing better what they exist to do, and it is accepted as an essential part of the educational process.

Educational television is bringing new meaning for "equal opportunity." The greatest teachers in the country, the facilities of the finest universities, museums, laboratories, and libraries are available even in the most remote and culturally impoverished vicinities. The glaring differences sometimes found in urban and rural education are being minimized. The TV antenna has become standard equipment in the school. ETV does not attempt to replace the personal relationship of teacher and pupil, but actually increases, stimulates, broadens, reinforces and intensifies classroom work. It is unexcelled in its ability to enrich and enlarge the students' experiences.

More than 550 schools in Alabama have already acquired receiving sets. Most of those have made ETV a definite part of the school program. TV has been used since 1955 for teaching shut-in children in Alabama. The elementary

and secondary schools of our State have many regular classroom telecasting periods per week. It is an exciting idea that many first graders entering school today will go through school having never known a world without the marvelous aid of educational television.

Tests made by the U.S. Navy in its training program show there is no significant difference in the learning from ETV and the traditionally formal classroom. Through ETV a master teacher can reach many more people and share educational aids and facilities never before enjoyed by most. An elementary science course presented by Auburn University over educational TV has had 22,500 student users. This is by far the largest group of students for any class in elementary science ever taught in Alabama or elsewhere. For this and other reasons, educational TV is increasingly more important to the economy of America. It is established that ETV is a means of helping to raise the economic level of our Nation.

It is evident that the responsibility for the success of educational TV has depended upon the vision, judgment, and courage of the educational leadership in this new venture. They have helped their communities seize the opportunity of the day to further the cause of education by carefully and wisely employing this new medium. Educators have effectively seen to it that educational television is used impartially with the scientific presentation of facts and the airing of all sides of debatable issues. Educational TV has been safeguarded against becoming a political football or allowed to be used for propaganda purposes.

With the necessary educational TV facilities, there could be made classrooms of 27 million homes. A majority of the homes in our country already have receiving sets. Television reaches more people than any other medium of communication in the history of our country. It is established that 90 percent of Alabama's schoolchildren have sets in their homes. The average family devotes 5 hours a day every day of the week to TV; the average child is exposed daily to as much TV as the time they spend at school. Frank Stewart, Alabama State Superintendent of Education, is right when he states that television and education will be increasingly more concerned with each other through the coming years.

Using educational television for mass education does not mean that we are producing mass thinking. To the contrary, because of ETV the people are able to do more thinking for themselves, which is the supreme byproduct of education. With his increased store of information the individual is better equipped to develop his own mind in his own way; to develop his own convictions. ETV gives the individual much food for thought which he must have in order to think. Presentation of the good and valuable develops the taste for the better things in life, and helps people progress. Educational television is in this way immeasurably contributing to the betterment of society.

Classroom television is concerned with demonstrations of special techniques, special type of instruction, as in the languages, sciences, art and music, cultural enrichment, and lectures of lessons by master teachers. Besides in-school programs there are after-school telecasts for children and youth. The establishment of educational TV is greatly increasing the number of desirable programs at desirable times for children. Here has been found a marvelous opportunity for character and citizenship training as well as appealing to keen youthful interests.

Other programs are designed for parent education stressing child growth and development and the importance of home-school cooperation. Programs designed for the general education of adults are probably the greatest service of educational TV. A new frontier has opened for adult education. There are cultural programs, music, art and drama; vocational and agricultural programs to improve our earning power; domestic science programs to improve our home life; civil programs for informing the electorate, etc. These programs are filling a long-felt need in strengthening education as a continuing process.

ALABAMA'S STORY

The early success of Auburn University in making its educational TV farm program a vital part of the people's lives has been a stimulus to the cause of educational TV throughout the State. As early as 1955 their studio began televising farm interest programs. Since then they have launched a program "Farm Facts" which has brought statewide approval. This program is designed to assist communities and individuals with their own agricultural problems;

a sort of "serve you on call, wherever you are" program. Today this studio produces 25 hours of educational programs every week in the school year.

In 1956 the University of Alabama began offering its regular series of TV programs known as telecourses for which college credit is given. Regular homework assignments are required. Ages of students taking the telecourse range from 19 to 68 years. An estimated 10,000 viewed the original series during its first 12 weeks.

Permission to build a station on Cheaha Mountain was applied for by the Alabama Educational Television Commission in 1954 and broadcasting began in January 1955. A 500-foot tower on top of Cheaha gives the station an elevation of 2,000 feet above the average terrain of the State. It is estimated that this station covers 60 percent of the population of the State. Channel 10 in Birmingham and channel 2 in Andalusia, Ala., added another 20 percent to the population coverage. This three-station network is connected with a microwave system that permits ETV broadcasting from the University of Alabama, Auburn University, and the Greater Birmingham Area Educational Television Association. The Alabama Educational Television Commission Programming Board is composed of the presidents of the University of Alabama, Auburn University, the chairman of the Birmingham Area Educational Television Association, the president of Alabama College and the State superintendent of education.

The Alabama Educational Television Commission is operating a network which now serves approximately 80 percent of the State of Alabama. Our Governors and our legislators, realizing the potentialities of TV for education, cooperated in helping to make possible this endeavor by means of capital outlay funds and regular appropriations. This Alabama educational television network program, as supported by the State legislature in biennium appropriations of approximately \$225,000 annually, looks forward to an extension of services to completely cover the State of Alabama.

By act of the legislature the policy and legal control ownership of the network is vested in the Alabama Educational Television Commission. Members are appointed for 10 years by the Governor, which terms are staggered. The president and officers of the commission are elected by the commission.

The Alabama Educational Television Commission has devised a broad community cooperative operation with commercial stations because there are many programs that can be exchanged. Educational television offers courses for broadcasting personnel training and studio experience for young people. This source, as a constant supply for commercial telecasters, is another service of educational television.

In Alabama commercial television and educational television compliment one another rather than compete. Commercial programs are designed primarily to appeal to majority interests and tastes and are chiefly for entertainment. Educational programs are for the purpose of bringing as many worthwhile educational experiences to individuals as possible, as well as serving minority cultural needs. Educational programs are not designed on a basis of entertainment but are planned programs to meet the educational needs of the community in as interesting a manner as possible. ETV programs need to be technically of such quality that viewers will never be conscious of mechanics of production. There are good program techniques and skilled presentations on ETV. Professional skill is as important to ETV as to commercial TV and the same skilled presentations are necessary to attract and hold the ETV viewer.

Highest professional production standards are maintained for students, performing instructors, and supervision of programings. Experience, ideas and technical knowledge are combined with professional skills and production ability to provide the best possible ETV programs.

The Fund for the Advancement of Education, one of the Ford Foundation organizations, has put in the past 3 years approximately \$100,000 per year into in-school programing of the Alabama Educational Television Network. This is for the specific purpose of experimenting with teaching on a statewide coverage basis to which the Alabama Educational Television Network uniquely lends itself. There are more than 230,000 students in the State of Alabama participating in the in-school television programing. A portion of this group is taking courses for credit. Also, the State Board of Education officially recognized educational television courses for adults toward high school certificates.

In our country and in our times, educational TV is becoming the best means whereby we may secure the most practicable continuing education for all the people. It has become a great national asset. It is democratically controlled

and truly reflective of the basic needs of the American people. By informing the electorate and increasing public understanding, educational TV seems providential as an instrument for insuring the perpetuation of our democratic society.

General Marshall said, "Wisdom in action in our Western democracies rests upon public understanding, and that this may be our 'last clear call' for the preservation of our democratic society." Thus, it would seem that our use of educational TV is of tremendous importance in helping our Nation answering this "last clear call" in our country's usual magnificent manner. ETV can help us reach greater maturity and serve mankind as it was intended with its consequent effect upon the whole world.

ALABAMA LAW

(Regular Session, 1953)

Act No. 81—S. 28—Phillips, Skidmore, and High

AN ACT Relating to education: To create the Alabama Educational Television Commission for the purpose of making educational television available to and promoting its fullest use by inhabitants of Alabama, charging the Commission with control and supervision of educational television in the State and particularly with the control and supervision of the use of channels already reserved to Alabama for noncommercial, educational use by the Federal Communications Commission; authorizing the Commission to approve and establish a plan of educational television for the State and in accordance therewith to own and operate television stations for educational purposes or to contract for their operation, and prescribe rules and regulations governing such station and the programs televised by them; and making an appropriation for effectuating the purposes of this Act

Be it enacted by the Legislature of Alabama:

SECTION 1. There is hereby created an agency to be known as the Alabama Educational Television Commission, hereinafter called the Commission.

SEC. 2. The Commission shall consist of five members who shall be residents and qualified electors of the State of Alabama, no two of whom shall reside in the same congressional district. No member of the Commission shall hold any other office of profit or trust under the United States, the State of Alabama or any political subdivision thereof. The first five members of the Commission shall be appointed by the Governor with the advice and consent of the Senate, within fifteen days after the passage and approval of this Act. One member shall be appointed for ten years, one for eight years, one for six years, one for four years, and one for two years. Their successors shall be appointed by the Governor with the advice and consent of the Senate for terms of ten years. Commissioners shall be eligible for reappointment. If a vacancy occurs at a time when the Senate is in session the Governor shall, with the advice and consent of the Senate, appoint another commissioner for the unexpired term. If such a vacancy occurs when the Senate is not in session the Governor shall appoint a commissioner who shall take office immediately, but his appointment shall be subject to confirmation by the Senate at the next session of the Legislature. If the appointment of such commissioner is confirmed by the Senate he shall serve the remainder of the unexpired term. Each member of the Commission shall be entitled to receive \$25 for each day actually engaged in the performance of his duties, not to exceed \$1,200 in any one year, plus an allowance for expenses for official travel in the State, not to exceed \$10 for each day he is entitled to compensation, and the actual cost of his transportation and no more. In the event a member uses a privately owned automobile for official travel, he shall receive six cents per mile for each mile actually traveled in attending meetings of the Commission and in the performance of his official duties.

Section 2½. (a) No member of the Commission shall have any financial interest in any facilities such as the Commission is authorized to deal with. (b) Members of the Commission may be removed from office upon impeachment on the grounds and in the manner prescribed in Section 173 of the Constitution of Alabama.

Section 3. Promptly after their appointment the Commissioners shall meet to organize. At such meeting they shall choose from their number a president, a secretary and such other officers as they deem necessary. Thereafter officers shall be elected annually. The Commission shall adopt rules regulating the conduct of its meetings and the transaction of the Business of the Commission, and may appoint such agents and employees as it deems necessary, or may dele-

gate to one or more of its members, officers, agents or employees such powers and duties as it deems proper.

Section 4. The Commission is organized for the purpose of making the benefits of educational television available to and promoting its use by inhabitants of Alabama, and to this end it is hereby empowered and directed to survey, study and appraise the need for an overall plan for the use of television facilities available for noncommercial educational use in the State. The Commission is specifically charged with the duty of controlling and supervising the use of channels reserved by the Federal Communications Commission to Alabama for noncommercial educational use. It may designate the location of stations to utilize such channels and make rules and regulations governing the operation of such stations and the programs televised over such channels. The Commission may own and operate television stations to utilize these channels, or it may contract with individuals, corporations, educational institutions, or other governmental agencies for the operation of such stations.

Section 5. The Commission is hereby authorized to execute all contracts and other instruments necessary and convenient to carry out the mandates of this Act. It may accept gifts or grants of money or property, real or personal, and voluntary and uncompensated services from any person, federal or other governmental agency, board of education, educational institution or commercial or industrial enterprise.

Section 6. The sum of \$500,000 is hereby appropriated out of any funds in the State Treasury not otherwise appropriated, and conditioned upon the condition of the Treasury and the approval of the Governor, which sum shall be used by the Commission in carrying out the provisions and purposes of this Act. Provided, however, the appropriation made in this section shall be a continuing appropriation and shall remain in force and effect until the full amount thereof has been expended by the Commission. Said appropriation shall not revert to the General Fund at the end of any fiscal year as provided by Section 104, Title 55, Code of Alabama, 1940.

Section 7. The provisions of this Act are severable. If any part or provision hereof is declared invalid or unconstitutional, such declaration shall not affect the remainder.

Section 8. All laws or parts of laws in conflict herewith are repealed.

Section 9. This Act shall take effect immediately upon its passage and approval by the Governor or upon its otherwise becoming law.

Approved June 15, 1953.

Time: 11: A.M.

I hereby certify that the foregoing copy of an Act of the Legislature of Alabama has been compared with the enrolled Act and it is a true and correct copy thereof.

Given under my hand this 16 day of June, 1953.

J. E. SPEIGHT,
Secretary of Senate.

ALABAMA EDUCATIONAL TELEVISION COMMISSION PROGRAM POLICY

SECTION I. ORGANIZATION

ARTICLE I. The AETC has contracted with three agencies, University of Alabama, Auburn University, and Birmingham Area Educational Television Association, Inc., for programs. These programs will be a result of the respective agencies working individually, cooperatively, and with commercial agencies to produce noncommercial educational programs. Civic or cultural organizations wishing to present programs should do so through one of the contracted agencies. The AETC reserves the right to have priority over network time and to substitute outstanding public interest programs for any regularly scheduled program or programs.

ARTICLE II. As licensee of the FCC, the AETC is held directly responsible for programming and the interpretation of policies for channels 2, 7, and 10.

ARTICLE III. Delegated responsibility for programs coming from the agencies rests with the respective administrative heads of the agencies. Responsibility for the content and conduct of said programs can be delegated to the Executive Committees of the respective agencies, with the understanding that the AETC has the exclusive responsibility to delete, change, modify, or refuse to broadcast any program submitted which does not conform to programming standards.

ARTICLE IV. The Executive Committee shall be composed of at least three members of an administrative level from within the programming agency; one of whom should be the Educational Television Service Director of the Agency who in turn will be responsible to the Executive Committee Chairman for his agency's programs.

ARTICLE V. Each programming agency will be responsible for its own publicity. Publicity affecting the total operation and the AETC will be the responsibility of the AETC.

SECTION II. PRINCIPLES GOVERNING ALL TELECASTS

ARTICLE I. No telecast is to place the AETC or its agencies in the position of endorsing or opposing any specific commercial products, methods, device, religious organization, civic group, political organization, or candidate for public office. All programs are to be educationally sound, accurate, and in good taste.

ARTICLE II. Commercial films may be used on these conditions:

A. As a quality program meeting AETC standards.

B. If it complies with FCC regulations: "No announcements (visual or aural) promoting the sale of a product or service shall be transmitted in connection with any program; *Provided, however,* That where a sponsor's name or product appears on the visual image during the course of a * * * program, either on the backdrop or in similar form, the portions of the program showing such information need not be deleted."

ARTICLE III. It shall be the general policy of the AETC to make any programs on the AETC network available to any other station.

ARTICLE IV. Public affairs telecasts are to be scheduled with the following conditions:

A. All persons must agree in advance in writing that arrangements for program time are equitable and otherwise satisfactory and that there will be no vituperation on the program and only a dignified discussion of issues.

B. All persons must present a typewritten original and two copies of program statements at least 72 hours prior to air time. This is subject to AETC policy and FCC regulations. The agency representative will sign, date, and file with the agency and the AETC the document used on the air.

C. Opposing factors will be given equal opportunity for air time.

D. Public affairs programs will be governed by the appropriate sections of the Federal Communications Act of 1934 as Amended, and appropriate Reports and Rules of the FCC.

Mr. Moss. Mr. Hurlbert, you were in the room and heard the chairman of the full committee express his views as to the things we on the subcommittee should determine in the course of these hearings. He expressed concern over the lack of material in the hearings conducted during the past Congress.

Will you state what you can and will do if this program of Federal aid is approved? I think Alabama has done an outstanding job in utilizing its educational TV; probably, the best of any of the States in the Union.

Mr. HURLBERT. Thank you, sir.

Mr. MOSS. What would you propose to do?

Mr. HURLBERT. What would we do?

Mr. Moss. As contemplated in the legislation now being considered by the subcommittee of the funds which would be available—how would it help you—how would it do that?

Mr. HURLBERT. In Alabama we have covered, at the present time, approximately 78 percent of the population. We need and feel it highly essential that we cover the entire State. We have sections of the State clamoring for it at the present time.

We are, in education in Alabama, suffering proration. That means that the return of taxes has not been equal to the appropriations. And, consequently, we have had to take reductions in our appropriations over the last 4 years. And for this reason we have not had—I

would say partially for this reason—we have not had capital funds available for extending the services.

We feel that to make this medium available to every citizen of Alabama, is not only their right, but it is their democratic privilege.

And furthermore, if I might be so immodest as to say, could we bring into this statement that we in Alabama have demonstrated with limited funds and means that we mean business and that your encouragement of our efforts and with some assistance from the Federal Government, we could complete our network. We want to complete it with a coverage as is. However we have larger plans. We hope to have a two-channel network, so that we can have simultaneous broadcasting over two channels over the entire State. This expansion is for the future but is in the thinking.

Mr. MOSS. If these funds were made available, do you feel that you would be able to have complete coverage of the other 22 percent of Alabama?

Mr. HURLBERT. Not only that, but we could do work in some of the institutions that want closed-circuit work and the like.

Mr. MOSS. I notice you overlap into Georgia and nearby States. Do you have any reciprocity—is there any at present in the area covered by your station in other States?

Mr. HURLBERT. We get considerable mail from Georgia, and we cannot help it if we help educate them. However, we are quite willing to do so. You are going to hear from a Georgian here today and I think he will have his views on this matter.

Mr. MOSS. You have no active cooperation of any of the communities or school systems in Georgia as the result of covering the area?

Mr. HURLBERT. Nothing in a formal sense, sir, but we do find that they are using it in the western part of Georgia for supplementing their educational programs.

Mr. MOSS. So nothing is lost?

Mr. HURLBERT. Nothing is lost in Georgia. They are very economical.

Mr. MOSS. You do have a proposed program which could utilize in this development, with additional equipment, with the funds which would be available, if this legislation passes?

Mr. HURLBERT. If this million dollars were made available, it would partially satisfy our plans.

Mr. MOSS. After having expanded your plans, and your facilities, would you then be in a position, with the resources of Alabama, to fully underwrite the operation?

Mr. HURLBERT. That is our hope and intention.

Mr. MOSS. Thank you.

Mr. HURLBERT. As I understand it, the legislation is largely a priming of the pump and that this would help Alabama complete its picture in total coverage and from there we would hope to do further expanding on our own.

Mr. MOSS. That is all.

Mr. YOUNGER. Mr. Hurlbert, you spoke of a network that you have. How do you transmit from your station to the various transmitters; is it through microwave or through cable?

Mr. HURLBERT. We have three studios: one on the University of Alabama campus, one on Auburn University campus, and one in the

city of Birmingham—all of which are connected to the three stations by microwave.

Mr. YOUNGER. By microwave?

Mr. HURLBERT. Yes; we own and operate our own microwave network.

Mr. YOUNGER. That is all.

Mr. AVERY. This program, as I understand it, from what you have told the other members of the committee, if the bill were passed, Alabama would use such funds to expand its present system, and not to repay itself for its present operation?

Mr. HURLBERT. That is the purpose. Any funds that would be made available by Congress, I understand would be for the purpose of new installations.

Mr. AVERY. That is my understanding. I just wanted to make sure that you agree with that.

Mr. HURLBERT. That does not involve the matching feature of one of the bills that we are concerned with. I mean—

Mr. AVERY. You said you would use different facilities for matching purposes, for the cost of the facilities?

Mr. HURLBERT. I would think that it would be penalizing those who had done the pioneering work in this field to say that they should not receive some credit in the matching process.

Mr. AVERY. Do you think that authority is thoroughly spelled out in the bill?

Mr. HURLBERT. Sir, I am not a lawyer and I would not want to attempt to interpret it, but I would hope that that could be interpreted in that fashion.

Mr. AVERY. That is all, Mr. Chairman.

Mr. HURLBERT. The State of Alabama has put more than a million, probably a million and a quarter of its own funds into the development of this network thus far.

Mr. AVERY. May I ask one more question. What is the annual cost of the operation of the network to the State of Alabama?

Mr. HURLBERT. The network in the sense of its mechanical operation, is approximately a quarter of a million dollars.

Mr. AVERY. Is that for programing?

Mr. HURLBERT. No. The University of Alabama and Auburn University get their appropriations directly from the legislature. And I think their appropriation is approximately about \$85,000 or \$90,000 a year each.

Mr. AVERY. For programing on the station?

Mr. HURLBERT. For programing the network. Each one programs approximately one-third of the time.

Mr. AVERY. That is about a quarter of a million there; that would be half a million dollars there for the network.

Mr. HURLBERT. I would say somewhere between \$400,000 and \$450,000.

Mr. AVERY. That would not necessarily increase in proportion to the number of stations, would it?

Mr. HURLBERT. No, sir; if we had stations to cover the city of Mobile and Tennessee Valley, which we are most anxious to do, and the city of Montgomery, the programing cost would not go up materially.

Mr. AVERY. That is all, thank you.

Mr. SIBAL. I have no questions.

Mr. ROGERS of Texas. I have one question, Mr. Hurlbert, with relation to your statement that you presently own your microwave facilities. There was discussion here yesterday, brought about by the alarm of some people that the language of the bill as drawn might make it so that a State agency or an agency contemplated under this bill would be required or be limited to the use of microwave or wire transmission facilities that were owned exclusively by the agency spoken of in the bill.

In other words, that they would be prohibited from leasing or renting facilities of private corporations that produced this service.

Do you have any feeling on that in particular, Mr. Hurlbert?

Mr. HURLBERT. If I understand you correctly, Mr. Rogers, the FCC regulations would prevent any such, as a common carrier of other operations, if that is what you are speaking about.

Mr. ROGERS of Texas. The way the bill was drawn, you would be authorized to acquire facilities, it was thought that would limit you to the use of the facilities that you actually owned and acquired, that you could not use the facilities owned by private companies.

Mr. HURLBERT. I would see no reason why private companies could not serve. I would think, though, at the same time that the private companies would want and deserve a fee for that service.

Mr. ROGERS of Texas. It is anticipated that they would want a fee, but what I am talking about in this bill, you would have no desire to block private companies out of participation, would you?

Mr. HURLBERT. We have no feeling of competition with business. We love business. Business helps to support us. They pay taxes and keep us in business.

Mr. ROGERS of Texas. And if they had the facility that could serve your purpose, you would be just as willing to use those as you would to buy your own?

Mr. HURLBERT. No, sir.

Mr. ROGERS of Texas. You would not be as willing?

Mr. HURLBERT. We have had such experience, sir, and we can do it 10 times as cheaply.

Mr. ROGERS of Texas. Of course, that enters into the picture.

Mr. HURLBERT. I mean—

Mr. ROGERS of Texas. I am assuming that your use of the facilities would be on a basis that would be economically the same as your own services.

Mr. HURLBERT. I do not see how they could.

Mr. ROGERS of Texas. Do you think that owning the wire or the microwave system, in your own facilities, could be handled much cheaper by ownership, than it can by leasing it from existing companies?

Mr. HURLBERT. We built one-half of our entire microwave network system for what it was anticipated we would have to pay for 1 year's rent.

Mr. ROGERS of Texas. I see. Of course, that enters into the picture, but you have no objection to an amendment, let us say, that permitted a State to utilize these facilities if they found it feasible to do so?

Mr. HURLBERT. If the commercial interests could serve as cheaply and as efficiently as we now have it, it would be a pleasure.

Mr. ROGERS of Texas. Do you not think that ought to be a matter of the State agency itself to decide?

Mr. HURLBERT. The State agency could do such as our commission did and go into the matter and weigh it, taking bids, and so on, and do the best thing for the agency.

Mr. ROGERS of Texas. You would want the Alabama commission, Mr. Hurlbert, to be free to act as it might desire to act in this situation, would you not?

Mr. HURLBERT. Certainly, they did—they did that very thing.

Mr. ROGERS of Texas. You would want the law so you would have control of what you have in Alabama?

Mr. HURLBERT. Certainly. Alabama ought to be allowed to do so in order that in changing conditions, the State might find new contracts that would adopt to such change.

Mr. ROGERS of Texas. Thank you very much, Mr. Hurlbert.

Mr. HURLBERT. Thank you.

(The following letter was later received from Mr. Hurlbert:)

ALABAMA EDUCATIONAL TELEVISION COMMISSION,
Birmingham, Ala., March 27, 1961.

Hon. KENNETH ROBERTS,
House of Representatives,
Washington, D.C.

DEAR KEN: This letter is in response to your request for information on microwave installation and operation. If you feel that the following information is pertinent, there is a place in my testimony before the Subcommittee on Interstate and Foreign Commerce in which it will fit perfectly.

If you approve of this information as suitable, will you please make the necessary arrangements with Mr. Williamson to insert the same: The Alabama Educational Television Commission began its network operation with six microwave units at an initial cost of \$100,000. This beginning included six complete microwave units, three 200-foot towers, and three concrete block houses. Six additional complete microwave units have been added, up to the present time, at an approximate cost of \$50,000. The operation of the AETC microwave network of 12 units at the present time approximates \$12,000 a year for power and maintenance parts. This service covers 24 hours a day, 365 days a year.

With kindest regards, I am,
Sincerely yours,

RAYMOND D. HURLBERT, *General Manager.*

Mr. ROGERS of Texas. Our next witness is Mr. John Letson, superintendent of schools of Atlanta, Ga.

If you will come forward and be recognized.

STATEMENT OF JOHN LETSON, SUPERINTENDENT OF SCHOOLS, ATLANTA, GA.

Mr. LETSON. Mr. Chairman and members of the committee, I have no written formal statement to present to the committee this morning. I come, however, as a practicing school administrator with the firm conviction that the assistance proposed in one or the other of these bills before the committee would make a real contribution in helping us solve some of the terrific educational problems that we face in the years immediately ahead.

I am convinced on the basis of factors that are certainly in evidence in my own city, that education, generally, has probably the biggest task ahead of it in the years immediately ahead that it has ever had. I say that in view of overcrowded classrooms, rapidly expanding enrollments in our schools, the difficulty of finding a sufficient number

of well-qualified teachers, the needs to find a way to extend the usefulness of the excellent teachers that we are able to secure for our schools, and, also, to say on the basis of a background of experience, that educational television is and can continue to help us solve some of these problems.

The city of Atlanta operates its own television station. I had previous to going to Atlanta some small part in the development of the Alabama network. I also had some experience in the city of Chattanooga in attempting to establish and get into operation a UHF station. That station is not as yet in operation because of limited finances and problems relating to the financing of the installation in that city.

The State of Georgia has made a beginning on the statewide network, a beginning that with some additional financial resources would make it possible for the State to proceed with the installation of a sufficient number of stations to reach a considerable portion of the State.

We are engaged in several experiments and have been in the city of Atlanta. Just one or two points about the effectiveness of this medium in education.

No. 1: It does make it possible for us to spread the usefulness and the value of an excellent teacher. It does not do the whole teaching job. It does not replace the continuing need for excellent teaching. It will, however, serve as a valuable resource and is serving as a valuable resource in helping school systems all over the country in utilizing effectively the best teachers that they have. It is an excellent source of in-service training in education for a school faculty.

Rapid calculation at the beginning of the school year in Atlanta, at least, indicated to merely assemble in one place all of the teachers in that school system would be the equivalent of approximately four teachers employed for a full year. So we are utilizing it effectively as a means of professional communication.

We are, also, utilizing it as a means of making available to our teachers in Atlanta comments, addresses, demonstrations of good teaching practice that we believe will contribute greatly to the effectiveness of the school program throughout our system.

We are also utilizing it, and only in a beginning way, for the whole area and in the whole area of adult education.

We, too, are engaged in attempting to assist individuals who are classified as functionally illiterate to read and write. We have in operation over 50 volunteer teachers and volunteer classes where a group of individuals in need of instruction in the elementary elements of reading and writing come together 3 nights each week and actually study these fundamentals. We have had the same thrilling experience of seeing individuals, 35 and 40 years old, who after receiving four or five television lessons are able to write for the first time a connected sentence.

Certainly, it has a lot of implications for the economic development and growth of our area, and all over the United States in view of the fact that we have approximately 5 million such illiterates.

The changing economic pattern in our area, automation and otherwise, is making it necessary for us to engage in retraining operations. Educational television has many implications in carrying through and doing this job more effectively.

It is a privilege to have had this opportunity to speak in support of Federal assistance that I am convinced will make it possible for the State of Georgia and other States to effectively utilize this medium for what it can really do.

Mr. ROGERS of Texas. Thank you very much for your fine statement on behalf of the State of Georgia.

The Chair recognizes the gentleman from California, Mr. Moss.

Mr. Moss. My questions will be substantially the same as I directed to the representative of the State of Alabama, Mr. Hurlbert, as to any plans you might have for the utilization of these funds if they become available.

Mr. LETSON. Mr. Moss, the State of Georgia, as I indicated, has made some tentative plans for the development of a State network. Those plans have not been implemented in their entirety. There have been two stations authorized to be constructed, other than the station in the city of Atlanta. These stations are not connected by microwave. They are programed in the main by taped programs that are provided from the State.

Also, only a small portion of the State is covered at the present time. Funds are not available at the present time, and as is in common with many other States, we have a terrific competition for every dollar that is available. The needs of our educational program are great, and thus far the State has been unable to implement with the necessary financing the program that has tentatively been outlined.

It is my belief that this bill would help, or these bills would help.

Mr. Moss. If the funds were available for the capital outlay required to place a broadcast facility on the air to connect existing ones by microwave or a cable, have you the resources available for the operation and maintenance of these facilities, once they are in use?

Mr. LETSON. There will be a developmental program, of course. I am convinced that those funds would be available and would be forthcoming as there was an increasing understanding throughout the State of the value of this medium.

Certainly, the step that has already been taken in Georgia indicates a statewide desire to accomplish that very purpose.

Mr. Moss. Is the station in Atlanta operated as an educational station or is it a community station licensed—is it one of the reserved channels?

Mr. LETSON. It was one of the reserved channels. It was implemented as an educational station wholly owned by the city of Atlanta—the city board of education in Atlanta. This was accomplished in part because of some assistance that was secured through the Ford Foundation. Without that assistance, I doubt that it would have been possible even for the city of Atlanta to have accomplished this.

We have underway at present an expansion of this program by including some of the neighboring school systems in a metropolitan school development council. Fulton County beginning next July 1 will become copartners in the educational television station.

The structure is so set that it will, also, be open to other school systems in the area; and, alternating, it can be made available and open to other agencies in the metropolitan area of Atlanta if they desire to become part of it.

Mr. Moss. Your local school board provided the funds for the support of the educational television station?

Mr. LETSON. Yes, sir.

Mr. Moss. Thank you.

Mr. LETSON. I might add, by way of emphasis, we have recently had completed in the city of Atlanta a rather comprehensive study of our program. The local education commission that was appointed by the Georgia Legislature has made a recommendation that we extend our television operation to six channels, rather than the one that we now operate in, believing that that would make it possible for us to present by television a full-scale, full in-school schedule, that would, certainly, make available to all of our schools a means of effective instruction, and we believe it will mean, also, some ultimate reduction in the possible cost of education that would have been involved had this not been accomplished.

Mr. Moss. Thank you.

Mr. ROGERS of Texas. Mr. Younger.

Mr. YOUNGER. In the determination of the quality of teaching, do you use a criteria as to the quality of teaching in determining the salary of teachers?

Mr. LETSON. We do not have what you would refer to as a merit system, other than the relationship that there would be drawn between training, or the appointment of the individual involved to some higher level of responsibility.

Mr. YOUNGER. There is no criteria of quality of teaching in vogue at the present time in the determination of salaries?

Mr. LETSON. As that term is normally used, I think I would have to say "No."

Mr. YOUNGER. All right. Although, you do have a developmental selection process that determines on the basis of quality certain administrative appointments that carry salary considerations.

Mr. LETSON. Some are administrative but not all of them.

Mr. YOUNGER. Which leads me to this, if you go into educational television and utilize a teacher who has superior qualities in teaching, in a particular subject, and can teach many classes, you will have to revise your salary schedule.

Mr. LETSON. It is, certainly, my belief that that revision will be forthcoming when we get this plan in full operation.

Mr. YOUNGER. So that you have some inducement to a teacher to be better qualified as an instructor than the process you are now using?

Mr. LETSON. One of our problems in education has been the limited number of opportunities for advancing teachers and let them still remain teachers and give some additional salary consideration. It is my belief, as we move in this program and several related programs, that I could call team teaching and several others, that one of the goals will be to provide several different levels of instructional salary, determined on the basis of merit in terms of specific selection of those individuals.

Mr. YOUNGER. You would then use that incentive?

Mr. LETSON. Yes, sir.

Mr. YOUNGER. That is all.

Mr. Moss (presiding). Mr. Avery.

Mr. AVERY. A good many commercial licensees over the country employ the facilities of the State for broadcasting an editorial policy,

a minute editorial, maybe longer. In your judgment will they avail themselves of that privilege or should they be denied that privilege?

Mr. LETSON. I doubt seriously that educational television should adopt or should be permitted to have an editorial policy in the same sense. I feel that one of the requirements for a good education is that the facts be presented, both sides.

Certainly, education in a classroom, for instance, is not concerned as much with passing resolutions as it is to serve as a forum and I believe that educational television would make a mistake if it did not proceed along the same lines to assume its function to be presenting points of view, presenting the facts as they exist.

This comes into the picture quite frequently in terms of the presentation of a social studies class or social studies program. It is difficult to teach a course in American history or to teach a course in problems of government without getting into issues that in some instances are considered controversial by one group or another.

So far as educational television is concerned, it is my belief that it should be utilized to present all aspects of this problem without drawing conclusions in an editorial.

Mr. AVERY. And the matter of whether or not the television station should present factual matter or whether it attempts to present or to emphasize a point of view in the broadcast of social studies, is one for the FCC to determine?

Mr. LETSON. Also, I think, it should be subject to the same review as other instructional mediums are subject to that in our school program.

Mr. AVERY. We cannot hide behind that, because they will be only responsible to one agency in this Government, that is, the FCC, and they will have the jurisdiction, so we have to direct our attention to that point.

We have no real guidelines, unless we write something in the bill.

Mr. LETSON. I was making that comment within the leeway that will be reserved to the local school systems and to the local organizations under the FCC's broad general policies and rules and law.

Certainly, the presentation of a social studies course by television would be subject to the same controls, locally, as the selection of the textbooks or the determination of the course of study.

Mr. AVERY. You would have the State administrative agency do that?

Mr. LETSON. Yes.

Mr. AVERY. It would have no effect on the licensee?

Mr. LETSON. That is right.

Mr. AVERY. Thank you, Mr. Chairman.

Mr. MOSS. Mr. Sibal.

Mr. SIBAL. I have no questions.

Mr. MOSS. Have you had the opportunity of reading the various bills now before this subcommittee for consideration?

Mr. LETSON. Only in summary.

Mr. MOSS. Have you any thought or expression to give on the matter of dealing in general with the Department of Education, Health, and Welfare—is that a satisfactory arrangement, in dealing with the State agency, through a representative, or would you prefer dealing directly?

Mr. LETSON. I feel that dealing through the Department of Health, Education, and Welfare agency would be the appropriate procedure. It is a standard one that is generally recommended by our profession. It is one that is customary in terms of many other relationships with the Federal Government. And I feel that it would be appropriate.

Mr. MOSS. You mean direct dealing?

Mr. LETSON. Through the——

Mr. MOSS. Through your State government?

Mr. LETSON. Through the State agency, through the State agency.

Mr. MOSS. Thank you. And you would envision no difficulty?

Mr. LETSON. I envision none at all.

Mr. MOSS. Thank you.

Mr. LETSON. It has been a privilege to be here.

Mr. MOSS. The next witness seems to be Mrs. Maxine Scoville, president of the Kansas Congress of Parents and Teachers. We are pleased to have you here.

Mr. AVERY. I would like to state, Mr. Chairman, of the many attributes of the first district of the State of Kansas, it does not encompass Mrs. Scoville as a resident. She has come well recommended to the committee. I do not know what she is going to say, but I am sure whatever she says will be said very gracefully.

And it is a pleasure to have you here, Mrs. Scoville, as a representative of Kansas. I would like the record to show that State Senator Lauren Jones expected to be present here this morning. He is chairman of the senate committee on education, but because of weather problems, Senator Jones will not be with us.

STATEMENT OF MRS. R. W. SCOVILLE, PRESIDENT, KANSAS STATE PTA CONGRESS

Mrs. SCOVILLE. Mr. Chairman and members of the committee, I have a written statement; but with the permission of the committee, I would like to deviate from the printed page occasionally.

Mr. MOSS. We will receive the statement as a part of the record. Do you wish that?

Mrs. SCOVILLE. Yes.

Mr. MOSS. And summarize it for the committee.

Mrs. SCOVILLE. Yes, sir.

Mr. MOSS. Without objection the statement will be made a part of the record at the close of your remarks.

Mrs. SCOVILLE. My first comment would be to thank Mr. Avery for his kind words of appreciation for my appearance. And since he does not know what I am going to say, I respect his reticence to go along with what I might say this morning.

As you have heard, my home is in Kansas City, Kans., and I am president of the Kansas Congress of Parents and Teachers.

Our organization has, probably, shown more interest in educational TV in Kansas, more interest than any other. May I remind you ours is an organization of lay people, not professional people, composed of parents and teachers.

In Kansas, ours is the largest voluntary organization in the State, working toward the welfare of children and youth.

As I listened to the statement of the other participants this morning, I realize that mine was going to be a different kind of statement. I cannot speak with the technical experience or the know-how of some of the previous participants, but I can tell the story of our struggle in Kansas to secure an educational television program or system.

The interest of many of our members in the possibilities of television as an instrument for the education of children and youth, and, also for adult education—and that is one of my main interests—in the ETV programs dates back to, at least, 10 years ago, even before the reservation of channels for education.

The booklet, "Moses Would Have Understood," which I think some of you have in your possession now, was printed in 1951.

The booklet is a sworn statement of the University of Kansas to the Federal Communications Commission in support of the Commission's proposal to reserve channel No. 11 for educational uses in Lawrence, Kans. This booklet was prepared for the University by the man who is now serving as the fourth vice president of the Kansas Congress of Parents and Teachers, and I wish it would have been possible for him to be presenting this matter before you this morning.

It contains one of the most powerful statements in support of educational television which I have ever seen. That statement on pages 9 and 10 was by the chancellor of the University of Kansas and his wife was the president of one of our PTA units in Lawrence, at the time the statement was written.

The booklet also contains a reprint of a letter by a personal friend of mine. He is from my hometown and he is our superintendent of schools, a former national president of the National Education Association, and a member of the PTA in Kansas.

This letter, written a decade ago, supports educational television and predicts that it will have great force with our social institutions. I am sure that none of us could predict then what we know to be true now: that in spite of all of our labors to obtain educational television for our State, there would not be one educational television station in Kansas 10 years after our labors began.

It is because of our interest over the years and our lack of success in obtaining action at the State level in behalf of educational television that I have requested the privilege of appearing before you this morning.

As many of you know, Kansas is one of the most conservative States. It has not always been so. Kansas has been celebrating its centennial this year, and all of us have been reminded of the heroic fires that burned in the hearts of our illustrious ancestors. We are persuaded that those fires are still burning today but there are those of us who feel that they are, perhaps, just smoldering fires today.

In 1957 the Kansas Congress of Parents and Teachers took official action on ETV at its State convention. A resolution was passed calling for the Kansas Legislature to establish educational television stations. No action was taken by the legislature in 1957. And again in 1958, the PTA included action on behalf of the ETV as one of the major planks in our legislative program.

The next regular session of the Kansas Legislature was in 1959. That year we carried on one of the most active legislative programs in the history of our organization in Kansas, and a great portion of our effort that year was centered on behalf of educational television.

Senators and representatives in Kansas told us in 1959 that they received more letters, cards, phone calls, and visits on educational television, and almost without exception in favor of ETV, than on any other issue before the Kansas Legislature at that time.

The Kansas press credited our organization as the one body most responsible for this expression of statewide interest in educational TV. It was a people's movement and the people were calling for the Kansas Legislature to begin the establishment of a network of educational television stations. And at last, in response to the interest shown by their constituency, the legislators of Kansas acted.

They did not begin the establishment of a network as we had requested, but they did appropriate \$25,000 to make a study of the feasibility of the establishment of a network serving all of Kansas.

That study has been completed. And it was undertaken under the leadership of the education committee of the Legislative Council of Kansas Legislature. That committee summarized the study and made its recommendations to the 1961 Kansas Legislature, now in session. These recommendations urged the 1961 legislature to establish an educational television authority, to empower that authority to request the FCC to reserve additional channels for educational use in Kansas, and to appropriate \$1 million to begin the establishment of stations.

I have in my possession a copy of the bill which has been introduced in the Kansas Senate. It calls for the establishment of the State ETV authority. It empowers that authority to request the reservation of channels. But it does not call for the appropriation of funds for this purpose. That matter is left to a separate bill, a copy of which I have, also, in my possession.

Additional money for education is a rather touchy subject in Kansas, and I presume it is in most States at this time. The second bill calls for the appropriation of money for ETV, all right, but it does not call for the \$1 million appropriation recommended by the education committee of the legislative council after its 2-year, \$25,000 study, and amount, also, endorsed as reasonable by our State Congress of Parents and Teachers.

No, it does not call for \$1 million. The bill introduced in the Kansas Senate calls for a portion of that amount, \$100,000. And we cannot build one station of any consequence with so small an appropriation.

Obviously, something more needs to be done if the smouldering fires in the Kansas Legislature are to burn brightly enough to light up one educational television station or even one television receiver in my home State of Kansas.

I believe that "something more" that is needed in Kansas must come from Federal sources. We have created the desire for ETV in Kansas. The people want it. And we know what it will take to establish the kind of service which we want. But the legislature is not willing to take the jump and spend the kind of money that will be required to do the kind of job which the people have envisioned.

But once the Kansas Legislature gets going, it will provide the funds to keep ETV going just as the State has kept its fine institutions of higher learning going over the years. And it is that first leap that is the hardest, and here is where the Federal Government can step in and provide the impetus that will get ETV moving in my State.

And I believe I heard one of the former participants make that very same statement.

When you consider the kind of money that is involved and compare it with the amount of money that is necessary for other spending, the pittance required for ETV seems almost nothing. How can anyone seriously doubt that educational television is one of the greatest bargains ever offered to the American people? No tool can serve so many so effectively for so little money invested.

Study has shown that the 2 million people of Kansas can be served by a statewide network of ETV stations for an annual expenditure of approximately \$1 million. If you prorate that \$1 million over the population of 2 million you have an annual cost of 50 cents per person. That is for 365 days of education delivered in the classroom or the home in all parts of the State. You just cannot beat that for economy.

I believe most of our legislators are smart enough to see the value of educational television. But because of natural conservatism, they hesitate to make the leap of faith that is required.

You gentlemen, I trust, have some of that vision of some of your forebears, and it is for that reason that I appear before you this morning: to ask you to make it possible for Federal funds to be used to help us get our ETV program in the State of Kansas off the ground.

Thank you very much for this opportunity of appearing before you.

(The booklet, "Moses Would Have Understood" will be found in the files of the subcommittee.)

(The paper submitted by Mrs. Scoville follows:)

REMARKS OF MRS. R. W. SCOVILLE

My name is Maxine Scoville, my home is in Kansas City, Kans. I am the president of the Kansas Congress of Parents and Teachers. Perhaps no organization in my State has shown more interest in educational television than PTA. I remind you that this is an organization of both parents and teachers. In Kansas, ours is the largest volunteer organization in the State working for the welfare of children and youth.

The interest of many of our members in the possibilities of television as an instrument for the education of children and youth, and also for adult education, dates back to at least 10 years ago, even before the reservation of channels for education. The booklet, "Moses Would Have Understood * * *" was printed in 1951. It is the sworn statement of The University of Kansas to the Federal Communications Commission in support of the Commission's proposal to reserve channel No. 11 for educational use in Lawrence Kans. This booklet was prepared for the university by the man who now serves as the fourth vice president of the Kansas Congress of Parents and Teachers. It contains one of the most powerful statements in support of educational television which I have ever seen. That statement (on pp. 9 and 10) was by the chancellor of the University of Kansas whose wife was the president of one of our PTA units in Lawrence, Kans. The booklet contains a reprint of a letter by a personal friend of mine from my hometown who is our superintendent of schools, a former national president of the National Education Association, and a member of the PTA. This letter, written a decade ago, supports educational television and predicts that it will have great force with our social institutions. I am sure that none of us could predict then what we know to be true now that in spite of all of our labors to obtain educational television for our State there would not be one educational television station in Kansas 10 years after our labors began.

It is because of our interest over the years and our lack of success in obtaining action at the State level in behalf of educational television that I have requested the privilege of appearing before this committee today.

As many of you know, Kansas is one of the most conservative of States. It has not always been so. Kansas has been celebrating its centennial this year and all of us have been reminded of the heroic fires which burned in the hearts of our illustrious ancestors. We are persuaded that those fires still burn today but they are smoldering.

In 1957 the Kansas Congress of Parents and Teachers took official action on ETV in its State convention. A resolution was passed calling for the Kansas Legislature to establish educational television stations. No action was taken by the legislature in 1957. Again in 1958 the PTA included action on behalf of ETV as one of the major planks in our legislative program. The next regular session of the Kansas Legislature was in 1959. That year we carried on the most active legislative program in the history of the PTA in Kansas, and a great portion of our effort was on behalf of educational television. Senators and representatives in Kansas told us in 1959 that they received more letters, cards, phone calls, and visits on educational television, and almost without exception in favor of ETV, than they received on any other issue before the Kansas Legislature. The Kansas press credited our organization as the one body most responsible for this expression of statewide interest in educational TV. It was a people's movement and the people were calling for the Kansas Legislature to begin the establishment of a network of educational television stations. At last, in response to the interest shown by their constituency the legislators of Kansas acted. They did not begin the establishment of a network as we had requested. But they did appropriate \$25,000 to make a study of the feasibility of the establishment of a network serving all of Kansas.

That study has been completed. It was undertaken under the leadership of the education committee of the legislative council of the Kansas Legislature. That committee summarized the study and made its recommendations to the 1961 Kansas Legislature, now in session. These recommendations urged the 1961 legislature to establish an educational television authority, to empower that authority to request the FCC to reserve additional channels for educational use in Kansas, and to appropriate \$1 million to begin the establishment of stations. I have in my possession a copy of the bill which has been introduced in the Kansas senate. It calls for the establishment of the State ETV authority. It empowers that authority to request the reservation of channels. But it does not call for the appropriation of funds for this purpose. That matter is left to a separate bill a copy of which I have also in my possession. Additional money for education is a touchy subject in Kansas, as I presume it to be in most States. The second bill calls for the appropriation of money for ETV alright. But does it call for the \$1 million appropriation recommended by the education committee of the legislative council after its 2-year, \$25,000 study, an amount also endorsed as reasonable and necessary by the PTA? No, it does not call for \$1 million. The bill introduced in the Kansas senate calls for a tithe of that amount—or \$100,000. We cannot build one station of any consequence with so small an appropriation. Obviously something more needs to be done if the fires still smoldering in the Kansas Legislature are to burn brightly enough to light up one educational television station or even one television receiver in my home State of Kansas.

I believe that "something more" that is needed in Kansas must come from Federal sources. We have created the desire for ETV in Kansas. The people want it. We know what it will take to establish the kind of service which we want. But the legislature is not willing to take the jump and spend the kind of money that will be required to do the kind of job which the people have envisioned. Once the Kansas Legislature gets going it will provide the funds to keep ETV going just as the State has kept its fine institutions of higher learning going over the years. It is that first leap that is the hardest, and here is where the Federal Government can step in and provide the impetus that will get ETV moving in my State.

When you consider the kind of money that is involved and compare it with the amount of money that is necessary for other things—defense spending for example—the pittance required for ETV seems almost infinitesimal. How can anyone seriously doubt that educational television is the greatest bargain ever offered America. No tool can serve so many so effectively for so little money invested. Study has shown that the 2 million people of Kansas can be served by a statewide network of ETV stations for an annual expenditure of approximately \$1 million. If you prorate that \$1 million over the population of 2 million you have an annual cost of 50 cents per person. That's for 365 days of education delivered in the classroom or the home in all parts of the State. How can you

beat that for economy? I believe most of our legislators are smart enough to see the value of educational television. But because of natural conservatism they hesitate to make the leap of faith that is required. You gentlemen, I trust, have within you the vision of some of your forebears in these sacred Halls and will supply the fuel which our own legislators lack to get in motion. If you do this for us, generations of people will rise up to call you blessed for what you have provided that called for small expenditures of money but a great leap of faith.

Mr. AVERY. I should like to compliment Mrs. Scoville for her fine statement. That is, probably, one of the most comprehensive and well prepared presentations we have had.

I do not have any questions, but I would like to say that Kansas State University had one of the original educational channels reserved for them back in 1949. And to my knowledge that reservation still stands. That particular institution has made a continual effort to try to implement the channel reservation. They have not secured State funds.

So Kansas has taken some steps to obtain this facility in its own behalf. I still have certain reservations about the responsibility of the Federal Government in the field. But if a State is to receive such funds, Kansas has manifested an understanding of their own responsibility in this field, to get this program underway.

Mrs. SCOVILLE. I think you can see while Kansas University did have the channel, we have had our problems in keeping other programs going within our State as far as educational needs are concerned and we have not had the additional funds to do this thing that we have wanted very much to do. And our appropriation will not be enough, but if we could have additional funds, I think we could get an effective ETV system in our State.

Mr. MOSS. Do you anticipate that the legislation that you referred to in your statement will be passed?

Mrs. SCOVILLE. I hesitated very much to come to Washington at this time because the legislature is now in session. I have reason to believe that these two pieces of legislation will be passed.

Mr. MOSS. Suppose they are not passed; then you would tend to be in a position to utilize this part of the funds proposed in the legislation before the committee?

Mrs. SCOVILLE. Then we would have to begin our struggle all over again, but I have a reasonable belief—this has been studied and battled out in previous sessions, and I believe at this time we will get the \$100,000 appropriations.

Mr. MOSS. If you get the \$100,000 and Federal funds are not available, to provide the necessary plant and facilities, do you feel that you will be able to successfully operate this station in the State as a TV educational station?

Mrs. SCOVILLE. We would not have as effective a system as we would have had had we had the \$1 million appropriation, but the PTA did not endorse the more elaborate plan. We were willing to start with less, that is, in order to get going.

Mr. MOSS. Can your local school district use funds, use their own funds, to support an educational TV station?

Mrs. SCOVILLE. That I do not know; other than I do know that they would be able to buy—it would be within the confines of the local board to supply the equipment necessary to receive.

Mr. Moss. They would not be able to supply the funds for the operation and maintenance?

Mrs. Scoville. Do you mean of individual stations? That I do not know.

Mr. Moss. Is there any legislation proposed in the current session of the Kansas Legislature, any provision for the supplying of funds for operations and maintenance?

Mrs. Scoville. Of the general overall proposition—not of the station—no.

Mr. Moss. Of the station.

Mrs. Scoville. Not of the station, no.

Mr. Moss. How then would you utilize it?

Mrs. Scoville. Just a moment. Are you speaking of the Kansas bill or the bill before you?

Mr. Moss. The \$100,000 mentioned, is that for the operation and maintenance or for the building of the station?

Mrs. Scoville. That is for the beginning—the beginning of any active ETV station.

Mr. Moss. Does your study contemplate \$100,000 would be sufficient to operate an initial facility?

Mrs. Scoville. Yes, sir.

Mr. Moss. Thank you, Mrs. Scoville.

Mrs. Scoville. Thank you.

Mr. Moss. The committee will adjourn at this time until tomorrow morning at 10 o'clock.

(Whereupon, at 12:05 p.m., the committee recessed, to reconvene at 10 a.m., Wednesday, March 22, 1961.)

THE UNIVERSITY OF CHICAGO
The University of Chicago Press
Chicago, Illinois
1954

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EDUCATIONAL TELEVISION

WEDNESDAY, MARCH 22, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND POWER
OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10 a.m., in room 1334, New House Office Building, the Honorable Morgan M. Moulder (chairman of the subcommittee) presiding.

Present: Representatives Moulder, Harris, Rogers of Texas, Moss, Rostenkowski, Younger, Avery, and Sibal.

Mr. MOULDER. The subcommittee will be in order.

We are glad the chairman of our full committee, Mr. Harris, of Arkansas, has joined with us.

Mr. HARRIS. If I might be permitted—as I indicated yesterday morning, it would be my attempt to give all of the cooperation and assistance possible to the subcommittee in developing complete hearings on this problem. I will not be able to attend the hearings extensively, but I will look over the transcript. And I want it understood by the subcommittee that the facilities of the full committee are available to it in order to develop the record in the greatest detail.

I think it should be said at this time that the Secretary of the Department of Health, Education, and Welfare was supposed to testify here this morning. We were notified yesterday afternoon that conditions developed which would make it impossible for the Secretary to get here this morning. His office advised us that he would like to arrange for a date, perhaps sometime next week—but that he would not be able because of past commitments to come up this week.

Under the circumstances, naturally, we have to do what we can to accommodate these busy people downtown.

In view of the fact that we do have a number of other witnesses today and tomorrow, I think the time can be fully utilized. It would be my hope that we would arrange to have the Department people here some day next week.

Mr. MOULDER. Thank you, Mr. Chairman.

The first witness this morning is our colleague, the Honorable John S. Monagan of Connecticut. Mr. Monagan, we will be glad to hear you at this time.

STATEMENT OF HON. JOHN S. MONAGAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CONNECTICUT

Mr. MONAGAN. I appear in favor of H.R. 965. I support this bill because of the great assistance it would give to these people in my

State who are devoting their efforts toward the establishment of educational television.

These interested citizens have established a nonprofit corporation called the Connecticut Educational Television Corp. The trustees of this corporation include representatives of business, education, labor, religion, and municipal government. All have joined together for the common welfare.

It is the belief of these people that our State needs an educational television station because commercial stations cannot afford to devote a major portion of their time to education, culture, and community service.

One of the first steps of the Connecticut educational television program will be to provide in-school programs which will be designed to assist classroom teachers by presenting materials and subjects that are not readily available to all schools.

The Connecticut Educational Television Corp. will be supported by the contributions of interested members, individuals, associations, and corporations, who will be asked to support this program. The State of Connecticut has already contributed \$10,000 for a survey and interested donors and foundations have provided or will provide funds for its support.

In order to establish this program, however, it is essential that there be an initial sum of money available for construction of the necessary facilities. This would amount to approximately \$300,000. In order to obtain this initial amount, Federal help is essential. For this reason, the grant provided in H.R. 965 is important.

I have no hesitation in supporting legislation of this sort. While it is true that we are besieged on all sides for requests to make Federal funds available for a variety of projects, it is obvious that it is impossible to allow the great majority of them. Nevertheless, we have a duty to pick and choose and to support those which will promote the welfare of the country.

It is clear that educational television will promote the welfare of the country in these demanding modern days. Our educational system is constantly challenged and its efficiency and excellence are under continual questioning. We must do everything within our power to guarantee the excellence of our curriculum and our teaching methods, and educational television is one tool whereby the general level of education will be vastly improved.

Of additional vital importance will be the benefits that will accrue to the general, nonschool population in cultural and educational improvement.

I hope that the committee will approve H.R. 965 and that the Congress will take prompt action on this vital legislation.

Mr. MOULDER. We appreciate your appearance and testimony, Mr. Monagan.

Mr. MONAGAN. Thank you, Mr. Chairman.

Mr. MOULDER. The next witness this morning is Dr. Edgar Fuller, executive secretary of the Joint Council on Education Broadcasting. You may proceed, Dr. Fuller.

STATEMENT OF EDGAR FULLER, VICE CHAIRMAN, THE JOINT COUNCIL ON EDUCATIONAL BROADCASTING; ACCOMPANIED BY DAVID C. STEWART, SECRETARY

Dr. FULLER. Mr. Chairman and members of the subcommittee, my name is Edgar Fuller. I am executive secretary of the Council of Chief State School Officers, and currently vice chairman of the Joint Council on Educational Broadcasting.

Accompanying me is David C. Stewart, who serves as secretary of the Joint Council.

We are appearing before this committee today to express general support of H.R. 965, S. 205, and similar legislation which would provide Federal financial assistance for the construction of educational television facilities in each State and in the District of Columbia. Personally, I believe Puerto Rico should also be included.

I hope your committee will give this very serious consideration, since the Senate did not when it passed this legislation yesterday. And an ETV station in Puerto Rico would be, it seems to me, a very great advantage to Puerto Rico, and to the national interest as well. In any event, the JECB greatly appreciates this opportunity to state its views.

The Joint Council on Educational Broadcasting, representing American education through leading educational organizations at all levels, was initially formed in 1951 as the Joint Committee on Educational Television. It has been chiefly concerned for a decade with the reservation, preservation, and the effective utilization of educational television channels.

In January 1961 the council was reconstituted as the Joint Council on Educational Broadcasting to reflect the organization's interest in the educational use of both radio and television. Its present role is to provide a forum for discussion and to formulate sound educational policies in the field of broadcasting. It is interested in this legislation because its members believe the implementation of such policies would be stimulated by the Federal assistance authorized.

The following organizations are constituent members of the JCEB: American Association of Land-Grant Colleges and State Universities, American Association of School Administration, American Council on Education, Council of Chief State School Officers, National Association of Educational Broadcasters, National Education Association of the United States, National Educational Television and Radio Center, and State Universities Association.

Several of the council's constituent organizations have already appeared before your committee, Mr. Chairman, or will be presenting testimony later during these hearings.

In fact, I have a statement which, with your permission, I would like to insert in the record at the end of this testimony to reflect the views of the Council of Chief State School Officers, which is one of the constituent agencies of the JCEB.

One other desires to support it, but not to support any particular bill. Still another has a history of matching requirements and, naturally favors them.

To proceed, our testimony here today, however, represents the consensus of the constituent members of the JCEB developed in a meet-

ing on March 17, 1961. We can assure you that virtually the entire educational establishment is substantially represented by it, and that there are no more than minor differences on details among the constituent agencies of the JCEB.

We believe one of the greatest services we can perform to assist your committee, Mr. Chairman, is to supply the most recent information on the status of educational television throughout the country.

We would like to enter into the record, accordingly, a short summary entitled "Current Developments in Educational Television," developed by the Joint Council on Educational Broadcasting in February 1961.

This report describes accomplishments in the field of educational television and provides ample evidence of sustained public support for activities in this relatively new educational enterprise. This document is based upon detailed information gathered from every State.

It clearly indicates that there is still much to be accomplished before we realize the full benefits of television to the Nation's educational and cultural advancement. Federal financial assistance is now urgently required for the construction of educational television facilities if we are to take full advantage of the experience and expand the accomplishments of the past decade.

As a practical matter, Mr. Chairman, we believe that the comparatively simple legislation typified by H.R. 965 and similar bills, together with the identical legislation in S. 205 on the Senate side, is the most feasible under all the circumstances. We support this because it would be comparatively easy to administer and because it can be placed in effect without the delays that would undoubtedly occur under more complicated legislation.

For instance, the provisions for compulsory matching would make it very difficult for State departments of education or any public agencies to take prompt advantage of the legislation. Forty-four State legislatures are or have been in session this year, and many of them do not meet again until 1962 or 1963. Perhaps we could accept the certainty of such delays, even so, if we felt there was any real necessity for compulsory matching, but we do not. We believe it is neither necessary or desirable.

This legislation authorizes appropriations of Federal funds for physical facilities only. It does not cover any other costs, either for the organization and administration of the local or State television agency or for the programing and operation of the station after it has been constructed.

In fact, it does not authorize Federal funds for the construction or repair of structures to house the apparatus to be purchased. Thus, major matching from State and local sources is inherently built into the legislation, because the construction of housing facilities for the apparatus, the construction of the station, the programing and staffing of the station, and all the other expenses that follow the purchase of the bare apparatus are mandated as part of a going operation. These are the expenses that must be absorbed by State and local authorities and private contributors to the station whether mentioned in the law or not.

The record since 1952 demonstrates clearly that the initial expenditures for capital outlay to construct educational television stations

is an increasingly serious obstacle to the further development of educational television. Most of the VHF stations in large centers of population have been activated. From now on, it must be the smaller communities which will be working to build and activate educational television stations, and often these will be broadcasting on UHF rather than VHF frequencies.

With the Federal assistance authorized by this legislation, Mr. Chairman, many of them can succeed; without it many will not have the financial resources to enter upon such extensive projects.

Once these marginal stations get into operation they have demonstrated that they can almost always stay in operation with State, local, and private support, but many will be unable to start without assistance for the major facilities expenditures.

It is not our intention here today, Mr. Chairman, to repeat all the arguments for educational television. They are many, and apply with special force in the rural and other areas that do not yet have educational television services. Noncommercial programs on such stations are needed by numerous groups, including schoolchildren.

The JCEB and its predecessor organizations have always been interested in developing all the educational and cultural potentialities of television, and we believe the enactment of this legislation would go far toward accelerating its development in the areas where it is needed most.

We appreciate the privilege of appearing here today, and would be glad to discuss any matters the members of the committee care to bring to our attention.

Thank you.

Mr. MOULDER. We thank you. The documents you mentioned will be incorporated in the record and files of the committee.

Dr. FULLER. Thank you.

(The documents follow:)

CURRENT DEVELOPMENTS IN EDUCATIONAL TELEVISION

By Joint Council on Educational Broadcasting, Washington, D.C.

INTRODUCTION TO EDUCATIONAL TELEVISION

There are 54 noncommercial educational television (ETV) stations now on the air. It is expected that 10 to 12 new stations will be activated during 1961.

What is an educational TV station?

Under FCC rules, noncommercial educational broadcasting stations are generally licensed to nonprofit educational organizations upon a showing that the proposed station will be used primarily to serve the educational needs of the community; for the advancement of educational programs; and to furnish a nonprofit and noncommercial television broadcast service.

Who owns the ETV stations?

About one-third of the stations are of the community type; nonprofit corporations are organized to be the station licensee, representing local educational, civic and/or cultural organizations. Another third of the ETV stations are operated by universities and colleges, and the remaining third by school systems or by State departments or commissions.

How many people have ETV service?

The ETV stations on the air, located in cities extending from coast to coast and from border to border, serve a total area that includes a population of about 60 million. Rating services have shown that about 30 percent of the TV homes watch educational television regularly.

Where does the money come from?

Funds for ETV station construction and operation come from public contributions, State legislative appropriations, foundation grants, and the budgets of educational institutions and agencies; commercial broadcasters have been very helpful in some cases. For the 50 stations on the air in October 1960, capital investments totaled \$24,500,000. Operating budgets totaled \$11,760,000 annually and the trend toward larger operating budgets suggests a growing awareness of ETV services.

What are other significant developments about ETV?

In a brief and general way, the following pages attempt to give a synopsis of current ETV developments, with no attempt to give detailed information on any one aspect, or to analyze the implications of this fast growing movement.

Summary of ETV station activation

Year	Number of new stations	Cities establishing VHF educational stations	Cities establishing UHF educational stations
1953.....	2	Houston (channel 8)	Los Angeles (channel 28). ¹
1954.....	8	Pittsburgh (channel 13)	East Lansing, Mich. (channel 60). ²
		San Francisco (channel 9)	Madison, Wis. (channel 21).
		St. Louis (channel 9)	Cincinnati (channel 48).
		Lincoln (channel 12)	
		Seattle (channel 9)	
1955.....	8	Munford, Ala. (channel 7)	Detroit (channel 56).
		Chapel Hill, N. C. (channel 4)	
		Birmingham (channel 10)	
		Boston (channel 2)	
		Champaign-Urbana (channel 12)	
		Miami (channel 2)	
		Chicago (channel 11)	
1956.....	5	Denver (channel 6)	Columbus, Ohio (channel 34).
		Oklahoma City (channel 13)	
		Memphis (channel 10)	
		Andalusia, Ala. (channel 2)	
1957.....	6	Monroe, La. (channel 13)	Philadelphia (channel 35).
		New Orleans (channel 8)	
		Minneapolis-St. Paul (channel 2)	
		Corvallis, Oreg. (channel 7)	
		Milwaukee (channel 10)	
1958.....	8	San Juan, P. R. (channel 6)	Atlanta (channel 30).
		Salt Lake City (channel 7)	Louisville (channel 15).
		Albuquerque (channel 5)	
		Jacksonville (channel 7)	
		Tampa (channel 3)	
		Gainesville, Fla. (channel 5)	
1959.....	10	Tulsa (channel 11)	Oklahoma City, second station (channel 25). ⁴
		Sacramento (channel 6)	Pittsburgh, second station (channel 16).
		Tucson (channel 6)	Buffalo (channel 17). ⁴
		Onondaga, Mich. (channel 10)	Oxford, Ohio (channel 14).
		Des Moines (channel 11)	
		Durham, N. H. (channel 11)	
1960.....	7	Athens, Ga. (channel 8)	Richardson, Tex. (channel 23). ⁴
		Dallas (channel 13)	Lakewood Center, Tacoma, Wash. (channel 56).
		Tallahassee (channel 11)	Toledo (channel 30).
			Ogden, Utah (channel 18).
1961 ⁵		Phoenix (channel 8)	
		Portland, Oreg. (channel 10)	
Total on air.....	54	39 VHF.....	15 UHF.

¹ Went off the air in 1954.

² and ³ UHF station went off the air in 1958. Michigan State University resumed broadcasting in 1959 on an unreserved VHF channel in Onondaga, operating noncommercially, and sharing time with a commercial broadcaster who has a separate license; the university owns and operates the transmitter and leases it to the commercial broadcaster, who maintains a separate studio at another location.

⁴ Operating noncommercially on an unreserved channel.

⁵ To February.

Upcoming ETV stations

Location and agency	Channel	Status of plans
Montgomery, Ala., Alabama ETV Commission.	26	City agencies and civic clubs have raised funds; tower and transmitter have been purchased, and construction permit applied for.
San Bernardino, Calif., Valley College board of trustees.	24	Construction permit applied for August 1960.
Hartford, Conn., Connecticut Educational Television Corp.	24	Target date: Fall 1961.
Washington, D.C., Greater Washington Educational Television Association.	26	Actively seeking support for construction of station. Currently presenting elementary science and art series for 18 school districts on time contributed by local commercial station.
Savannah, Ga., Georgia State Board of Education.	9	Construction permit granted Feb. 17, 1960.
Waycross, Ga., Georgia State Board of Education.	18	Construction permit granted Apr. 9, 1959.
Carbondale, Ill., Southern Illinois University.	8	Construction permit granted Nov. 18, 1959. Target date: Sept. 1, 1961.
Muncie, Ind., Ball State Teachers College.	55	Physical plant being constructed and closed circuit TV equipment being purchased; broadcast operation planned for future.
Augusta Maine, Bates College, Lewiston, Maine.	110	Commercial construction permit purchased. Target date: Fall 1961.
Orono, Maine, University of Maine.....	12	Petition filed with FCC May 31, 1960, for 3 additional ETV reservations for statewide network.
Bay City, Mich., Delta College.....	19	New college (being located between Midland and Bay City) and Mid-State Broadcasting Corp. (commercial TV) petitioned FCC jointly for assignment of channel 19 to Bay City for a joint operation. Channel allocated.
Kalamazoo, Mich., Western Michigan University.	46	Petitioned FCC to change reservation from channel 74 to channel 46; petition granted Apr. 27, 1960. Some equipment in hand. Will apply for construction permit when funds are appropriated.
Mount Pleasant, Mich., Central Michigan University.	14	Petitioned FCC to reserve channel 14; petition granted May 27, 1959. Actively planning station.
Duluth, Minn., Citizens Committee for Educational Television.	8	Have tower, some equipment and studio site. Raising additional funds for studio and operation before applying for construction permit.
Kansas City, Mo., School District of Kansas City.	10	Construction permit granted Mar. 24, 1960. Target date: March 1, 1961.
Paterson-Upper Montclair, N.J., Bergen County Federation of Boards of Education	-----	Petitioned FCC Feb. 14, 1961, to assign channel 14 to Paterson-Upper Montclair and reserve it for education.
Albany-Schenectady-Troy, N.Y., Mohawk-Hudson Council on Educational Television.	17	Have studio space and transmitter and are raising funds before applying for construction permit.
Athens, Ohio, Ohio University.....	-----	Petitioned FCC on Feb. 21, 1961, to reassign channel 20 to Athens and reserve it for education.
Newark, Ohio, Newark Public Schools.....	-----	Petitioned FCC on Oct. 17, 1960, to reassign channel 28 to Newark and reserve it for education.
Vermillion, S. Dak., University of South Dakota.	2	Construction permit granted Mar. 30, 1960. Target date: Spring 1961.
Nashville, Tenn., Nashville Educational Television Foundation.	2	Presently raising funds before applying for construction permit.
San Antonio, Tex., Southwest Texas ETV Council.	9	Construction permit granted Sept. 28, 1960.
Logan, Utah, Utah State University of Agriculture and Applied Science.	112	Granted assignment of construction permit Nov. 8, 1960.
Ogden, Utah, Ogden City Board of Education.	-----	Petitioned FCC on Dec. 20, 1960, to reserve channel 24, now unreserved in Ogden.
Tacoma, Wash., Tacoma School District No. 10.	162	Construction permit granted Jan. 13, 1960. Target date: early 1961.
Milwaukee, Wis., Board of Vocational and Adult Education.	36	Construction permit applied for Feb. 7, 1961.
Mayaguez, P.R., Department of Education of Puerto Rico.	13	Construction permit granted Oct. 1, 1958. Target date: Mar. 19, 1961.

¹ Educational application on unreserved channel.

Status of channel reservations

	Total	VHF	UHF
Original reservations, 1952.....	242	80	162
Current reservations, February 1961 ¹	268	90	178

¹ February.

No VHF reservations for the largest cities

The UHF and VHF channel assignments reserved for noncommercial educational use constitute about 12 percent of the total UHF and VHF television channel assignments in the United States. In many of the Nation's leading cities, however, no VHF channels were reserved for education because all available VHF channels were already in use by commercial broadcasters. Among the 36 U.S. cities having populations over 300,000 (1950 census), the following 18 received no VHF reservation in the 1952 allocation plan: New York, Philadelphia, Los Angeles, Detroit, Baltimore, Cleveland, Washington, Buffalo, Cincinnati, Kansas City, Newark, Indianapolis, Columbus, Louisville, San Diego, Rochester, Atlanta, and Toledo.

Commercial applicants have succeeded in obtaining three of the VHF reservations. In removing the reservation from these assignments the Commission stated in each case:

"In the sixth report and order we recognized that educational interests faced difficulties in using television for educational purposes not encountered by commercial interests. We, therefore, reserved the educational channels to give local educational interests adequate time to prepare for television. However, we expected that local educational interests would, within a reasonable time, undertake to formulate concrete plans for the utilization of the reserved channels and begin promptly to take affirmative action looking toward the fulfillment of these plans. In the absence of substantial evidence that the educational interests in a locality have made constructive efforts to fulfill these expectations, we cannot justify the continued reservation of available spectrum space for educational purposes, particularly where there is evidence of a demand for the reserved channel for a commercial station which would provide needed television service to a substantial number of persons."

The three cities where ETV reservations on VHF channels were lost are College Station, Tex., Weston, W. Va., and Eugene, Oreg.

Twenty-nine new reservations made

On the other hand, 13 new VHF reservations and 16 new UHF reservations have been made by the FCC at the request of JCET¹ and of educators planning individual stations or State networks. The need for these additions occurred because the unused reserved channels did not always happen to be located in the same areas in which educators and other community leaders had become interested in constructing stations and could hope to obtain financial support, and because, in some cases, multiple channels were needed.

Higher channels exchanged for lower

In the UHF band in a number of other cases the FCC has agreed to reserve a lower channel which was not in use to replace the higher reserved channel. The educators requested these changes because lower UHF channels are more desirable than higher ones, since larger coverage can be provided.

UHF AND VHF

Comparing the two

The advantages and disadvantages of UHF television as compared with VHF television may be briefly described as follows:

UHF requires higher power than VHF to cover an equivalent area, and the higher the frequency, the greater the power required. UHF is also more susceptible to shadowing by mountains, hills, and woods. Accordingly it is not presently practical to duplicate on UHF the coverage provided by high power VHF stations. UHF (and VHF) service can be extended by supplementary low power stations, such as "translators."

On the other hand, where line-of-sight transmission exists, UHF provides excellent pictures. Also, UHF is freer from natural and manmade interference. Further, multiple UHF channels are available and may be desired for greater diversity and flexibility of in-school programming.

Overcoming a handicap

A major stumbling block in the development of commercial UHF has been the fact that most receivers in homes are not equipped to receive UHF, and the public is reluctant to spend extra money to buy all-channel sets or converters if

¹The Joint Council on Educational Television (JCET) was changed in February 1961 to the Joint Council on Educational Broadcasting (JCEB).

programs are available without them (on VHF channels). These considerations seriously affect the educator, too, in securing local contributions toward constructing an ETV station. However, where the initiative in financing and construction can come from an educational agency such as a State or large city school system, it is easier to get UHF stations in operation than if public contributions alone must be relied on. If at first the UHF station does not serve a very large area, the demand for extended coverage may tend toward solving the financial problems involved in increasing power or providing translator stations. The public learns what educational television really is when they see it for themselves, and support grows with exposure.

UHF stations that have begun with in-school broadcasts alone because of the lack of UHF reception on home receivers in their area have, in time, expanded their program schedules into the evening hours. In addition to producing programs of their own for home viewing, the stations employ the program service of the National Educational Television and Radio Center.

Looking to the future

For the last several years the FCC has been considering various aspects of the UHF-VHF allocation problem. In this connection it has been finally determined that no additional VHF channels can be obtained from other services, such as the military. Certain technical problems about UHF are being studied, particularly potential UHF service in New York City. The FCC has obtained \$2 million from Congress to build two experimental UHF stations in New York City and make a thorough study of what UHF can do in that metropolitan area. Completion of the study is expected in 1962.

The Commission is considering adding a few VHF assignments at shorter separations than now permitted, but VHF channels are so fully utilized, particularly in the eastern half of the United States and on the west coast, that few additional assignments are possible. The future expansion of television must depend to a great extent on UHF. Educators have an opportunity now to use the lower, better UHF channels while they are still available.

STATUS OF ETV NETWORK DEVELOPMENT

NETWORKS IN OPERATION

Alabama has three stations, all interconnected

Since August 1956, Alabama has had three VHF stations in operation with three separate studios, all interconnected by microwave. The three stations cover an estimated 80 percent of the State by direct broadcast. Further extension of coverage into a portion of northwestern Alabama is provided through a community antenna system serving that area. Plans are now underway for reaching Mobile and other areas of Alabama not yet served, by the use of UHF channels. Plans for Montgomery are mentioned under "Upcoming ETV Stations."

The network is operated by the Alabama Educational Television Commission which was set up in 1953 by the State legislature, with \$500,000 appropriated for constructing the stations. Programming is in cooperation with the University of Alabama, Auburn University, and the Birmingham Area ETV Association, each with its own studios.

In response to a request by the Alabama ETV Commission the FCC reserved an additional 8 UHF channels in Alabama, making a total of 12 UHF reservations. Some of these will be activated in completing coverage of the State, and others are planned for a second ETV service in areas now receiving the VHF service.

Oklahoma has three stations, two interconnected

Oklahoma City now has two ETV stations, one VHF and one UHF, with the UHF operation on an unreserved channel. The purpose of the additional station is to provide greater flexibility in scheduling the reception of in-school broadcasts and to permit two different programs to be available at the same hour. The UHF station is owned by the Oklahoma City Board of Education and the VHF station is licensed to the Oklahoma Educational Television Authority, established by the Oklahoma State Legislature in 1953 and authorized to use more than \$700,000 from the State public building fund to construct stations on the reserved channels.

In Tulsa, the Oklahoma Educational Television Authority has another ETV station (channel 11). This station rebroadcasts the programs of the Oklahoma City VHF station at present, picking up its signal off the air. Microwave interconnections are planned for the future.

Florida has five stations, two interconnected

Florida now has five ETV stations in operation. Two of these (Jacksonville and Gainesville) are now interconnected by microwave.

The five ETV stations are all on VHF channels and include State university, local school system, and community type stations. The Florida Educational Television Commission was established in 1957 by the State legislature following a 3-year State-financed study of ETV possibilities in the State. The ETV commission's duties are to assist communities to construct stations, to facilitate cooperation among the existing stations, to construct microwave interconnections between them, and to coordinate Florida's ETV system with those of other States.

New England has two stations interconnected, others planned

The ETV stations in Durham, N.H., and Boston, Mass., are exchanging culture and instructional programing. Each station picks up the other's signal off the air and rebroadcasts the programs on its own channel.

A number of ETV stations are planned in Maine which would be connected with the Durham and Boston stations to provide an ETV network for the area. The University of Maine has petitioned the FCC for three new reservations in the State. One of these will be used by Bates College at Lewiston, which acquired an existing permit on July 27, 1960.

NETWORKS PLANNED OR UNDER CONSTRUCTION

Oregon

The State Board of Higher Education of Oregon is now operating an ETV station on reserved channel 10 in Portland. It is interconnected with the channel 7 ETV station in operation since 1957 in Corvallis, from which college credit courses are being received in four State and private colleges. Oregon is interested in using TV to broaden the curriculum available in each college as well as to improve the quality of instruction.

Western States

Thirteen Western States have an interstate compact establishing the Western Interstate Commission for Higher Education, financed by appropriations from each member State. The commission seeks to promote interstate cooperation in higher education, particularly in graduate, professional, and technical fields and in the health professions. The member States are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

The commission is interested in promoting an exchange of college TV teaching similar to the plan now in operation in the Corvallis and Portland areas of Oregon. Since it is a coordinating agency, it will probably not construct ETV stations on its own initiative, but will assist in working out exchange of college level TV instruction as further ETV stations develop in the area.

North Carolina

The ETV station at the University of North Carolina in Chapel Hill also has studios at two other branches of the university system in other cities. The broadcasts serve most of the eastern half of North Carolina and plans are being developed to provide ETV in western parts of the State. Meantime, commercial stations in six cities of the State are rebroadcasting the 8th and 9th grade science and math series of the ETV station.

Tennessee

Tennessee developed a network plan some years ago, but Memphis is the only ETV station on the air. Present efforts are directed toward the activation of reserved channel 2 in Nashville, and long-term plans indicate that other stations will also be built.

Michigan

The State superintendent of public instruction appointed a citizens committee on educational television which, with several subcommittee, has been active in developing plans for a statewide ETV network. A petition has been filed with

the FCC requesting an additional VHF channel assignment. Following up the work done so far, a further study is underway of educational needs; this will project a coordinated and extended statewide plan for the expanded use of television and related instructional media.

Upper Midwest States

An Upper Midwest Network is being planned to provide a number of ETV stations in Minnesota, Wisconsin, North and South Dakota, Nebraska, and Iowa. The stations would be so located as to provide maximum possible coverage of rural areas as well as cities.

Other State plans

Kansas, Kentucky, Montana, and Ohio are currently each making a study of ETV possibilities within their borders.

Summary of State support for ETV

Since 1952, 32 States have supported the development of ETV, either by the appointment of State ETV commissions for making plans, or by the appropriation of funds for station construction. Twenty-five State commissions have been formed by legislative action. In 20 States, financial appropriations have been made totaling between \$10 and \$12 million. In addition, 20 State universities partially or wholly support ETV station operation through participation in educational programs.

MULTISTATION ETV CITIES

Oklahoma City's two stations have been discussed under ETV network development.

Pittsburgh, in addition to its ETV station on channel 13, has constructed and is operating a station on channel 16 to increase the number of in-school broadcasts. A third station is now under consideration.

Milwaukee has petitioned and received the reservation of a UHF channel for a second station to be used largely to increase the in-school TV offerings, and an application for construction permit has been filed.

Andalusia, Birmingham, and Munford (Cheaha), Ala., sites of the three VHF stations of the Alabama ETV Commission, will each add a UHF service. Miami has filed an application to add a UHF station to supplement present VHF operation.

Ogden, Utah, has one ETV station on the air and plans a second so that the separate needs of city and county can be met.

AIRBORNE ETV

A different approach to providing TV service to schools is the Midwest program on airborne television instruction. This experiment will broadcast on two UHF channels from an airplane circling at 23,000 feet over Montpelier, Ind., south of Fort Wayne. Broadcast coverage will extend over a radius of 150 miles or more. Over 200 educators from the 6 States involved have been participating in program planning and production while manufacturers and engineers prepare and install the special equipment needed.

Demonstration broadcasts are planned for the spring months of 1961, with full programming expected for the fall of 1961. The area involved is Indiana, most of Ohio, and parts of Kentucky, Illinois, Michigan, and Wisconsin. Reception by schools and colleges is optional and the institutions will provide their own receivers except in a few experimental locations. The project is financed by a grant from the Ford Foundation and by contributions from private industry.

PROGRAMING OF ETV STATIONS

The programming of ETV stations may be divided into two broad categories: Programs for home viewing by adults and children on a variety of subjects, and programs planned for in-school viewing. Both types of programs may come from one of three sources:

Programs locally produced by the ETV station, by colleges and universities near the station, and by the local school districts.

The programs of the National Educational Television and Radio Center.

Films and other recorded programs obtained by the station from various sources.

PROGRAMS LOCALLY PRODUCED

While it is obviously impossible to describe briefly the great variety of programs produced locally, general types can be described and a few examples cited.

Direct instruction for elementary and secondary students

In instructional television, portions of a subject are regularly taught by TV, plans for the year being made by groups of teachers; or the entire course is taught by TV with varying degrees of followup in elementary classes and, for the high school students, a variety of arrangements about written assignments and examinations. Subjects most frequently presented by TV are: in the elementary schools, science, foreign languages, language arts, music, art, social studies, arithmetic, in that order; and in the high schools, science, mathematics, history, foreign languages, and English.

Illustrating the use of TV for foreign language teaching is the French program of the Boston ETV station. A 15-minute broadcast for elementary students and teaches is offered at two time spots on 2 days a week and is supplemented by a half-hour broadcast after school once a week for the teachers only. The series is now in its second year and the first year's series is being run again from recordings. Still more advanced instruction will be offered for the third year of the project. More than 75,000 pupils in 120 school systems in Massachusetts, Rhode Island, and New Hampshire are following these series.

A similar 3-year series in Spanish is running at the Louisville ETV station. Many other ETV stations have language instruction, giving French, Spanish, German, Russian, or Hebrew, in that order. The Tampa station offers four languages and several stations offer three or two. Practically all of the Spanish instruction is locally produced, but some language series are available from the National Educational Television and Radio Center. For example, a number of ETV stations are currently using the French series produced in Boston and supplied to the stations by the center.

High school subjects chosen for TV instruction in the larger population centers may be those which necessitate the repetition of the same material before successive class groups. The time saved by teaching them all at one time on TV is used in intensive preparation for the TV presentation and in more individual work with students of different ability levels. Advanced courses may also be offered by TV that are not normally included in the high school curriculum. These will be received in school hours by groups of qualified students in each high school. College-level work may be offered in this way to enable gifted students to enter college with advanced standing.

In some of the less thickly populated States, ETV stations carry college preparatory courses in science and mathematics for which no competent teachers are available in the smaller rural high schools. Refresher college preparatory courses in English and mathematics are offered by TV in Alabama and Texas to reduce the burden on the colleges of providing remedial work for new students.

College credit courses for home and campus

At least 23 ETV stations are currently carrying locally produced college credit courses. Nine stations are carrying one course each; two courses are running on six stations, three courses on three stations, four courses on two stations, and the other three stations are carrying five, eight, and nine courses, respectively.

The subjects taught may be generalized as follows: History (various periods); social studies (Africa), anthropology, sociology, psychology; economics, accounting, shorthand, personnel management; English, literature (world, English, American, English novel, 19th century poets); philosophy, religion; mathematics, algebra, geometry, slide rule; physical science, chemistry, biology; art, music appreciation, humanities; world geography, descriptive meteorology; general hygiene; education (various aspects); French, Spanish, German; speech, magazine and feature writing.

The Chicago TV Junior College, now in its fifth year, had drawn, as of its fourth year, an average semester enrollment for credit of 1,261 persons taking 2,321 courses, or nearly two courses per person. One-third of the credit students hope to become teachers. Noncredit enrollments averaged 3,550 individuals taking about 1½ courses each. In addition, a regular viewing audience of 5,000 to 35,000 persons followed each course (on the basis of an audience survey) and irregular viewers numbered in the hundreds of thousands.

Course enrichment

TV may be used to present certain facets of a subject by bringing into the classroom talks by experts who would not be available for repeated class-by-class appearances; or by showing the students factories, museums, and places of historical interest; or by showing any aspect of a subject not convenient in other ways, such as views of microscopic plants and animals.

Pre-school-age programs

Some ETV stations produce programs for the preschool child. Others rely on the National Educational Television and Radio Center for this type of program.

Adult programing

Colleges, universities, libraries and museums in an ETV station's general vicinity often produce series for home viewing on subjects of general cultural interest, such as drama, the dance, music, art, literature, current affairs (national international, and local), and other subjects. Many are of interest to young people as well as adults. The Minnesota Private College Hour, for example, has been running for many years. Different colleges present selected subjects, several weeks in a series. A few of these run for longer periods and are credit courses.

The TV literacy course

The Memphis ETV station, in cooperation with community groups and Dr. Frank C. Laubach, produced in 1956 a TV series teaching reading and writing to adults who never went to school or whose reading ability is so slight as to be useless to them. (There are 10 million such persons in the United States.) The classes met in rooms provided, under the guidance of specially trained volunteers recruited through civic and religious organizations. "Streamlined Reading" was recorded, and its success in the Memphis area has led to its subsequent use by at least 5 ETV stations and 10 commercial TV stations in Tennessee, North and South Carolina, Alabama, and Pennsylvania. The title of the series is often changed to "Improve Your Reading," as it has been found that adults are quite sensitive about admitting that they cannot read. Among foreign countries already applying this TV literacy method to their own languages are Egypt and Kenya.

PROGRAMS OF THE NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER

The National Educational Television and Radio Center supplies 10 hours of programing each week to affiliated stations. The center contracts for program production with the more experienced ETV stations and with commercial producers, stations and networks. Programs are distributed by videotape, kinescope, or film and circulate among the stations on a prearranged schedule. The programs are also available for use on commercial stations under certain conditions. Past program series are available on order and are often used by new ETV stations during the first few months.

The center concentrates on programing that would be beyond the means of the average station. It is difficult to present briefly a summary of center programing because of its variety. The following excerpts are quoted from NET News, Fall 1960, a publication of the center from its offices at 10 Columbus Circle, New York 19, N.Y.:

"The 'NET Drama Festival' is the exclusive American showing of six full-length dramas produced by outstanding television studios in England, Canada, and the United States (2-hour productions).

"'Command in Battle' is the televised memoirs of controversial British Field Marshal Montgomery.

"'Invitation to Art' * * * is especially informative to those to whom art is an uninviting and mysterious world.

"A memorable musical series is based on the classes for professionals conducted by Pablo Casals at the University of California.

"A unique weekly news broadcast presenting a personal glimpse of United Nations personalities together with a complete roundup of the week's events in the General Assembly and the Security Council is a NET program moving into its third season.

"For the first time in its 8-year history, National Educational Television has gone abroad to produce its own television programs. The first two programs for a new season of Mrs. Eleanor Roosevelt's 'Prospects of Mankind' were produced

in mid-September in London and in Paris. The first program, 'The British Attitude Toward Defense Policy,' features Lord Bertrand Russell and Hugh Gaitskell. * * * The historic program was produced at the BBC studios in London.

"In '45 Years With Fitzpatrick,' cartoonist D. S. Fitzpatrick of the St. Louis Post Dispatch uses his work as illustration in talks with guests about trends in history."

The center has recently concluded an agreement with Radiotelevisione Italiana which will provide for an exchange of programs. RAI will broadcast programs in the NET series, "Main Street," in which five cities give viewers an intimate, imaginative glimpse of their distinctive personalities, and "A Time to Dance" and other center series. NET will use selected documentary programs from RAI.

Also notable among NET projects is "What's New," a series for children which is being evaluated on the basis of children's reactions in six cities.

NET programs are usually carried by ETV stations during afternoon and evening hours, except that programs for preschool children may be offered during the morning, and any center programs being used for inschool viewing will, of course, be scheduled during school hours.

PROGRAMS FROM OTHER SOURCES

The ETV stations also carry other recorded programming which may be available either free or for a fee. The National Educational Television and Radio Center assists in keeping the stations informed about sources of such programs.

Outstanding in this type of programming are the NBC "Continental Classroom" courses in physics, chemistry, and mathematics, which are available to ETV stations through the center. ETV stations usually schedule these courses in evening hours.

ETV PROGRAMS ALSO ON COMMERCIAL STATIONS

A complete report of educational programming on commercial TV stations is beyond the scope of this paper. The total volume is known to be considerable, though the per-station amount of time is apt to be small except in special circumstances. Commercial TV station WPIX in New York City has a contract with a New York educational agency for the greater part of the school week and, immediately after school, inservice training for teachers is also broadcast. There are other cities in which air time is also purchased, though for a smaller number of hours.

Many commercial stations donate air time of an hour a week, or a half hour or more each school day, and some of these arrangements are of many years duration, as in Chicago and Philadelphia. A few instances of commercial cooperation have been mentioned on other pages, but there are many more.

A study made of the use of TV for teaching science and mathematics on commercial as well as educational TV stations and on closed-circuit TV systems in schools and colleges gave totals for the years 1958-59 and 1959-60, for all ages combined, of 164 mathematics series and 344 science series carried on 44 ETV stations, 52 closed-circuit systems, and 66 commercial stations in 41 States, the District of Columbia, and Puerto Rico. The numbers are in addition to any pertinent programs from the National Educational Television and Radio Center and are in addition to the "Continental Classroom" courses in physics and chemistry carried on the NBC network and on many ETV stations and offered for credit by about 200 colleges and universities. The figures do not include any single programs; the lengths of the series listed varied from several weeks to 1 year. Much of this programming was locally produced.

Closed circuit TV systems (CCTV) in educational institutions

Year	Number of institutions having CCTV systems	Number of CCTV systems in these institutions	Number of military CCTV systems used for training
1956	64	70	7
1958	119	133	21
1960 (July)	185	200	24

Figures for 1956 and 1958 are based on questionnaires returned in surveys. Figures for 1960 are based on a count of additional CCTV installations reported in newspapers and magazines, and in correspondence. It appears that there are about 300 CCTV systems now in use, including new ones not reported and a number used for medical diagnosis, scientific research, and other purposes not strictly educational and not included in the above totals. The closed-circuit systems vary from a single camera connected to a few receivers to well-equipped studios with cable connections to elementary and secondary schools in most of a county.

CLOSED-CIRCUIT ETV NETWORKS

The South Carolina General Assembly began a closed-circuit ETV experiment in 1958 in the Dreher High School of Columbia, S.C., and expanded it the following year to two more high schools and two junior high schools in Columbia. In 1960, the system was extended 135 miles to Charleston, adding 15 schools, with an additional 65 schools served by broadcast of taped instruction over commercial TV stations in Charleston and Columbia. A second circuit will extend 85 miles from Columbia to Florence and another will reach schools west of Columbia.

In Hagerstown, Washington County, Md., a closed-circuit cable system reaches into all schools of the county except a few in outlying districts. Six programs can be carried simultaneously by the cable, and TV instruction is given for all grade levels and in many subjects. No student receives more than an hour of TV instruction per day, with the exception of some high school students receiving an hour and a half.

Other city school systems using CCTV to connect several schools are Anaheim, Calif. (17 schools connected); Louisville, Ky.; Pocatello, Idaho; Corning, N.Y.; Cortland, N.Y.; Galveston, Tex.; and Snyder, Tex. Many colleges and universities connect a number of campus buildings; teachers colleges using CCTV for observation are connected with the classrooms being observed.

Colleges in several states have considered CCTV networks, but their plans have awaited a decision by the FCC as to whether microwave channels would be permitted for this purpose. The favorable decision was announced in September 1960, and it is anticipated that there will be considerable future expansion in closed-circuit networks.

Eleven Texas colleges and universities in the general area of Austin and San Antonio have recently obtained authorization from the FCC to construct a microwave network for transmitting college courses among the participating institutions by CCTV.

The uses to which CCTV systems are put are too many to enumerate briefly. Ages taught range from kindergarten to medical and dental postgraduate, and subjects vary from anthropology to zoology. CCTV is also increasingly used in colleges of education to facilitate observation of teaching methods by groups of student-teachers, and in medical and dental schools to permit a closeup look at subjects under consideration, permitting the whole group to have a better view than if the demonstration were repeated for each student singly without benefit of TV. Some schools use CCTV for enrichment only and not for instruction.

THE U.S. CONGRESS AND ETV

In the 85th Congress, Senator Magnuson, Democrat, of Washington, introduced a bill, S. 2119, to provide grants of \$1 million per State for establishing or improving ETV facilities. The bill passed the Senate on May 29, 1958. Similar bills were introduced by Representatives Boggs and Udall but no action was taken by the House.

In the 86th Congress, Senator Magnuson introduced S. 12, which proposed grants of \$1 million per State for the acquisition and installation of ETV facilities. This bill was passed by a voice vote on April 13, 1959. In the House, seven separate bills were introduced (H.R. 32, H.R. 1981, H.R. 2926, H.R. 3723, H.R. 4248, H.R. 4572, and later, H.R. 10609). After several months of study of the first six of these, the Subcommittee on Communications and Power of the House Interstate and Foreign Commerce Committee voted on February 18, 1960, to pass on to the full House committee the question of what legislative action was suitable. On February 23, 1960, Representative Roberts, Democrat, of Alabama, introduced H.R. 10609, which contained elements of several of the bills considered by the subcommittee. On March 24, 1960, H.R. 10609, with several amendments, were reported favorably out of the House Interstate and Foreign Commerce Committee and sent to the rules committee.

The House Commerce Committee made three major changes in H.R. 10609 before reporting it out: (1) the grant (not to exceed \$10,000) to a State for an ETV survey must be matched by the State; (2) a total of \$39 million (\$750,000 per State) would be authorized rather than \$1 million per State as in the initial version; and (3) the grant for any one project must not exceed \$150,000.

On May 12, 1960, the rules committee reached a tie vote on a motion to bring the bill before the House for debate and action, and accordingly the bill died in the committee.

In the 87th Congress, five bills providing Federal support for the acquisition and installation of ETV facilities (including closed-circuit TV) have so far been introduced: S. 205 by Senator Magnuson, Democrat, of Washington, for himself and Senators Schoepel, Democrat, of Kansas, Metcalf, Democrat, of Montana, and Cooper, Republican, of Kentucky; H.R. 132 by Representative Roberts, Democrat, Alabama; H.R. 645 by Representative Boggs, Democrat, Louisiana; H.R. 965 by Representative Harris, Democrat, of Arkansas; and H.R. 2910 by Representative McIntire, Republican, of Maine.

S. 205 and H.R. 965 are similar, proposing \$1 million for each State and District of Columbia, the grants to be made through the U.S. Commissioner of Education, with a time limit of 5 years after enactment. H.R. 2910 is also similar, except that no time limit is specified. H.R. 645, proposing amendment of the Communications Act of 1934, would provide the same amounts as S. 205, H.R. 965, and H.R. 2910, and provides for administration by the Commissioner of Education, but sets no time limit.

H.R. 132, also proposing amendment of the Communications Act, would be administered by the Secretary of Health, Education, and Welfare; it proposes for each State, District of Columbia and Puerto Rico \$1 million for facilities and \$10,000 for a State ETV survey and plan, both amounts to be matched equally by the States. State plans and project applications are to be submitted through a duly constituted State ETV agency; grants may be made to approved projects (including nonprofit community ETV organizations); a percentage of the cost of existing ETV facilities may be counted in computing the State's matching funds. Time limits: plans within 3 years of enactment; grants within 3 years of submission of a plan.

THE NATIONAL DEFENSE EDUCATION ACT

Two provisions of the National Defense Education Act, passed by the 85th Congress, have been of value to the ETV movement. Title III of the act is to improve the teaching of science, mathematics, and modern foreign languages by making funds available for equipment and supervisory services. Some schools have obtained assistance in purchasing TV receivers under this title. Title VII is to encourage research and experimentation in more effective utilization of TV, radio, motion pictures and related media for educational purposes. During the first 2 years, over 80 projects received grants under this title, and of these, 31 concerned the use of TV in instruction. The act is administered by the U.S. Department of Health, Education, and Welfare.

STATEMENT ON EDUCATIONAL TELEVISION BY DR. EDGAR FULLER, EXECUTIVE SECRETARY, COUNCIL OF CHIEF STATE SCHOOL OFFICERS

Mr. Chairman and members of the committee, this statement is submitted on behalf of the Council of Chief State School Officers. Its members are the State superintendents and State commissioners of all the States and the chief school officers of the Commonwealth of Puerto Rico, Guam, Canal Zone, the Virgin Islands, and American Samoa.

This council was among the first educational organizations to submit statements to the Federal Communications Commission in support of the reservation of television assignments for educational use in 1949. In 1950-51 it joined with six other educational organizations¹ to bring highly respected leaders in education to Washington from all over the country to testify to the value of television as an educational tool and to plead for an opportunity to develop it for the benefit of all the people on noncommercial channels. These organiza-

¹ American Council on Education, Association for Education by Radio-Television, Association of Land-Grant Colleges and Universities, National Association of Educational Broadcasters, National Association of State Universities, National Education Association.

tions became the Joint Committee on Educational Television which has represented the educational establishment before the FCC in protecting the reserved channels.

Although a considerable number of ETV stations are broadcasting, lack of funds for capital facilities has prevented others from going on the air. The need for such assistance as would be provided by H.R. 965 and similar bills is great. The program of the Federal Communications Commission to encourage development of ultra high frequency television will be especially helpful to education, since a large majority of the TV channels reserved for education are in the UHF band.

Twenty-six of the thirty chief State school officers who have thus far responded to a recent inquiry regarding this bill favor its passage. Many are active in State commissions which are now operating educational television stations. Some have participated in the formation of statewide network operations. Educational television is of great importance to most chief State school officers in connection with their general responsibilities to coordinate educational activities on behalf of their respective States.

STATE EDUCATION AGENCIES

As introduced, section 2 of H.R. 965 makes several types of agencies eligible for projects: "(a) agency or officer primarily responsible for the State supervision of public elementary and secondary schools, (b) a nonprofit foundation, corporation or association organized primarily to engage in or encourage educational television broadcasting, (c) a duly constituted State educational television commission, or (d) a State-controlled college or university."

The chief State school officers are generally responsible for State supervision of public elementary and secondary schools. Where State educational television commissions have been established the chief State school officer, or his designated representative, ordinarily serve as members. Some chief State school officers have responsibilities for and all have interest in the operation of State-controlled colleges and universities. We believe that approval by the U.S. Commissioner of Education of projects by groups which are not an integral part of the State system of education should be conditioned upon approval by the State department of education. Otherwise, agencies outside the State system of public education may unreasonably interfere with it. This coordination is necessary and desirable because a major part of the programming of educational television stations is and is likely to continue to be provided by and for the public elementary and secondary schools. Another important factor is that ETV stations depend heavily on public school budgets for their operating expenses.

U.S. COMMISSIONER OF EDUCATION

This council is in full agreement with the established policy of delegating to the U.S. Commissioner of Education the responsibility for administering Federal funds to the States for educational purposes. We therefore favor section 3 of H.R. 965 and believe it would be undesirable to delegate this authority to any other agency.

TELEVISION FACILITIES

In many States and localities, a considerable investment has already been made in television facilities. We believe that the legislation should give some consideration to such investments to insure that Federal funds in those States and localities may be used to improve the effectiveness of stations already on the air, such as increasing their power, or modifying their existing facilities.

MATCHING REQUIREMENTS

Mr. Chairman, chief State school officers have expressed a preference for H.R. 965 over other bills which require the State to provide matching funds. The purpose of H.R. 965 "to expedite the utilization of television transmission facilities in the public schools and colleges and in adult training programs," would best be accomplished by providing Federal grants which do not require State or local matching.

Three of the four types of educational agencies which qualify under section 2 as eligible for grants under this bill, (a), (c) and (d), would need to request legislative funds for such State contributions. At least 44 State legislatures convened in January 1961 and will have adjourned by the time H.R. 965 can

be enacted and placed in effect. So action could not be taken in these States for another year, which would delay the implementation of the legislation. It is unlikely that special sessions would be called for most State legislatures to authorize the small amounts involved for these special purposes.

The theory that State and local initiative is stimulated only when State and local funds are contributed to match the Federal funds is not realistic in terms of this legislation. H.R. 965 as written will stimulate continuing and long-range support by the States and localities. To add matching requirements would complicate the legislation and impede its usefulness.

Mr. Chairman, we hope that the Congress will pass legislation typified by H.R. 965. This council has been on record in support of the full utilization of the reserved television channels for many years, and will continue to work with the Congress and the Federal Communications Commission toward the best use of television in education.

We have attached a brief description of this council, together with a list of the chief State school officers.

COUNCIL OF CHIEF STATE SCHOOL OFFICERS, WASHINGTON, D.C.

Established in 1928, the Council of Chief State School Officers is an organization of State superintendents and commissioners of education, entirely independent of any other professional or official organization. Its membership includes the 50 State school officers plus the heads of education agencies in the Canal Zone, Guam, Puerto Rico, the Virgin Islands, and American Samoa. These officials are responsible for the administration and development of education in their States or territories.

The council is financed by contributions from the States, according to a formula which is based on total State expenditures for education.

The council's Washington office, with Edgar Fuller as executive secretary, has a staff of three, and carries out the established policies which have been developed over a period of years. It provides information to the membership on all matters which relate to State school administration. The staff seeks to promote a cohesion of action among the official State educational agencies and to express their views to the Congress, to Federal administrators, in professional circles and wherever such expression is serviceable in furthering education.

List of chief State school officers follows:

Alabama: Frank Stewart, superintendent of education, State department of education, Montgomery.

Alaska: Theo J. Norby, commissioner of education, State department of education, Box 1841, Juneau.

American Samoa: M. J. Senter, director of education, department of education, Pago Pago.

Arizona: W. W. Dick, superintendent of public instruction, State department of public instruction, Phoenix.

Arkansas: A. W. Ford, commissioner of education, State department of education, Little Rock.

California: Roy E. Simpson, superintendent of public instruction, State department of education, Sacramento.

Canal Zone: Sigurd E. Esser, superintendent of schools, division of schools, Balboa Heights.

Colorado: Byron W. Hansford, commissioner of education, State department of education, Denver.

Connecticut: William J. Sanders, commissioner of education, State department of education, Hartford.

Delaware: George R. Miller, Jr., superintendent of public instruction, State department of public instruction, Dover.

Florida: Thomas D. Bailey, superintendent of public instruction, State department of education, Tallahassee.

Georgia: Claude L. Purcell, superintendent of schools, State department of education, Atlanta.

Guam: John R. Trace, director of education, department of education, Agana.

Hawaii: Walton M. Gordon, superintendent of public instruction, State department of public instruction, Honolulu.

Idaho: D. F. Engelking, superintendent of public instruction, State department of education, Boise.

Illinois: George T. Wilkins, superintendent of public instruction, State department of public instruction, Springfield.

Indiana: William E. Wilson, superintendent of public instruction, State department of education, Indianapolis.

Iowa: Paul F. Johnston, superintendent of public instruction, State department of public instruction, Des Moines.

Kansas: Adel F. Throckmorton, superintendent of public instruction, State department of public instruction, Topeka.

Kentucky: Wendell P. Butler, superintendent of public instruction, State department of education, Frankfort.

Louisiana: Shelby M. Jackson, superintendent of education, State department of education, Baton Rouge.

Maine: Warren G. Hill, commissioner of education, State department of education, Augusta.

Maryland: Thomas G. Pullen, Jr., State superintendent of schools, State department of education, Baltimore.

Massachusetts: Owen B. Kiernan, commissioner of education, State department of education, Boston.

Michigan: Lynn M. Bartlett, superintendent of public instruction, State department of public instruction, Lansing.

Minnesota: Dean M. Schweickhard, commissioner of education, State department of education, St. Paul.

Mississippi: J. M. Tubb, superintendent of education, State department of education, Jackson.

Missouri: Hubert Wheeler, commissioner of education, State department of education, Jefferson City.

Montana: Harriet Miller (Miss), superintendent of public instruction, State department of public instruction, Helena.

Nebraska: Freeman B. Decker, commissioner of education, State department of education, Lincoln.

Nevada: Byron F. Stetler, superintendent of public instruction, State department of education, Carson City.

New Hampshire: Charles F. Ritch, Jr., commissioner of education, State department of education, Concord.

New Jersey: Frederick M. Raubinger, commissioner of education, State department of education, Trenton.

New Mexico: Tom Wiley, superintendent of public instruction, State department of education, Santa Fe.

New York: James E. Allen, Jr., commissioner of education, State education department, Albany.

North Carolina: Charles F. Carroll (president 1960-61) superintendent of public instruction, State department of public instruction, Raleigh.

North Dakota: M. F. Peterson, superintendent of public instruction, State department of public instruction, Bismarck.

Ohio: E. E. Holt, superintendent of public instruction, State department of education, Columbus.

Oklahoma: Oliver Hodge, superintendent of public instruction, State department of public instruction, Oklahoma City.

Oregon: Leon P. Minear, superintendent of public instruction, State department of education, Salem.

Pennsylvania: Charles H. Boehm, superintendent of public instruction, State department of public instruction, Harrisburg.

Puerto Rico: Candido Oliveras, secretary of education, Department of Education, Vela Street, Stop 34, Hato Rey.

Rhode Island: Michael F. Walsh, commissioner of education, State department of education, Providence.

South Carolina: Jesse T. Anderson, superintendent of education, State department of education, Columbia.

South Dakota: M. F. Coddington, superintendent of public instruction, State department of public instruction, Pierre.

Tennessee: Joe Morgan, commissioner of education, State department of education, Nashville.

Texas: J. W. Edgar, commissioner of education, Texas Education Agency, Austin.

Utah: Wilburn N. Ball, superintendent of public instruction, State department of public instruction, Salt Lake City.

Vermont: A. John Holden, Jr., commissioner of education, State department of education, Montpelier.

Virginia: Woodrow W. Wilkerson, superintendent of public instruction, State board of education, Richmond.

Virgin Islands: Alonzo G. Moron, commissioner of education, Department of Education, Charlotte Amalie, St. Thomas.

Washington: Louis Bruno, superintendent of public instruction, State department of public instruction, Olympia.

West Virginia: Rex M. Smith, acting superintendent of free schools, State department of education, Charleston.

Wisconsin: George E. Watson, superintendent of public instruction, State department of public instruction, Madison.

Wyoming: Velma Linford (Miss), superintendent of public instruction, State department of education, Cheyenne.

Mr. MOULDER. Chairman Harris has some questions.

Mr. HARRIS. If my colleagues will indulge me this moment. Mr. Fuller, could you tell us a little bit more about your organization?

Dr. FULLER. Do you mean the Joint Council on Educational Broadcasting?

Mr. HARRIS. Yes.

Dr. FULLER. Yes; I can. This was organized on October 16, 1950, as an ad hoc group representing education at all levels. I believe I am the sole surviving, original member of that group who is now a member of the JCEB.

We met on October 16, 1950, because we knew that the freeze of television station activation was about to be lifted by the FCC after hearings. So we got busy and raised funds and brought 73 witnesses in from all over the United States to testify about the possible use of educational television to education and to the country, to improve the culture and education of the country.

Those hearings took place during the last months of 1950 and in the spring of 1951, and I believe it was in April, I am sure it was in April of 1951, the Joint Council on Educational Television was organized formally and established and staffed to protect the ETV reservations if and when made. The reservation of 242 channels had been announced only a few days previous to the meeting. And this JCET organization was to assist in any way it could to activate the channels.

At that time there were seven organizations as members of the Joint Committee on Educational Television. It was my honor to serve as chairman the first 3 years, and Dr. David D. Henry, now president of the University of Illinois, served as vice chairman for those 3 years and then we traded jobs and Dr. Henry became the chairman for 2 years and I was the vice chairman.

And then about that time we reorganized into a Council on Educational Television, and admitted two or three new organizations to membership. The Council operated with an executive committee of five, and continued with Foundation support and with the support of the constituent agencies to protect the channels, to activate the channels, and to serve them as far as it could within the framework established by the different organizations in the country that were interested in educational television.

This we did, and from the very beginning we had as JCEB attorneys, two of the finest communications attorneys in the country: Gen. Telford Taylor, who was general counsel, I believe, of the FCC, and the late Seymour Krieger, who worked with General Taylor in appearing before the FCC to have the channels set aside.

That is our history. It has been, I believe, Mr. Harris, a rather consistent one. We hope it has been of assistance to the educational establishment throughout the decade since we started to work.

Mr. HARRIS. Now, these constituent members that you list here, are the organizations that presently make up your Council?

Dr. FULLER. That is correct.

Mr. HARRIS. Where did these 73 witnesses testify? You said they came down here.

Dr. FULLER. They testified before the FCC.

Mr. HARRIS. That was at the time when allocations were made for these educational channels?

Dr. FULLER. This was the case made before the FCC for the allocations to be made and was reported in the 6th Order and Report of FCC.

Mr. HARRIS. Does your organization have any contact or relationship with the State governments either with the chief executives themselves or through some other relationship?

Dr. FULLER. The State universities are a part of the State governments, but the most direct association with the State governments, I suppose, is in another capacity in which I serve as executive secretary of the Council of Chief State School Officers. These are the State superintendents and State commissioners and chief school officers of the 50 States, Puerto Rico, the Virgin Islands, Guam, American Samoa, and so forth. I have been representing them here for around 13 years now and was a State commissioner of education in one of them previously.

I might say in that connection that there has been State legislative action by State legislatures in 20 States, in the following respects: 20 States have provided direct financial assistance to educational television; 25 States have set up educational television commissions which have been formed at legislative direction; and 32 States have actively supported the growth and development of educational TV through legislative action designed to stimulate the movement.

I might add further that only very recently I directed an inquiry, in objective terms, to all of the chief State school officers in all of the States and the territories, and thus far I have received about 30 replies, asking them whether they favor this legislation or not.

Of those 30 replies, 26 of the State commissioners, and superintendents say they favor this legislation, and 4 stated they are opposed.

Mr. HARRIS. Mr. Fuller, that is what I was going to lead into; you anticipated me, obviously. I am interested in the position of the State governments on these bills. I think that is important. However, what I am even more interested in now is not only whether or not they favor the legislation, but what are they able to do about it?

What we want to know is if this legislation is passed, what arrangements will be made in the States for the utilization of it? What State organizations if any has been established, will be participating in a joint Federal-State program, and if they have not yet been established, what would be the plan of the State governments to establish such State organizations?

We want that information. And I think if this legislation is to be developed and is to be considered it must be done on the basis of how this legislation can contribute to the educational advancement in the United States, of our own people, and we have got to know what the States are going to do if this legislation should be enacted.

This bill provides an authorization of an appropriation to assist the States. Then it authorizes the Commissioner of Education to perform certain administrative functions in connection with it. It provides that the States themselves may submit applications. And until they submit applications there would be no program, regardless of what the Congress does.

What we want to know and what we should know is what provision, if any, the States have made or are making or will make? Are you going to be in a position to provide that information or have we to get it direct from these State governments?

Dr. FULLER. I am sure that the JCEB and the Council of Chief State School Officers can supply that. And we would be glad to supply for the record a list of the 25 States where educational television commissions have been established.

Mr. HARRIS. Yes. We will have one from my own State tomorrow. And I am going to be interested in finding out just what the nature of the commission is, what it is authorized to do, what kind of support it has behind it from the State. And what the State intends to do with reference to the utilization of these funds, or grants or whatever it might be, when the Congress finally does approve it.

I do not think that the Congress can accurately pass on this program until we find out what those who are going to use it and get the benefit of it will do with it.

This business of just authorizing something in a vacuum and to say, "We hope it will be used," to me is not enough. I think we are going to have to develop this record, and I said to the committee yesterday we have to develop it to the point where we know what will be done with it. That has to come from the States. I do not think there is any record yet that shows what the States will do with it and how it will be used. A few States have made outstanding progress in the field. It has been pointed out they have done a good job.

But as one of my colleagues said yesterday just to appropriate funds here to put up a television station down in some community somewhere, without any thought how it will be utilized and running the risk that it goes under, and not knowing what happens to it, if it is liquidated and sold we cannot do things of that kind.

I know you and other people have been urging on me and every member of this committee this program for the last 3 years. But I am speaking seriously, that you have got to come up with something to show how the States are going to use it.

Dr. FULLER. May I comment on the record thus far?

Mr. HARRIS. Yes, sir.

Dr. FULLER. We can give that information State by State. We will furnish that to you for the record.

The record so far is the activation of 54 stations. The first non-commercial station on the air was down at Houston, the second station that went on the air was located at the Hancock Foundation in Los Angeles, and is the only one, so far as I know, which has come on the air and then has gone off the air among the 54 that have been activated during the past years.

Mr. HARRIS. Two years ago, I think it was, was the anniversary of the station at Lincoln. I was under the impression that that was the first ETV station that actively got into use.

Dr. FULLER. The first noncommercial one was at Houston. The second one at Los Angeles. Iowa State College operated under a commercial license beginning in 1948 or so.

Mr. HARRIS. Is it still operating at Houston?

Dr. FULLER. Yes, sir.

Mr. HARRIS. Under what program?

Dr. FULLER. I will ask Mr. Stewart here, who is closer to the details of that organization, to answer that.

Mr. STEWART. The University of Houston is the licensee of that station. And it draws its funds principally from the university.

Mr. HARRIS. I recall during the course of the hearings in the last Congress—I think I do—that the State Legislature of Texas passed a resolution in opposition to this. Is that true or not? There was a move made to counteract that. What is the present situation?

Mr. STEWART. I think there will be a representative from Texas appearing this morning and he could more properly inform you on that subject.

Mr. HARRIS. Thank you.

Mr. MOULDER. Mr. Younger, of California.

Mr. YOUNGER. I would like to pursue just a little further the same lines on which our chairman, Mr. Harris, questioned you.

In addition to that information, I would like to have your organization give some thought as to what we should put into this bill in the way of criteria to a State or a university, giving a guarantee or assurance that they have the funds and will continue to have funds to operate with.

Also, a provision, regardless of the assurance, should the station fail financially, what happens to the station, if it is sold, will the funds from that sale come back to the Federal Government or what happens to them?

I think that ought to be spelled out in whatever legislation we pass. I do not think we ought to leave it up to chance.

Dr. FULLER. The conditions for the establishment of the television station is a matter for approval by the Federal Communications Commission taking into account all of the conditions that exist. And I believe there is considerable reliance in this legislation upon that fact, plus the fact that there is some discretion in the Federal Administrator of the act itself, the U.S. Commissioner of Education, to ascertain the feasibility and the practicability of the applications for funds.

I can speak with some background on that, because of the many years that I have been here representing the State superintendents, such as Roy Simpson of California, and the other State officers. They, of course, administer Federal laws from many different Federal sources—the Department of Agriculture, Office of Vocational Rehabilitation, and the Office of Education, and many others.

These details of Federal-State administration, I think, can scarcely be spelled out so that they would fit all of the States.

I would have no objection—and I am sure our organization would not—to any detailing of it that seems to help; but on the other hand, our experience is that if you have the protections in the Federal exercise of discretion; if you have the protections of the FCC hearings and the granting of the permit to construct the station, and

some of those procedures where in a quasi-administrative form they can take into account all of the peculiar situations, including the financial one, that that is better legislation.

That is the reason why in the formal statement, Mr. Younger, we favored the general bill, because we find that it works out better, it is more economical, it protects the Federal interests better, and it protects the State interests better to have the general framework such as that in Senate bill 205 and H.R. 965 before your subcommittee.

Mr. YOUNGER. That leaves it up to the department of Government to determine whether or not there is financial backing, but there is no criteria spelled out in that bill as to how or what we should require in the way of assurance. Should we provide that either the State or the university which is going to use it, or whatever organization it is, that they shall give certain assurances to be spelled out as to what the assurances will be that will be given?

Dr. FULLER. I am certain that those assurances would be given. They are given now by the Commissioner of Education in connection with several titles of the National Defense Education Act and other Federal laws which are administered by the chief of State schools officers at the State level.

The Federal Communications Commission has as its condition precedent for the granting of a license to operate a station, and a construction permit. In both cases, financial stability and the serving of the public interest and many other criteria that vary greatly from case to case, which are conditions precedent, are applied by the FCC.

Mr. YOUNGER. They have granted the license and gone into the feasibility and all of the backing financially. Under this bill that you are proposing that portion of the investigation would be by the HEW?

Dr. FULLER. The HEW, I believe—but we favor the U.S. Commissioner of Education, rather than any other Federal official, as the Administrator.

Mr. YOUNGER. He is part of HEW.

Dr. FULLER. That is true. But there is a difference. And some of the bills specify different Federal officers. And we strongly believe that the U.S. Commissioner of Education should be the person designated in the statute to administer these laws. The Commissioner would go into these things, Mr. Younger, and he would, undoubtedly, make a grant if he felt the conditions warranted. That grant would never be used and would, probably, never be paid, unless the station were actually constructed and went through the entire procedure of qualifying under the FCC rules for a construction permit and a license.

Mr. YOUNGER. Would your organization give some thought to that question and give such advice as you can to the committee as to how the bill can be improved on those features?

Dr. FULLER. I think your question is an important one and I would be glad to do that.

Mr. YOUNGER. Thank you. That is all.

Mr. MOULDER. Mr. Rogers of Texas.

Mr. ROGERS of Texas. I have no questions.

Mr. MOULDER. Mr. Moss of California.

Mr. MOSS. Would we not find it rather difficult to spell out precisely the criteria which would be applied administratively to all of

the States in view of the great difference between the approaches made necessary because of State constitutional provisions for the operation of educational television stations?

Dr. FULLER. I think it is a practical impossibility. And I am certain that we would have no objection to it if it would improve the administration throughout the States, but I don't see how it possibly can for the very reasons that you state.

Mr. Moss. I believe that the language contained in H.R. 5099, a bill introduced by Mr. Rogers, and also contained in H.R. 132 introduced by Mr. Roberts, states:

Such application shall contain such information with respect to such project as the Secretary shall by regulation require, including the total cost of such project and the amount of the Federal grant requested for such project, and in providing assurance satisfactory to the Secretary—

1. That necessary funds to construct, operate and maintain the educational television facilities will be available—

and other requirements follow.

This actually means that the FCC must be satisfied as to the conditions precedent to the granting of a license or a construction permit to operate the facility.

Dr. FULLER. That is correct; yes, sir.

Mr. Moss. That same requirement holds upon any applicant for a broadcast license. Then we would take the additional step in connection with Federal participation that is to be enforced by the Secretary of HEW.

Dr. FULLER. That is correct. You do have a double sifting, a double elimination of the organization that might not be on sound ground to operate a television station for one reason or other. It seems to me, Mr. Moss, this legislation has built into it all of the safeguards against abuse it would be possible to build into such legislation and still meet the peculiar problems: first, of the various States; and, secondly, of the different types of eligible applicants.

There is another aspect where there is a considerable amount of versatility in the arrangement. We have three different types of educational television operations now. I mean by that operated by three different types of organizations, general types that differ fundamentally. When you consider the differences among the States and the differences that are fundamental among these three types of eligible applicants under all of these bills, it seems to me that it would be very difficult to become very specific.

Mr. Moss. And it would be virtually impossible to grant to the States a guarantee providing that the States could indefinitely continue to operate the facilities. At best, any guarantee would have to be for a very limited period of time because of the change which occurs in legislative bodies and in the uses of annual appropriations for programs supported by the State governments. A firm guarantee would be virtually impossible.

Dr. FULLER. I do not know of any Federal-State program that affects education, among the many that I have the privilege of dealing with on behalf of the States, that requires any such guarantees.

It seems to me that—well, a fire might occur, any number of contingencies might occur, that would make it poor policy for a State to seek to guarantee, in advance, how long the station would operate and how many hours a day it will operate.

This is, of course, subject to FCC regulation in the granting of the construction permit and the license to operate. But to do it in advance, to guarantee in advance, is not required of the States in any of the Federal-State programs that I know anything about.

It seems to me it would be quite impracticable.

Mr. MOSS. That is all.

Mr. MOULDER. Mr. Rostenkowski.

Mr. ROSTENKOWSKI. I have no questions.

Mr. AVERY. No questions.

Mr. MOULDER. These bills that are before the committee, do you not think there should be some provision in there to give credit to those States that have already provided facilities and have made expenditures for a matching fund or some such proposition, if such a bill is passed?

Dr. FULLER. I think if matching is included, and I sincerely hope it will not be included for the reasons stated in the formal presentation, that that is all right. I do believe, though, that there is, in the legislation, provision for such matters as raising the power of the station or expanding the facilities of an already going station.

As I recall, there is in many of these bills a provision where an eligible project would not have to be necessarily a brandnew operation starting from the level ground.

Mr. MOULDER. My point is that it is a brandnew operation, starting, and there are facilities that the State may already have, such as housing facilities. Do you think the administration of the program then could take that into consideration?

Dr. FULLER. I would think if there is a matching requirement that that should be considered.

I would go a little further than that, Mr. Moulder, and say this: that in many of these Federal-State programs, in fact, all, so far as I know now, that are administered by the States, the overall matching principle is used.

In other words, there are 40,000 school districts, approximately, in the United States, and there are 55 State and territorial jurisdictions. Matching in educational matters is seldom pinpointed to a particular local project.

Take the school lunch or the vocational education or other laws of that type—they have overall State matching and not matching district by district specifically.

The same thing is true in the Kennedy public school bill now and in many other versions of the public school bill. For instance, the maintenance of effort clause to prevent the substitution of Federal for State and local funds that would otherwise be expended for education, is given overall State application rather than district by district application.

The reasons, of course, are obvious for practical administrative reasons. But if a State maintains its support of education as a State overall, it meets the requirements of the maintenance of effort clauses in those laws, and it seems to me that principle should be applied here.

If the State of Alabama, with a television network, has already invested heavily and wants to raise the power of the station or build another station, I see no reason why a portion, at least, of any matching requirements should not be taken into account.

But I would again emphasize that matching is inherent in the law, matching is inevitable under this law, even if matching is for brand-new projects it has to be made by State, local, and private sources no matter what the law provides. And if they already have put in all of this time and money and effort and have an operating system, then they have already matched, and a matching requirement is superfluous. I thoroughly believe it is.

During the past 15 years there has been a transition in thinking on that. The public school bill used to have matching requirements and there have been many bills held up and, in fact, I think many of them have been defeated because of matching requirements.

It has finally come to be more common practice in the current legislation to recognize that here we already have 95 percent of the support of education at the State and local levels. The Government, even if you count school lunch and such services, is putting in no more than 5 percent. This is 19-to-1 matching of Federal funds already. And the matching requirements are increasingly being omitted for that reason, that the States and localities are already matching 19 to 1, in general.

The same thing would apply here; there would be matching, if you built a television station right out on flat ground with nothing to start with, for about half a million dollars, which is the probable cost according to some of the testimony in the hearings on the Senate side. This half million dollars would be matched over and over again as the buildings were put there, as it was staffed, as it was programed, as it expanded its programs. Within a few years it would have been matched over and over again, and unless it was going to be matched over and over again, there would be no purpose in putting it there.

So I hope that your committee will seriously consider no matching requirement.

Mr. MOULDER. We certainly appreciate your appearing before the committee. Mr. Avery.

Mr. AVERY. Could I ask one question, Dr. Fuller? What constitutes the Council of Chief State School Officers?

Dr. FULLER. The Council of Chief State School Officers are the State superintendents and State commissioners and the chief school officers of 50 States, Puerto Rico, Canal Zone, Guam, American Samoa, and the Virgin Islands.

Mr. AVERY. All members then would have some official connotation at the State level?

Dr. FULLER. Commissioner Sanders in Connecticut, Mr. Throckmorton in Kansas, Roy Simpson in California.

Mr. AVERY. You have done your homework very well.

Dr. FULLER. Thank you.

Mr. ROGERS of Texas. Will you yield?

Mr. AVERY. I will be honored to yield to my friend.

Mr. ROGERS of Texas. Doctor, searching for words to fit, you might call it sloganism, we hear so much about Federal aid to education, do you not think it would be better in this particular instance to look upon this program more from the standpoint of participating in the development of a medium that belongs to the public at large, and let it be looked at from that standpoint rather than as a part of the Federal aid to education program?

Dr. FULLER. I think there are two points that might be made there. The first is that I think the implications of your question certainly carry an affirmative answer. It is of assistance to education; it is also of assistance to the general community, to the education of adults, to the raising of the general cultural levels of society.

The second point is this: Among all of the organizations in Washington that have been interested in legislation affecting education, the one I represent has been responsible perhaps for more opposition to special Federal aids than any other.

In other words, the general policy of the State superintendents and commissioners who would have an active part in the administration of this bill in many States, practically all, I should say, has been that overall support carried less danger of Federal regulations which would translate themselves possibly into Federal controls of education. Special Federal aids have to have special Federal regulations to keep them special. We have been adamantly opposed to most special aids, and if I may be—

Mr. ROGERS of Texas. Special aids to education?

Dr. FULLER. Special aids to education. We do not believe in them if a general support bill would cover the matter concerned. But the point I want to make is this: that even if the Kennedy administration bill for general support of public education sharing of the support for the amount proposed were to pass, the Federal share of the cost of public elementary and secondary schools in this country would be increased only from 4 or 5 percent up to perhaps 9 percent. I see no chance whatever for any part of the general support bill funds going for the purpose for which this legislation is intended. I do not believe that such funds would be distributed for ETV equipment in the face of the educational priorities for current expenses and for the construction of school buildings and in the face of all of the competition for those funds. I do not believe that a million dollars would be taken out of those funds for this purpose.

I do not know that 20 States have already provided direct financial assistance. If the Federal carrot were, so to speak, held out in the field of educational television in the form of a million dollars to get the large initial cost paid for the facilities, then the States would support ETV, as they have already begun to do so. They would support increasingly the entire field of educational television.

I appreciate that question.

Mr. ROGERS of Texas. One reason that I ask the question is this, primarily, because we have a very keen controversy on the question of Federal aid, that is, Federal aid to education. If this was primarily a Federal aid to education bill, it would not be before this committee, we would not have legislative jurisdiction of it. And that is the reason that I want to pin point the proposition, so there will not be confusion in the minds of the people generally that this is designed (it may be, but not in my opinion, it is not) as being a question of Federal aid to the schools, but rather the general broad subject of education to all.

Dr. FULLER. That is entirely true. It is an aid to broadcasting. And for several years after the channels were reserved for education, relatively a minor part of the effort was placed in the development of television for in classroom use.

As a matter of fact, many of the stations were set up primarily for open circuit broadcasting to many groups in the general community. And this is a major part of it.

The only reason that I mention education in connection with testimony here is that, after all, we are talking about educational television, noncommercial broadcasting, it might be called, and we have a special interest in that facet of it.

Mr. ROGERS of Texas. I think in this situation that conditions might change, but I have been of the opinion that the reason that your educational institutions were tied in to this was because they simply provided the best avenue available for making utilization of this broad right that belongs to the people of the entire country.

Dr. FULLER. The State superintendents represent all of the people of the State, as constitutional State officials in most States. And they are in positions representing all of the people of their respective States that call for far more than a narrow view of financing any one cultural advantage to the people. They are active in many fields.

Mr. ROGERS of Texas. Thank you very much. That is all.

Mr. MOULDER. We have several more witnesses. Again I want to say we thank you very much for your very informative and educational statement and for the information you have given us.

I would like to ask you this, how soon do you think it will be that you can supply the committee with the information requested by the chairman of our full committee, Mr. Harris?

Dr. FULLER. I would say that we can supply a great deal of it within a very few days.

Mr. MOULDER. That will be fine.

Dr. FULLER. And we will check, if you would like us to do it, Mr. Chairman, with the clerk of the committee on the closing of the record date and use all of the time available to get as much as we can up to that point where the record is closed.

Mr. MOULDER. Fine. Thank you very much.

Dr. FULLER. Thank you.

(The following letters were later received from Dr. Fuller:)

COUNCIL OF CHIEF STATE SCHOOL OFFICERS,
Washington, D.C., April 5, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN MOULDER: This is in regard to a letter sent to you under the date of April 3, 1961, by Mr. David C. Stewart, secretary of the Joint Council on Educational Broadcasting. In that letter he points out that there are two points that were not covered either in the direct statement or in the colloquy during my testimony before your subcommittee on March 22, 1961. The first point is that the Federal funds under S. 205 and companion legislation ought not to be available for leasing wires from the telephone company. With both his conclusion and the reasons for it we heartily agree.

On the second point made by Mr. Stewart, we want to make it clear that his statement does not represent the viewpoint of the Council of Chief State School Officers, when he says: "In order to arrive at a plan which will prove responsive to the needs of various educational elements within the States, the agency which draws such a plan must of necessity be a broadly representative body. Such a body, while its exact constituency may vary from State to State, might include the State department or commission of education, public and private schools, colleges and universities, as well as community groups, corporations and foundations organized for the purpose of providing educational television service." This is directly contrary to the policy of this council as well as several others that are members of the JCEB.

It is our belief that the Keating amendment to the Senate bill, about which I had no knowledge when I testified on March 22, 1961, is entirely in order and should be made a part of the legislation. A State educational television commission or the State department of education which is the representative of the State for education generally provides an adequate choice for selection of the agency responsible for reporting on the funds to the Federal Government. This in no way affects adequate planning by any of the groups mentioned in the letter from Mr. Stewart. On the contrary, it provides a coordinating agency to bring these groups together, rather than to have them submit separate and competing plans directly to a Federal agency.

The entire State should be represented in the agency that handles Federal funds for the benefit of the entire State. To grant funds directly to public and private schools, colleges, universities, community groups, corporations and foundations goes far beyond the appropriate use of Federal funds for educational television in the States.

I hope you will also make this letter a part of the record of the hearings.

With appreciation for the opportunity to testify on March 22, and with assurances of enthusiastic support for the legislation as passed by the Senate, I am

Sincerely,

EDGAR FULLER, *Executive Secretary.*

COUNCIL OF CHIEF STATE SCHOOL OFFICERS,
Washington, D.C., April 14, 1961.

HON. OREN HARRIS,
Chairman,

Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN HARRIS: This is to support the amendment by Senator Keating to S. 205 which was adopted on the day that educational television legislation passed the Senate, and to express the hope that your committee will make a similar addition to H.R. 965.

The amendment reduces the choices among eligible recipients for Federal funds on behalf of the States to three, eliminating private agencies that might apply for and receive the entire allocation for a State without reference to any official agency of the State.

We believe the amendment is highly desirable. A State commission, State department of education or State college or university could be an effective coordinating agency for the development of educational television throughout the State. This would be equitable, provide for more comprehensive planning, and would eliminate competition between private and State agencies in favor of statewide coordination through official agencies of the State.

When this council's formal statement was filed with the Subcommittee on Communications and Power on March 22, 1961, we were not aware that this amendment had been added to the Senate version of the legislation. We covered the point, however, in the following language: "We believe that approval by the U.S. Commissioner of Education of projects by groups which are not an integral part of the State system of education should be conditioned upon approval by the State Department of Education. Otherwise, agencies outside the State system of public education may unreasonably interfere with it."

The Keating amendment, however, achieves the purpose better, and offers a broader, more representative choice of dispersing agencies. We hope the House bill will embody these administrative principles in section 2 of the legislation.

Sincerely yours,

EDGAR FULLER, *Executive Secretary.*

Mr. MOULDER. Our next witness is Dr. Edward C. Lambert. I want to say that Dr. Lambert is from the State of Missouri and I am, indeed, proud and pleased that he appears before the committee. He is assistant to the president of the University of Missouri in charge of television, in my district.

STATEMENT OF EDWARD C. LAMBERT, ASSISTANT TO THE
PRESIDENT, UNIVERSITY OF MISSOURI

Dr. LAMBERT. I appreciate this opportunity to appear before you. It is a privilege to appear.

My name is Edward C. Lambert. I am assistant to the president of the University of Missouri in charge of television development and operation, and director of the University of Missouri's educational television program.

I also serve as an educational and public affairs consultant for radio station KMOX, St. Louis, and for the CBS Radio Network.

I wish to urge the passage of H.R. 132 and/or one of its companion bills: S. 205, H.R. 965, and H.R. 645. I recognize that the Roberts bill, H.R. 132, approaches the problem in a somewhat different manner from the other bills, but I feel certain that the differences can and will be resolved.

Basically, then, I am in favor of expediting the utilization of educational television facilities, and I believe that Federal aid is essential for this purpose. I would like to recommend, however, that if a "matching funds" provision is placed in the final bill, section 394 (3)(d) of H.R. 132 should be included in its entirety. This section stipulates:

Upon his determination that any application for a grant for a project for the construction of educational facilities meets the requirements of subsection (a) of this section, the Secretary may make a grant to the applicant of an amount not exceeding (1) 50 per centum of the amount determined by the Secretary to be reasonable and necessary cost of such project, plus (2) 25 per centum of the reasonable and necessary cost, as determined by the Secretary, of any educational facilities owned by the applicant on the date on which it files such application; except that the total amount of any grant made under this part with respect to any project may not exceed 75 per centum of the amount determined by the Secretary to be the reasonable and necessary cost of the project.

This section, in my judgment, makes good sense. By being allowed up to 25 per centum for educational facilities owned by the applicants, the agencies and institutions that presently have ETV stations on the air will be encouraged to expand their services and to improve the quality and scope of their educational, cultural, and public affairs offerings.

Furthermore, the several hundred closed circuit operations, installations that have a proven interest in ETV and have the necessary experience and trained personnel to do the job, may in many instances use the additional money to buy the equipment needed to establish educational television stations. Thus they will be able to make any of their closed circuit classroom presentations also available on a live basis to the students or to the general public in their areas.

Assuredly, in these days when the complexities of living stagger the comprehension of even the well educated and the well informed, we need to use every avenue of communications, every means of better educating and better informing our citizenry.

Educational television most certainly is a direct answer to these needs. We most urgently somehow must find a way to activate a large share of the more than 200 ETV channels that for 9 years have had no takers. The Federal aid, recommended in H.R. 132 and its companion legislation, will do much to prime the pump and

to make possible the initial establishment of these stations in the areas that today are not served by educational television stations.

I think, however, that in pursuit of our goals for a better educated and a better informed populace, we should not lose sight of the fact that there are a number of ways to achieve these objectives.

For this reason, I am delighted that all of the bills proposed include closed circuit television as an important part of educational television. It is my belief that this is a most important inclusion, and I hasten to recommend that any measure that finally is passed should authorize the expenditure of money for such installations.

In comparison with some institutions, at the University of Missouri we have begun only to scratch the surface in closed circuit instructional television. Nevertheless, we are enthusiastic about its potential as we face the rapidly expanding enrollments of the future.

Our current enrollment on the Columbia campus is approximately 11,700, and we expect the figure to reach 26,000 by 1970. So far, our projections for future enrollments have been too conservative.

We believe, however, that closed circuit television will be of assistance in handling the huge student influx. We do not endorse closed circuit television because it is cheap. Our experience has shown that it is not.

Closed circuit television does enable us, though, to bring better quality instruction to a larger number of students. This, we believe, is of great importance.

In the 2-year period since our closed circuit installation, KMIT-TV, began operation in February 1959, we have presented 25 regular university courses over these facilities.

These represent courses totaling 67 hours of university credit; over 1,500 hours of lectures and demonstrations.

Over 3,000 students have received course work by means of television, and 200 students have gained experience as members of television production crews.

I think that is very important. That does form a nucleus that could be used.

Most important, however, is the fact that the 3,000 students who have taken course work via closed circuit television have all had the stimulation and inspiration that comes with being taught by some of the university's finest professors.

Plans are now underway for us to get multiple duty from our closed circuit facilities. By virtue of a microwave relay that is being installed to link KMIT-TV with the university's commercial television station KOMU-TV, we soon shall be able to present course work simultaneously to our closed circuit classrooms and to our entire mid-Missouri live television area of more than 500,000.

Thanks to the installation of new video tape recording equipment, we also shall be able to tape the lectures of our closed circuit professors and to make these outstanding courses available to educational television stations in Kansas City and St. Louis, as well as to any commercial television stations throughout the State that desire to use the tapes. The taped course work will, of course, be updated, as the need arises.

We expect to have 4 of our master teachers "on tape" by the end of this year, and our goal is 11 taped courses by the end of 3 years.

Some of our Ozarkian friends in Missouri have an expression,

"There's more than one way to skin a cat." This homely bit of philosophy typifies my feelings and exemplifies better than I can the point I made a moment ago about the diverse ways of achieving our goals.

Most emphatically, we should do everything in our power to encourage school systems, universities, and other nonprofit groups to activate the nonreserved channels in their areas.

The splendid pioneer work that is being done by the 54 existing ETV stations should serve as a challenge and as an inspiration to the numerous sections of our country that now are not enjoying the fine educational, cultural, and public affairs offerings of nonprofit stations.

Nevertheless, I feel with equal intensity that we should do everything feasible to stimulate and encourage the distribution of high quality educational, cultural, and public affairs programs to every citizen within reach of a television set regardless of where the programs are produced or where they are telecast.

In our justifiable urgency and enthusiasm to encourage the development of nonprofit educational TV stations, we may overlook, even discourage, other worthwhile ways of bringing quality programing to our populace. I already have mentioned our tentative plans at the University of Missouri to set up a video tape production center to service the entire State.

Not only do we believe that we can supply outstanding formal course work from this center, but we contemplate the preparation of public affairs and cultural programs of the highest type for distribution both to educational and commercial stations in our State.

We have eminently qualified specialists in economics, business, government, history, social science, communications, foreign relations, agriculture, medicine, and science, and we have gained considerable experience in the presentation of public affairs programs over a period of 7 years via the university station KOMU-TV.

One such public affairs presentation, "Missouri Forum," a panel program, has had a 6½-year run, and features the Governor of the State at least once a month. Other State and National officials and dignitaries also are featured, along with well-known Missouri personalities and university professors.

It is my belief that universities, by virtue of the fact that they are traditionally centers of learning, should be encouraged to establish production centers that will provide educational, cultural, and public affairs television programs for use over large areas.

I believe that by means of video tape recordings distributed to interested outlets and via live and video taped programs presented over microwave statewide networks, such centers could be of inestimable value. In my estimation, these centers would be able to service a much larger audience if they were permitted to distribute their programs to commercial as well as to nonprofit stations.

We are interested in reaching viewers in all walks of life and in all areas. If we can reach our citizenry only through commercial channels, I believe we should do so. Many commercial broadcasters today are as concerned about the welfare of this country as are those of us in the field of education, and they wish to do their part in the field of public service programing. Fortunately, too, this trend is growing. Maybe some of you saw our "Man in Hong Kong."

I believe educators should be encouraged to take the lead in working with these broadcasters in an effort to help them achieve our common goals of a better informed and a better educated public.

In connection with my statements concerning the importance of seeking a variety of ways to reach the populace with quality programming, I would like to urge the inclusion in the final act that is passed section 395 (2) of the Roberts bill, H.R. 132, which states:

The term "construction of educational television facilities," means the acquisition and installation of transmission apparatus (including towers, microwave equipment, boosters, translators, repeaters, mobile equipment, and video recording equipment) necessary for television broadcasting (including closed circuit) and does not include the construction and repair of structures to house such apparatus.

I would hope, too, that the final bill is flexible enough to permit educators to work closely with commercial broadcasters in order to achieve the stipulated goals.

We at the University of Missouri are not newcomers to the field of educational television. As early as 1948, I began a comprehensive study of the video medium in education. This was culminated in 1952 by my doctoral dissertation, the first nationwide study of educational television, "The Organization and Administration of Television Programming for Schools Systems and Institutions of Higher Learning."

This study was followed by the publication of a small pamphlet distributed nationally, "Educational Television in the United States."

In the course of my research, I contacted in person and/or by questionnaire nearly every educator who was engaged actively in the field of educational television. My total responses represented a 97.4 per cent return from school systems and from institutions of higher learning.

I discovered in this early study that the primary problem facing educators who wished to establish their own facilities, both open and closed circuit, was the acquisition of the necessary funds to purchase equipment. Subsequent study and observation have convinced me that this financial hurdle is the main obstacle that has prevented institutions and agencies from activating restricted channels or from establishing closed circuit operations and/or production centers.

At the University of Missouri we found a partial solution to this problem by establishing in 1953 the previously mentioned educationally owned commercial station KOMU-TV. Money for establishment of this station was made available through unrestricted gifts and bequests and from nontax funds. The station is committed to repay this money to the university from its earnings.

Because of the relative smallness of the market area, however, the earnings of the station cannot be great and the repayment process will be slow. Nevertheless, from the very beginning we have made an effort to provide many services to the State.

Our "Missouri Forum" program, which I mentioned earlier, was for a period of time distributed throughout the State by means of kinescope recording. This process proved too slow, however, because of the necessity of sending the kinescope film to New York for processing.

For a number of years we distributed by means of kinescope an all-university program, "Showcase," and since 1955 our "RFD" programs,

produced in conjunction with the college of agriculture, have been made available to the entire State via kinescope and film.

We carry the fine NBC series, "Continental Classroom," on a credit basis, and we regularly offer formal class credit courses via this station.

In addition, we have worked closely with the schools in our area by making available to them on an inschool viewing basis outstanding chemistry classroom films purchased at university expense.

Currently, in conjunction with the League of Women Voters, we are presenting a half-hour program concerned with the work of the State legislature entitled "Legislative Spotlight."

These are but a few of the services we are seeking to perform. They do, however, indicate our willingness and eagerness to work in the field of quality programing. They further show, I believe, that we have the staff and the know-how to prepare and present educational, cultural, and public affairs programs of a high order. This same eagerness to produce quality programs, I am sure, can be found at many institutions and agencies that wish to do their part in educational television programing.

In summary, then, educational television in the form of open and closed circuit broadcasting, is most certainly one of the possible solutions to the surging enrollment problem. In both cases, the services of a highly qualified teacher can quickly, intimately, and effectively be brought to a large number of students.

Well over 200 studies conclusively have shown that students do as well on examinations when they are enrolled in telecourses as they do on tests when they take their course work in the traditional manner.

The splendid research work at such institutions as Penn State, Michigan State University, Miami University, New York University and State University of Iowa, the University of Houston and Hagerstown, Md., has shown the great potential of open and closed circuit educational television. Virtually all types of course material at all levels have been tried and in nearly every case, tried successfully.

I believe the value of educational television to our American educational system has been demonstrated. It is a means to help maintain quality of instruction on both a formal course basis and on a less formal informational or cultural basis.

I believe, and the available research supports my belief, that educational television does reach many of the opinion leaders in the communities where it is available. These are the people, not necessarily wealthy and not necessarily highly educated, who help mold the opinions of the persons with whom they come in contact.

It is my hope that the legislation that is passed will be flexible enough to permit us to establish production centers and microwave networks through which we may serve all of our citizenry with cultural, educational, and public affairs programing.

I believe that H.R. 132 and its companion legislation will make possible further expansion of educational television throughout the United States. With many States hard pressed financially and with foundations withdrawing their support of new ETV installations, the growth of ETV is in danger of being thwarted. This legislation will encourage its growth.

I feel that the great value of educational television will encourage schools, colleges, universities, and other agencies willingly to find the

necessary means to operate and maintain equipment made possible by this legislation. I urge the adoption of H.R. 132 and/or its companion legislation.

Mr. MOULDER. Thank you very much, Dr. Lambert.

Mr. ROGERS of Texas.

Mr. ROGERS of Texas. Doctor, just one question: With relation to the educational TV broadcasting and the controversy that has come out as to whether or not those educational groups that are not public educational groups, whether or not they would be able to participate in it, would it not be possible with the time that would be available to allow these different groups to have time, that they could broadcast educational programs?

Dr. LAMBERT. You mean on commercial channels?

Mr. ROGERS of Texas. No; I mean on the educational TV channels.

Dr. LAMBERT. I would think so; yes, sir.

If they could qualify, I think they should be permitted. I think it should be for all agencies.

Mr. ROGERS of Texas. Thank you.

Mr. MOULDER. Mr. Younger.

Mr. YOUNGER. In connection with your closed circuit installation, do you own that transmission facility?

Dr. LAMBERT. Yes, sir. We started it on a very small basis, about \$50,000 worth, but we have been expanding, we have seven phases and we are ahead of ourselves right now. We are already installing the microwave equipment we have, thanks to the cooperation from the Ford Foundation, and the video tape recording equipment we hope to use as part of our production center.

Mr. YOUNGER. Was there available commercial channels that you could have used, such as telephone lines or telephone company microwave systems?

Dr. LAMBERT. You mean to extend to other areas?

Mr. YOUNGER. To serve in your closed circuit.

Dr. LAMBERT. No, sir; there were none in our area.

Mr. YOUNGER. Do you have a network program in connection with your commercial television?

Dr. LAMBERT. Yes, sir; we have ABC and NBC.

Mr. YOUNGER. Two networks?

Dr. LAMBERT. Yes. We try to take the best of both.

Mr. YOUNGER. That is all.

Mr. MOULDER. Mr. Moss of California.

Mr. MOSS. No questions.

Mr. MOULDER. Mr. Avery.

Mr. AVERY. Did you mention in your statement, sir—

Mr. MOULDER. Mr. Avery is from Kansas.

Mr. AVERY. I think so long as we confine our colloquy to educational television, why, there will be no serious difficulty. [Laughter.]

I might state that, probably my views on educational television might be different from yours. Nevertheless, I respect you, certainly, in what you have said. Your voice represents a great deal of experience in the field of education.

Dr. LAMBERT. I lived in Kansas for 5 years. I am a graduate from a high school there.

Mr. AVERY. You acquired a certain amount of dignity then from there. [Laughter.]

Approximately, what is the cost of operating the television facilities?

Dr. LAMBERT. Are you referring to an educational television station?

Mr. AVERY. Yes, sir.

Dr. LAMBERT. Well, I think it could be done, not comfortably, but it could be done for \$150,000 a year. It is being done in Lincoln for much less than that. But I would not recommend that; I would recommend \$250,000 a year.

Mr. AVERY. Would that be for a network, with a comprehensive coverage, or is that for one?

Dr. LAMBERT. This is for one station, sir. Of course, your initial cost, the basic cost, though, would be in your mother station, so to speak, your big cost would be there. The rest of your cost would be simply transmission and rebroadcast and, of course, engineers to maintain the equipment.

Mr. AVERY. Does the University of Missouri receive a substantial grant from the Ford Foundation for its broadcasting facilities?

Dr. LAMBERT. No, sir; we received \$90,000 for teachers' salaries but with the provision that we could use this money however we wished, for our video tape teaching and we have a project on where we are putting 11 courses on tapes with our master teachers during the teaching, and this has an advantage in that we can use this many, many times updating it, but also that these master teachers can be working on research or can be guiding graduate students, working with them in conferences, while they are actually teaching via video tape.

Mr. AVERY. Thank you very much, Mr. Lambert. I am glad to know that you were identified with Kansas in your early days.

Mr. MOULDER. Dr. Lambert, I want to develop just one thought. In your opinion, can you state whether or not the State of Missouri with the facilities that you have and from the knowledge that you have would be in position to proceed under this bill to develop educational television?

Dr. LAMBERT. Well, I believe so. Of course, that would be up to the State legislature. They have, at least, we have had the available funds to do our closed circuit television. I can see no reason why that could not and should not be expanded. The advantage there is, of course, that we can make so many more teachers available throughout the State. I do not mean that we are replacing teachers in an instance like this. We are not. We are making quality teachers available over a larger area, and getting more use from these outstanding teachers.

We are proposing in the State, for example, as you know, five junior colleges, and I can foresee through this the possibility through microwaving or video tape, if they have the equipment, the lectures to these various junior colleges giving them a higher stature of teaching than they would normally have.

As you know, the need for junior colleges in Missouri is urgent.

Mr. MOULDER. The State colleges, too.

Dr. LAMBERT. Yes, sir.

Mr. MOULDER. In addition to the junior colleges.

Dr. LAMBERT. Yes, sir.

Mr. MOULDER. Mr. Sibal.

Mr. SIBAL. Does this encompass classroom teachers in conjunction with the television work?

Dr. LAMBERT. In instances like this, they sometimes are hour periods and maybe half-hour lectures and then the students will meet with an assistant or an instructor, and the video teacher will circulate, or the closed teacher circuit will circulate talking to these young people in groups. Other times those are handled, the questions are handled by the instructor who is in charge of each viewing group.

But the professors do make very definite attempts to get around to the various viewing groups even though they are viewing from closed circuit via video tape.

Mr. SIBAL. Thank you.

Mr. MOULDER. Mr. Rostenkowski.

Mr. ROSTENKOWSKI. Is there any followup on educational programming in your teaching, such as the student having viewed the program and then follow up that with in-class teaching?

Dr. LAMBERT. Well, we have done some rather primary studies, inconclusive studies, on that. As a matter of fact, we taught our Speech 175, rotating the classes, which is a basic speech course, and half of the semester the students watched by means of closed circuit and the other half, they watched it live and then they rotated. It was a big class and each got half and half that way. And we found that they liked the closed circuit television very much. It does give more media to that.

As you know, it gives the student in the large classroom more proximity to the professor.

Mr. ROSTENKOWSKI. How large were the classes?

Dr. LAMBERT. Our classes will vary. I think the largest one we have now is about 400. Of course, they could be much larger in our future plans, installing closed circuit conduits so that we can put closed circuits in our new classrooms and new teaching building, our Liberal Arts Building, and we expect to have larger classes there.

Mr. ROSTENKOWSKI. How is it presented to the students, through various television sets in the classrooms?

Dr. LAMBERT. Special monitors, sir. We have specially designed monitors which are much sharper than the traditional television set. And if it is a big group, we will have two. It is a group of over 30.

Mr. ROSTENKOWSKI. You mentioned that you received initially a grant from the Ford Foundation for the construction; is that correct?

Dr. LAMBERT. Not for the construction of our station, no, sir. It was for video tape equipment. And actually, the grant was not for the video tape equipment but for professors' salaries, but we were permitted to use this money any way we wanted, so we went ahead and paid the professors' salaries and took the money to buy the video tape equipment.

Mr. ROSTENKOWSKI. How are you maintaining the TV station now—do you solicit the money for it by appropriation from the State legislature?

Dr. LAMBERT. We are entirely self-supporting.

Mr. ROSTENKOWSKI. Or is it developed by contributions?

Dr. LAMBERT. No, sir. It is a commercial station.

Mr. ROSTENKOWSKI. Thank you.

Mr. ROGERS of Texas (presiding). Thank you, sir.

Dr. LAMBERT. Thank you.

Mr. ROGERS of Texas. Our next witness is Dr. Logan Wilson of the University of Texas.

Doctor, let me say that I am very happy and honored to have you here. And I want to state for the benefit of other members of the subcommittee and for the record, my first introduction to Dr. Wilson was at the University of North Carolina, when he agreed to come to the University of Texas. We went down to a football game and I do not recall the outcome of the game, but I do recall the impression that I had when I met Dr. Wilson and I want the members of this subcommittee to know that, and that impression has been confirmed each time by his fine work at the University of Texas.

He is now the chancellor of the University of Texas. I want to congratulate you. We are glad to have you before us.

STATEMENT OF LOGAN W. WILSON, CHANCELLOR, UNIVERSITY OF TEXAS

Dr. WILSON. My name is Logan Wilson. I am chancellor of the University of Texas. I appear before this committee in support of legislation which would provide Federal funds for construction and expansion of educational television facilities.

Two years ago, Vice Chancellor L. D. Haskew appeared before you in support of such legislation, and my testimony will, in part, re-emphasize certain statements of his and present additional new information for your consideration.

I shall not take the time of the committee to cite evidence to which many previous witnesses have addressed themselves, demonstrating that educational television facilities have a tremendous potential for helping this country meet its educational needs. In the very short time since television has been used for educational purposes, a wealth of evidence has been amassed that proves television's ability to teach. There is no longer any serious question as to the usefulness and the adaptability of television in education.

It is regrettable, therefore, that despite the acknowledged attributes of educational television, we have made slow progress in utilizing the channels reserved for educational TV and are far from realizing its potential on a national scale for strengthening our educational system.

This is not because of any lack of interest on the part of educators but results from a lack of funds. Throughout the Nation institutions and agencies are eager to apply what is already known about educational television to the service of new groups of people and to experiment with new techniques and ideas. Many have operating funds assured or have excellent chances of getting such funds once it is certain that the stations will go on the air. The barrier is funds for the initial capital outlay. This is the big step they have been unable to make. The legislation now before you is designed to facilitate that initial step.

The University of Texas is one of several educational agencies in southwest Texas which can testify from experience to the difficulties involved in securing the establishment of an educational television station. Channel 9 VHF was allocated by the FCC to San Antonio

for educational purposes. In 1953, educational institutions and organizations in San Antonio formed a joint council for the purpose of activating channel 9, but were unable to find sufficient funds for the initial capital outlay.

In the meantime, the University of Texas at Austin was developing a production and teaching unit by closed-circuit television. The San Antonio Council suggested that the channel 9 endeavor be broadened to include Austin and the area between Austin and San Antonio.

The Southwest Texas Educational Television Council was subsequently formed. It included some 15 colleges and universities, some 20 public school systems. Practically every college and school system can contribute toward operating costs. The problem is to establish the station.

Great effort has been made to raise the capital funds. All the money is not in hand as yet, but we are determined that we will get the station on the air; however, its activation may come years after the time when it should have been on the air. If the capital money which has been raised so far could be released for operating expenditures, the people of central Texas would be afforded a quality and variety of educational experience hitherto unknown to them. If Federal assistance became available for station construction, the local money could thus be used directly for the development of such quality programming.

In Texas we have made considerable progress in the use of closed-circuit television for college instruction. Five years of experience at the University of Texas in teaching by closed-circuit TV has clearly demonstrated the power and utility of this electronic teaching tool.

In February we began a unique experiment in interinstitutional televised instruction for college and university classroom use, via a microwave network linking three campuses: Houston-Tillotson, St. Edwards University, and the University of Texas—all in Austin.

To proceed: Next fall the network will be expanded to include eight other colleges and universities in the San Antonio, San Marcos, Seguin, and Georgetown areas. Video tape lectures are supplemented at each institution with live discussions led by local instructors.

The University of Texas has a contract with the U.S. Office of Education for construction and operation of this microwave network. Participating institutions have made contributions and a grant from the Ford Foundation is aiding in instructional costs.

We believe this experiment holds tremendous promise for extending the abilities of talented teachers, upgrading quality of instruction, reducing instruction costs, as well as general benefits deriving from interinstitutional cooperation. Significant as this experiment is, however, such a closed-circuit system between colleges and universities provides a service only for students in attendance on these campuses. We feel that it is important that the benefits of educational television should be extended beyond the campus.

This means extending educational opportunities to the preschool child, to youngsters in elementary and secondary schools, as well as to people beyond college walls and college years. Through educational television, these valuable educational experiences may become the common portion of all the people of Texas and all citizens of this country. To do this, we need, in addition to closed-circuit installa-

tions for formal instruction, many open-circuit broadcast stations which can cover wide areas and reach people wherever they are.

Let me repeat that the Southwest Texas Educational Council is determined to get channel 9 on the air. Ultimately it will do so, with or without Federal assistance. If Federal aid via ETV legislation had been forthcoming 2 years ago, we would have had that station on the air 2 years ago. It would now be the fourth ETV station in Texas (Houston, Dallas, and Richardson already are on the air). But Texas is such a large State that many more stations will be required if the needs of its citizens are to be properly met. Money for capital expenditures is sorely needed if the other areas of the State are ever to have educational television services.

The Federal assistance provided for by this legislation might well result in the Nation having at least 100 new educational television stations come on the air within the next 5 years; and if this happens, the adoption of educational television as a normal and accepted means of education would be assured.

We have already constructed and operated successfully the pilot plants necessary in any technological departure; the next step is to secure enough producing units to stimulate the "market." It seems that Congress is the only agency which can assure that this next step is taken in time to conserve the gains from these pilot operations. It is for this reason that we favor legislation of the type you have before you.

Mr. ROGERS of Texas. Thank you, Dr. Wilson, for your excellent statement.

Before we start the questioning, I wonder if you would be in position, Dr. Wilson, to enlighten the subcommittee on the action that was taken by the Legislature of the State of Texas on this general subject matter. Mr. Harris mentioned that earlier.

Dr. WILSON. Yes, I heard that question. That was discussed last year. I think there were two reasons for that. That was the rider on the appropriations bill that was never discussed openly in the legislature.

My answer to this is, at least, secondhand.

One, I think is the conservatism of the legislature in the matter of appropriating funds, which is a characteristic of our legislature—I do not know whether it is of the other 49 States or not—a reluctance to establish new enterprises, no matter how worthy, in the face of the difficulties of supporting and financing the tax revenues for existing enterprises.

A second point which might be made is that it is my understanding that some of the commercial interests in the State engaged in some behind-the-scene efforts to block the activation of these educational channels in the hope that they might eventually be converted to commercial purposes if they were not activated.

These are valuable properties. They are expensive to activate and expensive to operate. If they are used for profit purposes, of course, they are very valuable commercially. If they are used educationally and conserved from this point of view, of course, there is no profit in terms of money to the operators of the station, but a great profit to the people at large.

The latter point, as I say, is just a matter of hearsay with me, but those would be my two reasons. I am a little more direct on that point than Dr. Hawke was last year.

Mr. ROGERS of Texas. So there was action on the matter, you say, by way of a rider on the appropriations bill. Did not the rider state none of the funds could be used for this purpose?

Dr. WILSON. That is the way the rider read. My interpretation of that is that there was no real opposition in principle on the part of the legislature to educational television. I have talked with any number of members of the legislature, and they think it is a very worthwhile thing.

Mr. ROGERS of Texas. I thought we ought to get the record completely clear on this so there would not be any questions by reason of the absence of the information.

Mr. MOSS, do you have any questions? Mr. Younger?

Mr. YOUNGER. I have no questions.

Mr. ROGERS of Texas. Mr. Avery.

Mr. AVERY. I have no questions, Mr. Chairman, only I would like to become associated with you in complimenting Dr. Wilson for his remarks before the committee this morning, although in Kansas we claim you as one of our own, a midwesterner, and I welcome you here.

Dr. WILSON. Thank you.

Mr. MOSS. I want to join with the rest of the members in saying I believe you made an excellent statement.

At the bottom of page 2 of your statement you said:

In February we began a unique experiment in interinstitutional televised instruction for college and university classroom use, via a microwave network.

Is that network one constructed and being maintained by the university or is it a leased facility?

Dr. WILSON. The university constructed it and maintains it. We looked into the leasing arrangement and became convinced that we could do it more economically ourselves than we could lease it.

Mr. MOSS. That is all.

Mr. ROGERS of Texas. Mr. Sibal.

Mr. SIBAL. I have no questions.

Mr. ROGERS of Texas. Thank you very much.

Dr. WILSON. Thank you.

Mr. ROGERS of Texas. Arrangements have been made, by agreement, for Dr. Robert Anderson, executive vice president of Auburn University, to appear next because he has a plane reservation.

Dr. Anderson, if you will come forward, please, we will be glad to hear you now. Mr. Roberts.

Mr. ROBERTS. It is a real pleasure for me to introduce to you Dr. Robert Anderson, who is vice president of Auburn University. He has had quite a bit of experience with educational television. He organized the first regional conference in Atlanta in 1952, and served as director of the Southern Regional Educational Board, in Atlanta, for 8 years. He now is at Auburn University, one of the old land-grant colleges of our country, one with a fine history, and has made a great contribution in this field.

I might tell you that he was our host last year at Atlanta when we went down there on our field hearings.

Mr. ROGERS of Texas. We are glad to have you here and to have the fine remarks of our colleague from Alabama.

You may proceed.

**STATEMENT OF ROBERT C. ANDERSON, EXECUTIVE VICE
PRESIDENT, AUBURN UNIVERSITY, AUBURN, ALA.**

Dr. ANDERSON. Mr. Chairman, I have entered for the record a longer written statement.

Mr. ROGERS of Texas. Without objection, your statement that has been submitted to the Chair will be included in the record at this point. (The document follows:)

COMMENTS OF ROBERT C. ANDERSON, EXECUTIVE VICE PRESIDENT, AUBURN UNIVERSITY, AUBURN ALA., AND FORMER DIRECTOR, SOUTHERN REGIONAL EDUCATION BOARD, ATLANTA, GA., IN CONNECTION WITH THE ROBERTS BILL, H.R. 132

In the 9 years since 1952, the 16 States in the southern region, in cooperation with the Southern Regional Education Board, and with the assistance of private foundations, national educational and television organizations, have activated 21 of the Nation's 54 stations.¹ Of these 21 stations, at least 13 are devoting some portion of their on-air time to telecasting college-level courses and enrichment programs. At least eight of these stations are owned by or for higher institutions. At least 16 of these stations present courses and programs of higher education. All 21 stations provide televised instruction at the public school level. In brief, roughly two-fifths of the Nation's educational television stations operate in the South.

Thirteen colleges and universities in the region are using these open-circuit telecasting facilities, to varying extents, for the presentation of college-credit courses. Some of these 13 higher institutions are working cooperatively with one or more additional colleges and universities in their areas to plan, develop, and use televised college-credit courses together. Such cooperative arrangements are being utilized by at least 26 additional higher institutions throughout the region.

There are four other ETV stations in the region in various stages of advanced planning for construction and operation. They will be located at Savannah and Waycross, Ga., at Nashville, Tenn., and at San Antonio, Tex.

There are two new State networks emerging, both closed circuit at present, but both have plans for utilizing open-circuit stations in the future. The University of Texas presently is completing the Nation's first closed-circuit microwave ETV network for higher education. When completed, the network will link together the campuses of the university and 11 other smaller colleges in central Texas. Excellent college instructors will be able to teach on 12 campuses simultaneously. The other network development is in the State of South Carolina where there is the beginning of a Statewide closed-circuit network interconnecting 17 cities and 31 high schools. Plans call for interconnecting the schools and higher institutions of this State over the next 5 years. The network utilizes the telephone company's regular intercity microwave facilities. The local school boards pay for cable connections from the city limits to the schools.

During 1960 three new ETV stations went on the air in this region alone, one at the University of Georgia in Athens, one at Florida State University in Tallahassee, and one in Dallas, Tex. ETV facilities are being utilized as instructional tools to present courses and educational programs for college, public school, and adult students at regularly scheduled times each day and evening. These ETV stations aid the universities and colleges and the public school systems by carrying a portion of the increasingly heavy load of instruction that thousands of new students and our times require.

¹ The Southern Regional Education Board is a public agency supported by 16 States which work together to improve higher education and the economy of the South. The member States include: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

It is important to note that without exception these stations are owned and controlled locally by colleges and universities, by public schools, State-administered ETV commissions, or community, nonprofit corporations, in about equal proportions. The physical locations of the majority of these stations are on either university-college campuses, or in public education buildings, in about equal proportions.

Obviously much has been accomplished by the local initiative of the States and their citizens in the South and elsewhere in the Nation. But this is only part of the story.

It is a hard fact of life that educational television has been developed in only eight coastal and border States in the South, and even in these States the extent of development varies widely. These eight States form a crescent of television activity around a relatively dormant, centrally located belt of another eight States where little or no ETV development exists beyond a single station here, or a struggling ETV citizens' group there.

The eight States with considerable experience in educational television include Oklahoma and the coastal States of Texas, Louisiana, Alabama, Florida, Georgia, South Carolina, and North Carolina. These States are making substantial progress in utilizing ETV for formal instruction at all educational levels. They are giving increased attention to the role of ETV in meeting some of the instructional needs of their higher institutions.

Much less ETV development and planning exist in the central belt of eight States which include Arkansas, Mississippi, Tennessee (except for one station in Memphis), Kentucky (except for one station in Louisville), Virginia, West Virginia, Delaware, and Maryland (except for one closed-circuit network in Washington County). Numerous efforts in these States to activate stations and to expand the few facilities that exist have been blunted or canceled by continuing difficulties in securing capital outlays.

In essence, the most critical, continuing problem in both the eight States that have made a start to build ETV stations and networks, as well as in the other eight States that have made little or no headway in this regard, may be stated simply as the lack of money for initial investment in broadcast equipment and facilities. Once this hurdle has been crossed, experience time and time again has indicated that the States and their communities then find ways and means of funding the annual operating costs of operations and staff.

The issues about the usefulness and effectiveness of television as an instructional tool are now somewhat beside the point. The vast amount of research about television indicates beyond any reasonable shadow of doubt that it is an effective aid to teaching—that students can learn as well from a teacher on television as from a teacher in the classroom, especially in cases where the television teacher and the classroom teacher work together as a team.

The facts are plain. Eight States in the region have made decisions to build and to use ETV facilities. These States have made their decisions based on the conviction that educational television is, and will be increasingly, an aid to education. But each of these States has found it impossible to accelerate the development of television facilities because of lack of funds. Eight more States have made numerous efforts to establish and utilize ETV facilities, but they, too, have been thwarted because initial capital investment funds were not available.

As we interpret the Roberts bill it would provide needed impetus for the optimum development of educational television, nationally, regionally, and within each State. We believe that its provisions would meet the needs of those States which have already invested considerable moneys and effort in this field, as well as those which, for various reasons, have not taken advantage of the availability of educational channels.

The Southern Regional Education Board was the first regional educational organization to take an active part in the development of educational television. Southern Regional Education Board sponsored a regional project on educational television in the fall of 1952, just a few months after the FCC's allocation of channels for education.

That project culminated in a regionwide conference which made certain broad recommendations with regard to the development of educational television in the South.

During the several years immediately following that conference the Southern Regional Education Board maintained a staff person responsible for the board's interest in television, provided consultant services to universities, school systems, and communities interested in ETV, sponsored a number of continuing committees and councils for the implementation of the conference's recommenda-

tions, and represented the region in legal matters pertaining to ETV before the Federal Communications Commission. At the request of the Southern Regional Education Board, I testified before the FCC in behalf of the allocation of inter-city microwave frequencies to be reserved for education, during that period.

One of the goals of the Southern Regional Education Board's program in educational television calls for the eventual establishment of a regional network of educational television stations, for the programming of university-level credit courses, as well as for the interstate sharing of adult educational programs. There are two major arguments for such a network: (1) It would enable the States of the region to share with each other the best of their faculties and productions, and (2) it would reduce the cost of programming for each individual station. These advantages have been illustrated in the development of national commercial networks.

The provisions of the Roberts bill would bring such a network in the South, and similar networks in other regions, much closer to realization. If each State were to develop a planned system of educational television within the State, interstate programming could more easily be effected. The Roberts bill would make that possible.

One of the three major studios for the production of programs for the Alabama Educational Television Network is located at Auburn University, and is an integral part of the university's instructional and extension programs. As executive vice president of Auburn University, I have responsibility for the supervision of that studio's programming.

In that capacity I should like to add my endorsement to the written statement presented to this committee by Mr. Raymond Hurlbert, general manager of the Alabama Educational Television Commission.

It is our hope that the Congress will include, in any appropriation it may make for educational television, provisions for funds for—

(1) The establishment of new television broadcast facilities;

(2) The establishment of new television closed-circuit facilities; and

(3) The improvement and/or expansion of existing television broadcast and/or closed-circuit facilities.

In many cases, as in the case of Auburn, the existing broadcast facilities were established through a minimum allocation of funds. As is often not the case in commercial broadcasting, funds are not available or provided to counter obsolescence in the replacement of existing broadcast facilities.

Federal funds when made available would enable Auburn University to expand its programming activity into what are now ignored areas and to reach thousands of additional inschool as well as general adult viewers. Currently reached with just one course are some 625 classrooms viewing upper elementary science from Auburn. The enrichment value to the basic science curriculum of these 20,000 students is priceless. Auburn is programming in the sciences, music, home economics, and mathematics for inschool audiences. This program must be expanded.

General adult programs, formal college-level courses and vocationally related programs are a part of the Auburn program. All contribute to the goal of lending dignity and skills in economic achievement to the viewer. Even now additional facilities are needed to continue and improve the current offerings.

Mr. ROGERS of Texas. You may proceed, Doctor.

Dr. ANDERSON. I am the executive vice president of Auburn University. Prior to March 1, 1961, I served as director, Southern Regional Education Board, and held other staff positions with that board beginning in 1952.

In both capacities I have and had supervisory responsibilities for programs relating to educational television.

The interest of the Southern Regional Education Board in the use of educational television began with a project conducted in 1952 to consider regional cooperation in this area. That project culminated in a regional conference, in October of 1952, the first such conference held in the Nation. The Southern Regional Education Board has continued its interests and activities in educational television in the ensuing years.

Through the use of staff experts in television, consultant services provided to States, institutions, school systems, and communities, through continuing committees and councils, the Southern Regional Education Board has helped in the development of educational television in the South.

The region as defined includes 16 bordering States from Texas and Oklahoma on the west and Maryland and Delaware on the northeast, and all of the Southern States.

To proceed: The region now has 21 of the Nation's 54 educational television stations, almost two-fifths of the U.S. total. Of these 21, at least 13 are devoting some portion of their on-air time to telecasting college-level courses and enrichment programs.

Auburn University includes one of the three major studios programming for the Alabama Educational Television Network. Its contributions to network programming include general adult programs, formal college-level courses, and vocationally related programs. Currently reached with just one course are some 625 classrooms viewing upper elementary science from Auburn.

The enrichment value to the basic science curriculum of the 20,000 students who view that course is priceless.

Auburn is programming in the sciences, in music, in home economics, and in mathematics for in-school audiences.

The State of Alabama is one of the eight Southern States in which considerable development in educational television has taken place. There are eight other States in the SREB region in which very little has been accomplished, in the use of the medium for educational purposes.

It is our hope that the Congress will include, in any appropriation it may make for educational television, provisions for funds for—

1. The establishment of new television broadcast facilities;
2. The establishment of new television closed-circuit facilities; and
3. The improvement and/or expansion of existing television broadcast and/or closed-circuit facilities.

As we interpret the Roberts bill, H.R. 132, it does include such provisions. We believe that the Roberts bill would provide needed impetus for the optimum development of educational television, nationally, regionally, and within each State. We believe that the provisions would meet the needs of those States which have already invested considerable moneys and effort in this field, as well as those which, for various reasons, have not taken advantage of the availability of educational channels.

Further, we believe that the passage of the Roberts bill would considerably hasten the day when interstate educational television networks might be established. The Southern Regional Education Board has for some years been interested in the possibility of a regional educational television network in the South.

Efforts to further the establishment of such a network have, however, met with failure, because of:

- (1) Lack of development of educational television opportunities in half of the States of the region;
- (2) Relatively inferior equipment now in use by some of the stations of the region, because of lack of funds for capital outlay; and

(3) The need in each State to spend the limited funds available locally for intrastate needs before consideration could be given to interstate networking.

Such a network in the South, or in other regions of the Nation, would have two advantages:

(1) It would enable the States concerned to share with each other the best of their faculties and productions; and

(2) It would reduce the cost of programing for each individual station.

The experience of the commercial networks supports this contention.

The principal task now is to encourage and assist the States to speed up efforts to build and use television stations and networks for education use, first, to help meet the tidal wave of students coming into their classrooms during the years ahead, and second, to help provide training and postgraduate education for adult citizens—in the cities, in the farmlands, and in industry and business—so that an increasing supply of trained manpower will be available to maintain a strong economy and a resolute defense in these United States of America.

I appreciate the privilege of appearing here today and I will be glad to discuss my statement more fully if you care to.

Mr. ROGERS, of Texas. We are glad to have you before the subcommittee.

Mr. Moss, do you have any questions?

Mr. Moss. No.

Mr. ROGERS, of Texas. Mr. Younger?

Mr. YOUNGER. Do you anticipate giving a degree or some award to those who are not in attendance on the campus but are taking courses on television?

Dr. ANDERSON. I do not know of anyone anticipating giving a degree to a person who has done all of his college work by television and not on the campus. The accrediting associations, I know at least of the Southern Association of Colleges, which is the accrediting agency in my region, has under advisement at the present time the question of what standards and requirements will be established for television credit courses. Until that decision is made, the association has said that institutions in the region go ahead and experiment with educational television, "We will not penalize you for offering a credit by television, we will get this worked out eventually." And I assume, I suppose—or perhaps I should say I guess—that probably some kind of solution will be found here such as that now used with extension courses where credit is given for off-campus extension courses. But most institutions require that at least 1 year, and usually 2 years, of college work for a degree must be done on the campus.

I am certain that no institution would allow a student to do all of his college work by television.

Mr. YOUNGER. In Miami we had testimony that they were giving a complete 4-year course entirely by television.

Dr. ANDERSON. I did not know that.

Mr. YOUNGER. It is a nonresident course. I am wondering how they would charge for that, because all of the colleges have fees that are charged the resident students.

Dr. ANDERSON. Most institutions that have offered credit courses by television have set a fee for the course. The student who wishes

to get credit, registers sometimes coming to the campus, sometimes by mail, and receives admission to the credit class for the television course, takes the examinations during the course and at the end of the course and receives credit for it, but does pay a fee.

Mr. YOUNGER. Something like paid television.

Thank you. That is all.

Mr. ROGERS of Texas. Mr. Avery.

Mr. AVERY. I have no questions.

Mr. SIBAL. I have no questions.

Mr. ROGERS of Texas. I do not want to be facetious, but do you think there would be any chance of working an extra football game in on a Saturday afternoon. Under some rules or regulations between the colleges, you can now only see one game, or perhaps two. Perhaps use it for noneducational purposes on Saturday afternoon. We could give some thought to that.

Dr. ANDERSON. I think that is an admirable idea. [Laughter.]

Mr. ROGERS of Texas. It seems that the House will soon be in session. And the chairman of the subcommittee, Mr. Moulder, has gone to the House to ask unanimous consent for the subcommittee to be allowed to sit this afternoon during general debate on the military construction bill. And if that is obtained, we will resume hearings at 2 p.m.

So if all of the witnesses scheduled will be back at that time, we will appreciate it.

The subcommittee will recess until that time.

(Whereupon, at 12 noon, the hearing was recessed until 2 p.m.)

AFTERNOON SESSION

Mr. ROGERS of Texas (presiding). The Subcommittee on Communications and Power will come to order for the purpose of consideration of pending business.

I believe our next witness to be heard is Dr. Hilton C. Buley, president of Southern Connecticut State College.

Will you come forward, please.

STATEMENT OF HILTON C. BULEY, PRESIDENT, SOUTHERN CONNECTICUT STATE COLLEGE, REPRESENTING THE AMERICAN COUNCIL ON EDUCATION

Dr. BULEY. Mr. Chairman and members of the committee, my name is Hilton Buley, and I am president of Southern Connecticut State College, New Haven, Conn. I am appearing in behalf of the American Council on Education, an organization which over the past 10 years has provided a tremendous amount of leadership and assistance not only to 1,065 member colleges and universities but also to 146 member organizations and to education generally.

In the past 10 years this organization has been a very constructive influence and force in providing leadership in regard to not only the reservation of the TV channels for education, but, also, in its general development and evaluation.

To proceed: It also may be of interest to you that I am chairman of the Subcommittee on Television and Teacher Education of the American Association of Colleges for Teacher Education, another

organization numbering approximately 500 accredited colleges and universities throughout our Nation. As a member of the television committees of both of these large and influential organizations of institutions of higher education, I have visited and become acquainted with a number of noteworthy educational television endeavors, projects, and systems.

The opportunity to testify before this committee and to place the American Council on Education on record as favoring passage of H.R. 132, a bill to assist in the establishment and improvement of certain television broadcasting facilities, or similar legislation for the assistance to States in the establishment and the improvement of certain television broadcasting facilities, is very much appreciated.

The council, from the very beginning when channel reservations for education were first being sought, recognized the tremendous potentialities this medium had for education at all levels. I am confident, too, that the members of your committee are well aware of the valuable work of the council in the past 10 years in the evaluation and development of educational television throughout the United States.

The conviction held by the council that the medium of television offers one of the best solutions to the problem of achieving an optimum of development of our human resources, especially the intellectual power of our people, has been reinforced and substantiated by numerous studies.

Perhaps some of the most dramatic evidence has been gained through the success of Continental Classroom, initiated by the Committee on Television and Teacher Education of AACTE. As a member of the committee that administered the operation the first year, I am well acquainted with this project which, as large as it was, has given only a fleeting glance of what the future may hold.

Continental Classroom was cosponsored by the AACTE and NBC to present over a national television network of 149 stations from 6:30 to 7 o'clock in the morning, Monday through Friday, a series of 160 half-hour lessons of "College Physics." Two hundred and sixty-five colleges and universities gave 3 or 4 semester hours credit to approximately 5,000 students. The general viewing audience totaled some 400,000 from which it was estimated that 40,000 were science teachers. This totals more than 50 percent of all the science teachers in the United States.

The quality of this course, taught by Dr. Harvey White, professor of physics, University of California, is well attested to by the many television awards it received for its excellence. Its effectiveness in realizing its objective of up-dating the knowledge, understanding, and competence of science teachers was evidenced by interviews of a sampling of teachers which indicated the following: (1) 97 percent found the courses useful to them; (2) 54 percent stated that they would change their teaching methods (in high school) as a result of the course; (3) 37 percent indicated that they were changing the content of their high school courses as a result; (4) 82 percent learned new demonstration techniques; and (5) 75 percent of those who enrolled completed the course.

Continental Classroom multiplied many times by equivalent demonstrations of merit in Florida, California, Illinois, Missouri and, in fact, in several States, gives much support to the wisdom of the Federal Government in expediting the establishment and the improve-

ment of educational television facilities and programs. This is further reinforced by the fact that although 268 television channels have been reserved for noncommercial educational use, only 54 such stations are on the air.

The reasons for this lag in taking advantage of the availability of these reservations are many but the obtaining of the initial financing has represented an insurmountable obstacle to many colleges and universities in getting programs on the air to demonstrate the values of educational and instructional television.

Realizing the increasing responsibility of the Federal Government to education, the American Council on Education, therefore, endorses the principle of Federal grants to State agencies, organizations, and institutions of higher learning to stimulate the establishment and improvement of educational television.

It, however, respectfully recommends that the committee give consideration to the following:

(1) The total amount of money made available to each State should substantially be increased since a million dollars is inadequate to accomplish the purposes of the act, especially in the larger States.

(2) Grants should be made not only for new installations of educational television but also for the improvement of those now in operation. Institutions already broadcasting should not be penalized for demonstrating leadership and initiative. It also can be pointed out that these installations are very much in need of extra help to improve their programs.

(3) Matching funds imposed upon an institution as a condition of eligibility to receive grants for surveys or developments of educational television will defeat the principle of stimulating a State to provide for its own self-support. Many States are reluctant to make the initial investment to establish a television system, but once the values are proven it will make the necessary effort to continue a successful operation.

Mr. Chairman, the American Council does appreciate this opportunity of presenting its observations and beliefs concerning a Federal grant-in-aid program for the more effective development of educational television. We are convinced that such financial assistance to the States is essential to any substantial expansion and improvement in the utilization of educational television which has such an important role to play in the optimum development of our human resources.

This concludes my testimony, but I will be glad to answer questions.

Mr. ROGERS of Texas. Thank you for your informative and interesting statement.

Does the council subscribe to a policy that grants in aid made should go to a State agency to be utilized by that agency or go directly to the institution; which should it be?

Dr. BULEY. Mr. Chairman, I am not sure that I exactly know the direct policy on that. I believe in the past the council subscribed to the fact that the institutions would work with the State agencies, where necessary, in order to implement various programs that the Federal Government financed.

Mr. ROGERS of Texas. Would the council, as a council, give any thought to the possibility of setting up, say, a State authority without relation to the educational facilities of the State or the educational authorities of the State—say, a separate State agency having to do

with the utilization of that part of the spectrum which has been assigned to the people, generally, and permit that authority to allocate time used by different institutions or educational organizations to participate in that program?

Dr. BULEY. The council has advocated that the institutions of higher education cooperate in the development of educational network systems, utilizing all of the educational and cultural agencies and resources within a State or within a region for the general welfare of all the people. This is very definitely their policy and position there.

Mr. ROGERS of Texas. Mr. Moss, do you have any questions?

Mr. MOSS. No questions.

Mr. ROGERS of Texas. Mr. Younger.

Mr. YOUNGER. In your statement you say that imposition of matching funds as a condition would defeat the principle of stimulating a State to provide for its own self-support. Why do you make that statement?

Dr. BULEY. It has been my experience, both as a college president and as a former commissioner of education, that where matching grants are required, there may be a condition of eligibility, and the lag from the time that you can raise these matching funds tends to work against the stimulating effect that the new project should demand or which is required to implement it and get it into operation.

Mr. YOUNGER. That is not true of our experience with Hill-Burton funds.

Dr. BULEY. Well, let me explain it this way: For instance, in Connecticut we have had three UHF channels since 1952, and there has been activity on the part of the colleges and the University of Connecticut, which has requested funds for the utilization of one of these channels, and as yet we have not been able to get any of them on the air.

In the last session of the legislature a State commission on educational television was created in order to try to solicit private funds which could make utilization of these. And the State board of education has turned over to the State commission the three channels that were originally allocated to it.

And as I say, this would not be an absolute statement, that is absolutely right, because some States have gone into operation. As you heard, there are 20 States already that have aided financially the utilization or the implementation of these channels.

Mr. YOUNGER. They have done that without any help from the Federal Government.

Dr. BULEY. That is right.

Mr. YOUNGER. I am rather amazed to have you make the statement that the matching funds would defeat the principle of stimulating a State to provide for its own self-support because that has not been true, I believe, in any of the programs of the Federal Government which requires matching funds on the part of the State.

The experience of the Hill-Burton hospital experience or any other experience has not been of that nature, that I know of. I am not advocating matching funds. I am rather alarmed at the statement which you make and I was wondering why you make it. What proof do you have?

Dr. BULEY. Well, the proof is my interpretation of stimulation to implement the utilization of the channels in less than 10 years.

Mr. YOUNGER. We have not had even partial help yet.

Dr. BULEY. No; I see your point now. Yes. We have felt that if we had had straight grants of Federal money these would have been utilized to develop the television stations at once.

In talking with various leaders in the State, matching grants would, certainly, require a good bit of delay in trying to decide whether the people felt they wanted to support this activity or not.

In other words, once it has been proved, the people will support it. **And stimulation in my interpretation is to get it immediately on the road.**

Mr. YOUNGER. You also make the statement here that—

Many states are reluctant to make the initial investment to establish a television system but once the values are proven it will make the necessary effort to continue a successful operation.

We have had testimony after testimony before this subcommittee which already proves the value of the noncommercial television. I do not see where you draw any conclusion as to that statement, either.

Dr. BULEY. I think the best evidence I could offer is the fact that out of 260-some-odd reservations, only 54 have been taken up; and this in almost 10 years, you see. A good bit of the United States has not believed that it had the necessary data to put the money into it.

I think this is the important part that the Federal Government can play, you see, is that here we have proved it but with the individual it is like education and the general support for education. Even though we will all say that education is vital not only to our national welfare but even to our survival, we find many circumstances where it is financed and supported below the level of where it can be most effective for the purposes for which it is to serve.

And that is the point that I am trying to make in this case, and I do not want at all to indicate that I have argued with you. You have got a very good point. I am trying to say that in those States where the people as yet have not seen the value sufficiently strong to finance it, and Connecticut is one of those States, outright grants would immediately stimulate them to implement some of these channels. I probably said it poorly, but this is what I am trying to say, anyway.

Mr. YOUNGER. That is all.

Mr. Moss (presiding). Mr. Sibal.

Mr. SIBAL. First, I would like to take this opportunity to welcome Dr. Buley to this committee and to express my delight that he has come down from my home State to testify before us.

I might say to the committee for the committee's information, in areas quite apart from television, he is involved in various phases of educational development within the State for which we are all very appreciative.

I have just one question I would like to develop along the lines that Mr. Younger was inquiring about.

Has it not actually been a fact that so far as Connecticut is concerned, Dr. Buley, with which we both are familiar, with Federal programs where matching funds have been made available, the State has almost invariably participated, and even in areas where there has been a lag, it has shown initiative?

Dr. BULEY. As I understand it, the Federal Rehabilitation Act where we have matching funds, the State has not appropriated enough to do that and they have not been able to provide as many services. In other fields where other Federal funds have been had, they have not been able to secure equal matching grants large enough from the State sources to fully take advantage of the Federal funds.

Mr. SIBAL. I have no further questions.

Mr. MOSS. Dr. Buley, I want to join my colleagues in congratulating you on your statement and to thank you for coming here and appearing before the committee.

I notice in your statement, on page 3, you assert:

The total amount of money made available to each State should substantially be increased * * *.

Dr. BULEY. Yes.

Mr. MOSS. Do you have any particular figure in mind?

Dr. BULEY. Normally, we think about \$250,000 for the establishment of a television station. And if a network is going to be established within a State, even in Connecticut where you have a number of institutions that need to develop their own studios and develop microwave stations into the station, it would take substantially more than \$1 million to accomplish the result that we had hoped we could.

Mr. MOSS. Do you feel that if a million dollars were available, it could be immediately utilized in Connecticut?

Dr. BULEY. Yes, any part, if it did not have matching grants connected with it. I feel very definitely there would be a great deal of enthusiasm and means brought about to utilize it, yes. But it would not be able to do a complete job, or go as far as the State would like to go, I am sure of this.

Mr. MOSS. In mentioning the matching funds, I note you have a statement along that line. "To receive grants for surveys," you state, "or development of educational television," and so forth. Would it not depend upon the formula of matching that was employed, dollar for dollar for a given facility, or would it be a matching that was inherent even if it is not expressed in the legislation?

Dr. BULEY. Yes.

Mr. MOSS. If you are going to build the facility, you, in effect, will have to match the Federal grants in order to make it operative; is that not correct?

Dr. BULEY. That is correct. And in Dr. Fuller's testimony where he pointed it out, I thought very well, in other words, every institution and the State, also, in establishing or making the conditions available for the establishment of a television station, is bound to contribute or match some, if you want to include this as a part of the matching.

What I was thinking of was not to match it dollar for dollar for each dollar that you obtain, but it was such as in the Rehabilitation Act.

Mr. MOSS. You would need a formula perhaps similar to that in the present Federal highway program, where 19 Federal dollars are matched by 1 State dollar.

Dr. BULEY. Yes, I am sure that anything that the Federal Government can do to implement these channels would be most worthwhile and be very much welcomed by the institutions of higher education, as well as the people generally; that is, throughout this country.

Mr. Moss. We are really talking about the Federal part of \$50 million, which would constitute about 10 miles of freeway in a metropolitan area. In comparison, the same amount here would be the total measure of Federal underwriting of a program to stimulate educational television. As related to other activities, that is a very small amount.

Dr. BULEY. That is right.

Mr. Moss. I want to thank you very much again.

Dr. BULEY. Thank you.

Mr. Moss. Our next witness is Dr. Armand L. Hunter, director, Division of Broadcasting Services, Michigan State University.

We will be glad to hear you now.

STATEMENT OF ARMAND L. HUNTER, DIRECTOR, DIVISION OF BROADCASTING SERVICES, UNIVERSITY OF MICHIGAN

Dr. HUNTER. My name is Armand L. Hunter, professor and director of the Division of Broadcasting Services of Michigan State University.

The division consists of the university AM and FM radio stations, the university television station, and the on-campus closed-circuit instructional television. I am here today to speak in behalf of the educational television interests in Michigan, at the elementary, secondary, university, and adult education levels, and in connection with the needs for the development of a statewide educational television service.

The State of Michigan was among the first to recognize the need for the supplemental instruction and educational resources which the medium of television could make available to its schools and its people. Starting in 1950, the University of Michigan and Michigan State University operated closed-circuit educational TV services, producing and recording programs on kinescope for distribution to, and broadcast by, local commercial stations.

In January 1954, the Michigan State University UHF television station (WKAR-TV) went on the air with a full-time educational program service.

And in October 1955, the Detroit UHF educational station (WTVS) launched its broadcasting schedule.

On the basis of the experience of these two educational stations, it was recognized that only a limited segment of the population could be reached by their services. Something needed to be done to extend this new educational resource to a larger number of schools and communities within the State.

Consequently, in 1958 the State superintendent of public instruction appointed a large, representative Citizens Committee for Educational Television in the State of Michigan, charged with the responsibility to study and investigate the possibility of establishing a statewide educational television network service.

This committee met for the first time on October 8, 1958, in Lansing; and out of the interest and concern with the need and potentiality of a statewide service, which this citizens' group expressed, a special working committee was appointed to carry out the details of the study for the larger body.

This working committee has met regularly since 1958; and in this past year has held regular monthly meetings. A number of subcommittees have been appointed in turn within the working committee to carry out specific assignments in connection with the problems of allocation of educational frequencies, technical and engineering requirements, educational purposes and objectives, and questions of administration and operation.

It soon became evident from the work of these subcommittees that what was most needed was a thorough study of the educational needs and objectives of the State, and that a systematic and thorough research job should be done before any recommendations or decision could be made.

The working committee then recommended to the State superintendent of public instruction that an effort be made to secure funds for conducting such a statewide survey and analysis. Upon this recommendation, a special committee was assigned to work with the State superintendent to investigate the possibility of obtaining foundation support for such a study, since State funds were not available.

A plan and proposal was worked out by this committee and submitted to the State superintendent for his examination and approval. The proposal was accepted and a conference was held with a representative of the Ford Foundation in connection with this need.

The request for support then was made by the State superintendent and the dean of the College of Education at Michigan State University; and in July of 1950, the Ford Foundation gave a grant to the College of Education, at Michigan State, to conduct a statewide survey for the following purposes:

1. To determine the various kinds of educational TV activity underway and planned in Michigan public and private school systems, colleges, and universities;
2. To collect the plans for future uses of TV in these educational institutions;
3. To analyze the data gathered and to recommend a coordinative effort in the statewide utilization of educational TV.

This study is now in process; and the results and recommendations will be available on September 1, 1961. However, a great deal of the data and information is already in; and it may be of interest to examine some of the present activities and plans.

Twenty-six public school systems have been visited and personally interviewed in depth. The two educational television stations on the air, in Detroit and East Lansing, have been visited and interviewed. And, 44 junior colleges, colleges, and universities within the State have been similarly studied.

The following is a list of all schools visited to date:

PUBLIC SCHOOL SYSTEMS

- | | | |
|------------------|--------------------|-------------------|
| 1. Battle Creek | 10. Grosse Pointe | 19. Saginaw |
| 2. Bay City | 11. Highland Park | 20. St. Joseph |
| 3. Benton Harbor | 12. Jackson | 21. Traverse City |
| 4. Birmingham | 13. Kalamazoo | 22. West Ottawa |
| 5. Dearborn | 14. Marquette | 23. Lansing |
| 6. Detroit | 15. Mount Pleasant | 24. East Lansing |
| 7. East Detroit | 16. Muskegon | 25. Buena Vista |
| 8. Flint | 17. Pontiac | 26. Plymouth |
| 9. Grand Rapids | 18. Port Huron | |

EDUCATIONAL TV STATIONS

1. WTVS Detroit
2. WMSB (TV) East Lansing.

JUNIOR COLLEGES, COLLEGES, AND UNIVERSITIES

- | | |
|---------------------------------------|------------------------------------------------|
| 1. Adrian College. | 24. Jackson Junior College. |
| 2. Albion College. | 25. Kalamazoo College. |
| 3. Aquinas College. | 26. Lawrence Institute of Technology. |
| 4. Battle Creek Community College. | 27. Marygrove College. |
| 5. Bay City Community College. | 28. Mercy College. |
| 6. Benton Harbor Community College. | 29. Michigan College of Mining and Technology. |
| 7. Calvin College. | 30. Muskegon Community College. |
| 8. Central Michigan University. | 31. Nazareth College. |
| 9. Chrysler Institute of Engineering. | 32. Northern Michigan College. |
| 10. Cleary College. | 33. Northwestern Michigan College. |
| 11. Cranbrook Academy of Art. | 34. Olivet College. |
| 12. Delta College. | 35. Port Huron Community College. |
| 13. Detroit Business Institute. | 36. Sienna Heights College. |
| 14. Detroit Institute of Technology. | 37. South Macomb Community College. |
| 15. Eastern Michigan University. | 38. Spring Arbor Junior College. |
| 16. Ferris Institute. | 39. University of Detroit. |
| 17. General Motors Institute. | 40. University of Michigan. |
| 18. Gogebic Community College. | 41. Wayne State University. |
| 19. Grand Rapids Community College. | 42. Western Michigan University. |
| 20. Henry Ford Community College. | 43. Flint Junior College. |
| 21. Highland Park Junior College. | 44. Michigan State University. |
| 22. Hillsdale College. | |
| 23. Hope College. | |

Within this week, 1,900 carefully designed questionnaires will be distributed to all the public and private school systems in the State (this includes the 26 systems personally visited); and the deadline for the return of these questionnaires has been set for April 28.

The results from the analysis of the personal interviews and visits, along with the returns from the 1,900 questionnaires, will be carefully examined and analyzed to form the basis of the final statewide findings and results. The recommendations and suggestions which will come out of this study then will be presented to the State superintendent of public instruction for further action.

From the work done so far, it has been found that construction permits for UHF educational television stations have been obtained by Central Michigan University at Mount Pleasant, and Western Michigan University at Kalamazoo. These two university stations plan to be on the air by this coming fall.

If they are successful in meeting this deadline, Michigan will have four educational television stations extending their program services to most of the schools and communities within the central and lower half of the lower peninsula. In addition, a new college, Delta College at Saginaw, has applied for a UHF channel; and if successful should be able to add its contribution sometime in the near future.

In short, Michigan will have at least four and possibly five educational television stations on the air within the year. However, while 70 percent of the population in the State would receive class B coverage from these five possible educational television stations, the population concentration in the southeast quadrant will not be effectively covered by the present Detroit channel 56 and the proposed Delta College channel 31. Additional coverage will need to be provided either by a satellite or booster system from one or both of these stations.

The survey also reveals that while Michigan falls within the range

of the proposed "airborne" educational television program service, about which you may have heard, it is estimated that it will cover only the southern third of the lower peninsula, and over one-half of the school systems within the State would not be able to receive this additional service.

The significance of this is that a relay network linking the existing and planned stations would be required to make an extension of the "airborne" programs available to the majority of schools and communities in the State.

Given the four or five educational stations on the air, given the additional resources of the "airborne" service, the study so far already indicates a very great need for an interconnected network and relay system between the existing and planned stations, and for the extension of their resources. In order to serve the hundreds of smaller schools and communities in the upper half of the lower peninsula and in the entire upper peninsula, some form of network, relay, and local coverage, either broadcast or closed circuit, will be necessary.

In addition, it has been found that the upper peninsula and the western shore of the lower peninsula are closely oriented to Wisconsin, Illinois, and Indiana. If a statewide network could be implemented and put into operation in Michigan, along with similar State networks in these and other border States such as Ohio, a regional network could be developed very quickly. Which, in turn with other regions, could be linked into a national system, such as has been presented and discussed in this and previous hearings.

The advantages of a statewide educational television service also would not be limited just to the schools and to the general public; but business and industry would find this facility of very great value in the development and operation of their own educational and training programs.

The use of educational television facilities, both broadcast and closed circuit, for this kind of direct training in business and industry has been proved and found to be extremely effective and successful. There is no reason why such a network could not serve to extend and improve the educational needs and programs of business and industry in the State, as well as of our schools and public service groups and organizations.

The study is systematically and carefully revealing that it is the coordination of services, and the networking facility, which will make possible the full realization of the potentiality and values of the educational resources within the State, and serve those needs which can be met best through the television medium.

It is too early to predict what form this network and extension might take. However, it would be safe to say that the entire State could be provided with effective coverage from the four or five major stations and program production and recording centers, if some form of extended coverage system could be put into operation.

The history of the State's interest and activity in the development of its educational resources and the utilization of the television medium, the record of achievement by the two existing stations, the contributions and services of the public schools, colleges, and universities, and the extent and range of the educational needs and the interest shown, as based upon the incomplete returns of the statewide study, certainly indicate that Michigan has taken the initiative in

meeting its educational opportunities, and has made a great deal of progress in the fulfillment of its responsibilities.

But, it is also quite clear that additional assistance will be necessary if the State is to meet its total obligations. The schools and universities now providing educational television services cannot take on the statewide job. And, even the addition of the two or three new stations will not serve to cover the entire State and its requirements. Here, as in other services, Federal assistance is necessary to the fulfillment of our local, State, and National needs..

I realize that there is considerable question concerning Federal support for educational television; and, it might appear that the initiative and leadership which have been shown in Michigan and other States is an indication of what can be done without additional and outside aid. But I think it is quite clear that the development and utilization of the full potentiality of the television medium, in terms of its national contribution to the schools and to the public, will require the kind of assistance and support that can only come through a national effort.

Here again, the educational problem is one of great complexity and goes beyond the resources now available on a local community basis.

I realize also that one soon becomes tired of hearing all these requests for funds. I am sure that our Government representatives at times must feel that the world is entirely composed of nothing but needs, and those who come with palms outstretched. However, I would like to put it this way. Let's not talk of educational television needs in the sense of a handout. Michigan, and no other State, needs a handout in this sense. Rather, let us talk of opportunities.

The problems of education and of educational television are fundamentally opportunities. Opportunities which require our cooperative and coordinated effort to realize and fulfill. Under our democratic form of government, these opportunities and the obligations that go with them have been properly assumed by the people, and those of us within the educational system and institution, at all levels, have the professional obligation to carry out this trust.

Therefore, to this end, we request Federal assistance and support for the development of television as an educational resource; not to get more money, not to meet our needs through a handout, but to enable us to develop and realize the full educational potential which our own efforts and contributions have brought into existence but only in a local and limited way.

We are proud of our achievements in the educational communications media in Michigan; and the record of success has been set forth in the Governor's proclamation of April 1961 as Educational Broadcasting Month, a copy of which is attached.

But while we have our record of achievement, we are now learning the new and larger dimension of our needs and requirements. What we ask in the way of consideration is not the funds and assistance to do our job, or the total job, but simply the support from our family resources that is necessary to the fulfillment of our national obligations.

Our people are one; and to the degree that we are able to provide them with the instruction and learning resources they need to take their full and responsible place in our democratic society, then, I be-

lieve we are helping to fulfill the responsibility which rests upon us all, and which we share in common.

(The proclamation by the Governor of Michigan referred to in Dr. Hunter's statement follows:)

STATE OF MICHIGAN,
EXECUTIVE OFFICE,
Lansing.

PROCLAMATION

EDUCATIONAL BROADCASTING MONTH

Michigan has always been in the forefront in education. Our schools, colleges, and universities educate and train our children and our young men and women in the sciences, the arts, and the professions. Because of our outstanding educational facilities and faculties, our people are one of our greatest assets.

The constitution of the State of Michigan sets forth that the means to education shall forever be encouraged. This our people have done. Our institutions of learning have met the challenges of changing eras and have kept pace with world progress.

Education, like other facets of our society, has adapted itself to scientific advances. Michigan has pioneered in the application of broadcast media to education since 1922 and today enjoys the advantages extended by nine radio and two television education stations. More are in the planning stage.

National recognition has been accorded our largest metropolitan area for its classroom use of television from the early grades through the college level. In addition, there are outstanding adult programs.

Michigan's educational television has shown repeatedly as a useful method of making quality instruction available to every school system and assuring superior utilization of overburdened instructional staffs. Great credit has been reflected on Michigan's educational system as programs have been loaned to school systems throughout the Nation.

Therefore, I, John B. Swainson, Governor of the State of Michigan, do hereby proclaim April, 1961, as

EDUCATIONAL BROADCASTING MONTH

in Michigan, and urge all our people to give appropriate recognition to this phase of education and to encourage it as a means of providing the fullest benefits to all.

Given under my hand and the great seal of State of Michigan this 13th day of March in the year of our Lord nineteen hundred and sixty-one and of the Commonwealth one hundred and twenty-five.

[SEAL]

/s/ JOHN B. SWAINSON,
Governor.

By the Governor:

/s/ JAMES M. HARE,
Secretary of State.

Mr. Moss. Mr. Younger.

Mr. YOUNGER. I do want to congratulate you on your statement and, also, on having the foresight to make this survey which I think is essential. And this legislation has provided for \$10,000 to make such surveys.

I am wondering if in this survey you have come to the point of how many networks is it going to take, to cover the problems. Can you use one network for the college level, high school level, and the primary level?

Dr. HUNTER. Yes, sir; one network can provide this service because of the time distribution. In other words, during certain hours of the day, the network would carry programs designed primarily for classroom use at the elementary and secondary school level.

At other hours in the day, programs for college level work would be offered and programs for adult education.

So that over the full range of the broadcast day and over the full range of the school week, programs would be made available to fit within the total range of the educational institutions from the elementary through to the general adult education.

Mr. YOUNGER. In each State appearing before us, they have either advocated the elementary or the high school or the college—there is no combination in any of the testimony that I know of which we have had where the combined station is actually operating now.

Dr. HUNTER. Our experience in terms of the Detroit station and our own university station, also, the plans of the proposed and upcoming stations at Central Michigan and Western Michigan include within them broadcasts at the elementary level, at the secondary level, at the college level, and, also, in terms of the general public in the area of adult education.

What happens very often is that we begin to think of television as doing one job entirely and for the full time. This is not the way it works.

Educational programs used in the classroom in the elementary grades, for instance, these programs may be only 15 or 20 minutes in length. Therefore, they become a part of a learning experience within the classroom. It is not a total educational design.

Therefore, you have a number of such programs that can be produced in any given hour, and offer certain selected hours of the day. So that on a single network or even from a single source, you can really provide a great variety of programs at different grade levels for different purposes to be used over an extensive range.

Mr. YOUNGER. One other question: You have a State where the concentration of population is pretty much in the southern part of the State. Should the Federal bill if passed, carry some type of limitation so that one sector of the State does not gobble up all of the funds as against another sector of the State which may be less influential, shall we say, in the legislative halls because of its population number?

Dr. HUNTER. Well, sir; the way that would work with us is that I am sure that any Federal funds which would be made available would be used to reach the less populated and less effectively served segments of our State.

Our legislative distribution pretty well insures this. And I know within the framework of our own State problems that the representatives from the upper part of the Lower Peninsula and from the Upper Peninsula are constantly insuring that any expenditure of State funds is going to provide some benefit for the people that they represent. And I am quite sure that there would be this intent on the part of State officials and on the part of the legislature to insure that any funds made available would be used to extend these existing services now to those areas of the State that cannot now receive these benefits.

Mr. YOUNGER. That is all.

Mr. MOSS. I want to thank you very much for your appearance here today.

Dr. HUNTER. Thank you.

Mr. MOSS. The next witness is Mr. John C. Crabbe, general manager of KVIE in Sacramento, Calif., one of my constituents; also,

a member of the Advisory Committee on Educational Television of the Governor of California.

We will be glad to hear you.

**STATEMENT OF JOHN C. CRABBE, GENERAL MANAGER, STATION
KVIE, SACRAMENTO, CALIF.**

Mr. CRABBE. Mr. Chairman, I actually would like to introduce into the record and read a letter, a copy of which you have, from the chairman of the Governor's advisory committee prior to my own statement as chairman of the Subcommittee on Legislation of that particular committee.

This letter is addressed to the chairman of the Subcommittee on Communications and Power, Mr. Moulder:

GOVERNOR'S ADVISORY COMMITTEE
ON EDUCATIONAL TELEVISION,
STATE OF CALIFORNIA,
March 21, 1964

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power,
House of Representatives, Washington, D.C.:

In October of 1959 I accepted an appointment from Gov. Edmund G. Brown to serve as chairman of his Advisory Committee on Educational Television. In that capacity I have had occasion to meet with many of our State's leaders in education, government, and broadcasting, and to study the work that is going on in our educational institutions in the applications of television to the instructional process.

One cannot help but be impressed by the magnitude of the problems of education in California. Our State, like no other, must meet the seemingly impossible task of maintaining or increasing the quality of education in the face of an explosive growth of school population. The problem here, as elsewhere, is compounded by the rapid expansion of what is to be taught within the limited years of formal schooling. The problem suggests its own solutions: more effective use of our teaching resources, employment of every proven technical device to intensify and accelerate the learning process, and the extension of learning beyond the years of formal schooling. Countless demonstrations and experiments have proven beyond question the efficacy of television as a major factor in the solution of these problems.

The deep and sincere interest which the State of California has in educational television is manifest in the appointment of this advisory committee of 21 citizens who have served for more than a year at their personal expense to study the problems and to recommend to the Governor's office steps to be taken for the full and effective use of educational television in this State. Copies of the report have been made available to the members of this committee.

I will make further reference to that in a moment. To proceed:

It is immediately apparent from our study that the single greatest barrier to the full use and development of television is a financial one. Schools are taxed to the limit to provide buildings and equipment to meet the expanding population growth without resorting to a watering down of quality through such devices as double sessions. Conscious as they are of the need to embrace the newest teaching tools, building plans now provide for the installation of television receiving and distribution apparatus. Older schools are making substantial investments in the purchase of television receiving equipment to take advantage of the instructional services being broadcast by the two existing educational television stations in California. Difficult as it is for our schools to meet this increased investment in television receiving equipment, they are doing it in those areas where television instruction is available. This is tacit testimony to the value our schools place upon this teaching tool and its potential for increasing the quality of education.

Faced as they are with this investment, our schools are in no position to meet the additional investment required to establish television broadcasting and re-

peater facilities. It is in this area that Federal aid is absolutely essential if we are to meet the problem. As the second most populous and fastest growing State in the Union, we are currently limited to two educational television stations serving only a fraction of the school population. Our largest city, and one of the largest in the Nation, Los Angeles, is not now served by an educational broadcasting facility. These and other facts will be amply documented by the testimony which is to follow.

California is justly proud of its educational system. We have made important strides to improve it through the applications of this new technical teaching tool. But we do need your help. We earnestly seek your favorable consideration of the legislation before you to provide Federal assistance to the States in the establishment of additional educational broadcasting facilities.

This is signed by James Day, chairman of the Governor's Advisory Committee on Educational Television.

Now, with reference to my own statement:

In our search for new approaches in education, we have now turned to the most powerful medium of communication yet devised by man, television. We have a continuing obligation to make the fullest use of this already proven instrument. An almost explosive increase in enrollments, an extreme shortage of physical facilities, and an acute deficiency in the number of able teachers forces education to examine carefully many new educational mediums of communication. Among the new mediums, television offers many advantages for every level of education.

It is no longer necessary to demonstrate the effectiveness of television as an instrument of positive value in the educational process. Substantial evidence is now in to support the worth of the new tool. In large part it is beyond the experimental state and has become a basic and integral element of those educational systems that have been able to include it in their regular operations.

The weight of this evidence is available in a large body of published material that has most certainly come to the attention of this committee in its deliberations.

Channels have been made available by the reservation of educational television channels. The reservations were announced by the Federal Communications Commission in April of 1952, and within the same year, Governor Warren convened a statewide conference on educational television in Sacramento in which more than 2,000 educational, community, and professional leaders participated.

One of the recommendations of this conference was that an advisory committee on educational television be appointed by the Governor. Such a committee was appointed and held its first meeting in February of 1953.

During a period of changing administration, activities of this committee were at a minimum. It was reactivated by Governor Brown in early 1961, and its findings as of the present time are contained in the first report recently accepted by the Governor, copies of which are being made available to you.

At this point I would like to digress to call your attention to part III of that report and request that that report be made a part of the official record of these proceedings, copies of which you have here in your hands.

Mr. Moss. That will be made a part of the record at this point.

(Part III follows:)

III

"We recommend * * *"

A SUMMARY OF COMMITTEE PROPOSALS

The Governor's advisory committee, after due deliberation and study, recommends the following steps be taken in order to assure the full use and development of television in this State for educational purposes:

A. The creation within the department of finance of an educational television agency to be administered by a commissioner appointed by the Governor, such agency to work in cooperation with all appropriate educational agencies in the State to (1) survey the precise needs for educational television; (2) develop a statewide plan for its most effective and economic use; (3) encourage its use by schools, colleges, and universities; (4) receive and allocate in accordance with the State plan any Federal funds which might become available for educational television; (5) advise and assist applicants for educational television channels; (6) maintain a central depository of information on educational television, including research studies on its effectiveness and data on technical developments; (7) conduct studies on the need for changes in architectural design of school buildings to accommodate television; and (8) provide reports on progress and needs to the Governor and legislature.

To advise the commissioner in carrying out these functions there shall be created an educational television advisory committee of 11 members, to be appointed by the Governor, which shall include, in addition to its lay members, adequate representation from the principal educational agencies of and in the State.

B. It is proposed that legislation be drafted and introduced in the 1961 session of the legislature that will accomplish the following:

(1) Revision of the education code to permit school districts, the department of education, and state colleges to become the owners and operators of television broadcasting stations.

(2) Make possible the use of available public funds to permit county school superintendents to use television as an additional tool in the performance of their normal functions.

(3) Establish procedures under which public schools may be reimbursed for the costs of presenting television courses to enrolled students for home study, or other viewing, where it is not feasible for a certified teacher to be present.

(4) Seek a means by which the State can assist financially the existing educational television stations and those to be developed in the future.

Mr. Moss. And the balance of the report will be filed in the files of the committee.

(The report of the governor's advisory committee on educational television will be found in the files of the committee.)

Mr. CRABBE. It should be pointed out that the report, for the most part, is a statement of conclusions and recommendations based on one year of study of immediate needs. The report does not document fully the problems the State faces that cause it to consider television as an instrument that may help solve a serious educational dilemma.

In California, "people" appear to be at once its greatest commodity and its greatest problem. The population of the State is increasing at a rate of 50,000 new citizens each month, and this rate is expected to continue and to increase well into the future.

The combined effects of immigration and "birthquake" are staggering. In 15 years, more than 1 million students will be enrolled in California institutions of higher education; in 10 years, more than 5 million will be enrolled in public elementary and secondary schools. The University of California will soon be operating nine campuses; it expects to add two more in the next 10 years.

These new students require new facilities. The financial resources of the State are taxed to the limit to provide the capital funds necessary to meet the ever-increasing demands for new housing for edu-

cation. Too often the funds available for both capital and operating are so limited that operating funds are used for capital outlay and the quality of instruction deteriorates.

One of the conclusions drawn in a recently adopted master plan for higher education in California is, and I quote:

Funds for capital outlay cannot be supplied after 1960-61 entirely within the present tax structure; thereafter, higher current revenues or bond issue money or both will be required to meet higher educational construction needs.

In general, the same can be said in terms of meeting the needs for elementary-secondary educational facilities.

Means of extending the walls of the classroom, of bringing the best of teaching to more pupils, of making fuller use of existing facilities, of assuring that each student has equal access to the best possible kind of instruction, of using the new media to improve instruction to the highest point, must be provided. The full and wise use of television can become one of the most important of those means.

Television in its many forms is many things. It is the excitement of young people sharing a learning experience with a skilled teacher who has at hand the resources, the materials pertinent to a subject that might not otherwise be available to all pupils. It teaches teachers, upgrading the educational leadership of tomorrow.

It introduces to many students new teaching techniques that bring alive many material that have heretofore been only inanimate representations of the real thing. It is sensitive to change and can adjust to meet current needs. It is here and now and constantly creative. It is imaginative and immediately responsive to new thoughts, new ideas, new techniques.

In California, as in many other States, there appear to be four major areas of service for education television. In general these can be identified as follows:

(a) Open-circuit television stations, operating at medium power, licensed to institutions of higher education or larger school districts, the purpose of which are to carry on programs of formal instruction within the confines of their particular area of jurisdiction, either a single campus or district.

Generally speaking, such stations would, during the daytime hours, originate formal instructional programs from one or more points to be picked up and used in clusters of viewing areas that might be scattered over a rather wide area. The purpose of such a service would be to make the best use of the best teachers to the greater advantage of more students, and to free other teachers for more individualized work with those students who require a greater amount of individual assistance.

In addition, some students would be able to gain the televised portion of their study in their own homes, thus alleviating to some degree, pressures upon the school plant. The latter would be particularly true in adult education programs carried on during evening hours.

(b) Open-circuit stations of lowpower, licensed to smaller school districts, to be used primarily for administrative and in-class instruction. Here the emphasis would be placed upon the improvement of instruction where large groups of students could benefit from the best teaching available in the district.

(c) Closed-circuit installations, ranging in size from one confined to a single classroom where teaching in such subjects as science, medicine, art, and certain other technique courses will be improved through the use of the new medium. Here the television camera is a new kind of blackboard, projector, or microscope, one that is fluid and moves at the command of the teacher.

The extension of this is obviously that situation in which the teaching is conveyed by cable connection to other classrooms so that more students may participate.

(d) Open circuit television stations that will assume broad instructional and community responsibilities. At the present time in California, two such stations exist, both of which were brought into being and continue to operate through the efforts of private enterprise.

However, it is reasonable to expect that larger institutions of higher education will assume in other parts of the State the kinds of responsibilities undertaken by KVIE in Sacramento and KQED in San Francisco and will become licensees of similar kinds of developments. In such stations are found elements that are not organized education. They present services that are of great benefit to the citizenry. They are an important part of the best of the television medium, assuming a responsibility for general education of an informal nature in addition to formal instructions by and for the organized elements of public education in their service areas.

A note of interest to those of us connected with the two stations now operating in California is to realize that the history of higher education in the United States will show that it began as a product of the efforts of private enterprise. Our great public institutions were founded in years following the establishment of many of our important private institutions. It would appear that history is repeating itself in the establishment of educational television stations in California.

The services of the existing stations in the State and others could be extended to many new areas if funds could be obtained to establish repeater stations in selected areas.

California is not lax in its interest in educational television nor is it inactive. This committee has before it a document that suggests certain immediate steps that must be taken to permit the full and free expansion of educational television in the State.

The Assembly Committee on Ways and Means of the California Legislature has recently completed a study on recommendations in higher education. One of these recommendations calls for an orderly introduction of television into the curriculum of the schools.

The senate committee on education is presently studying ways by which educational television may expand in the State in a constructive way, and a bill has been introduced in the present session of the legislature to open the way for that expansion.

The State department of education in April of 1960 completed a study and has adopted a basic State policy.

The University of California has received appropriations in an amount of \$407,000 in the last 3 years to prepare for the expansion of television in the State. It has developed a statewide plan for the university and hopes it may gain funds in a substantial amount over the next 7 years to establish a statewide educational television network.

The State colleges have recently received appropriations and are presently installing closed circuit facilities on several campuses, not for experimentation but for actual use of these facilities in their teaching programs. Two of the State colleges have been actively engaged in closed circuit experimentation over the past several years.

Contained in the Governor's budget request in 1960 was an amount of \$500,000 to be used for educational television in the State.

The only reason California has not gone further ahead is that it has been unable to develop sufficient capital resources to establish necessary facilities to make use of this important medium. Only two of the eight television channels reserved in the State have been activated. These represent an important resource to the people of this State.

As has been pointed out, these are avenues of communication through which can be disseminated much that is of great value. There is every possibility that more channels will be available as additional reservations are requested. The problems of obtaining sufficient capital to activate these channels will only become greater because of the growing population, unless assistance is forthcoming in the form that is now under consideration by this committee.

The assistance provided for in the legislation you are now considering is not the whole answer. However, it is vital to the establishment of those important beginnings that will give impetus to a movement that will help meet the ever-increasing costs of education and will improve the quality of learning in a State that is already proud of its achievements in providing equal educational opportunities for all.

I have one other thing I would like to read into the record. And, unfortunately, I do not have copies. It is a telegram received since I arrived here:

A million dollars would go a long way toward making possible those aids to education which can be afforded by educational television. We have already taken giant steps in California toward the establishment of a plan for the effective use of television in education. With such additional money, we can take the necessary step toward implementation.

And that is signed Edmund G. Brown, Governor.

Mr. Moss. Mr. Younger.

Mr. YOUNGER. Mr. Crabbe, we are always glad to have a Californian here. I have not had an opportunity to read this report of the Advisory Committee, but does it cover all of the uses of the network both for the higher education and intermediate, and primary?

Mr. CRABBE. No; the network is not covered in this particular report, Mr. Younger. This is under study, as you may well know.

The university has been doing a considerable amount of work on the development or the plans for such a network. This is a part of the continuing activity of this committee to direct its attention toward finalizing those plans.

I believe, perhaps, you are asking as to whether or not a single network might serve all of these interests. I think it is a little hard to generalize and answer at this point. However, I do feel that, certainly, a multiplicity of networks is not necessarily indicated at this time.

Mr. YOUNGER. I know that the university has been working on a network of its own.

Mr. CRABBE. Right.

Mr. YOUNGER. In order to cover all of its branches. You have a little different situation in California than they have in any of the other States which have been represented in the hearings because of the great number of branches which the University of California has.

Of course, that network is just to serve the University of California and its branches.

Mr. CRABBE. I would hesitate to say in our particular structure of schools in the State with the university, as you point out, and its numerous branches, with the State college system expanding and the junior college system expanding, and, of course, this tremendous growth that is upon us in secondary and elementary education, that a single network would answer all of these needs in the future.

At the same time, I do not believe that I am in a position to say much more than that.

This is a matter that we are studying very carefully. The coordinating council on higher education recently created the work between the State colleges and the university and supposedly the junior colleges. This is an item on their agenda for study. It is an item on the agenda for the Governor's advisory committee to consider further.

You get into engineering and all sorts of technical matters.

Mr. YOUNGER. In the university you have classes of a certain type as of a certain time, in all of the branches—could you include as well the junior colleges, if they participate in the same lecture, for instance.

Mr. CRABBE. I rather imagine that the size of the educational needs in California is soon going to become so great that a single network would not serve all purposes. I say this without a great deal of authority, but this would be my own personal judgment and opinion on this particular point.

Mr. YOUNGER. I am sorry that this started out as an educational program or an educational TV station study. From the very beginning if we had called it noncommercial, as pointed out by my colleague, it would cover the subject better than just saying it is the allocation of certain channels for educational TV. There should be certain stations for commercial television and others for noncommercial television. We have both of the stations in California.

Mr. CRABBE. We like to call ourselves community stations and this is what we are, really. It is already merged. The designation of community sets us apart somewhat from the institutionally oriented or institutionally connected stations.

Mr. YOUNGER. We will have to back up and change the terminology. I think that would be advisable.

Thank you very much.

Mr. MOSS. I have not had an opportunity to study the report of the Governor's Advisory Committee. Is there not a slight error in the copy of your statement where you refer to the committee's establishment by Governor Brown early in 1961? Should that not be 1960?

Mr. CRABBE. Yes. I am sorry. Did I say 1961? It should have been early 1960—January of 1960.

Mr. Moss. The broadcasting activity carried on in the noncommercial stations in California would be partly affected by the provision in our State law against ownership of a broadcasting license by a school board. I note that a recommendation of the Governor's council relates specifically to that question, and urges the enactment of legislation by the State legislature permitting ownership of a license by the school board.

Is this legislation now before the California Legislature?

Mr. CRABBE. Yes. No. 196, introduced by Senator Farr. That is now before the legislature.

Mr. Moss. In addition to ownership, the operation?

Mr. CRABBE. Right. What this legislation effectively does is to remove the restriction that presently exists in the State statute. There is a specific restrictive clause in the former legislation that was passed in 1957. This removes that restriction and permits them to own the license and to operate.

Mr. Moss. Do you carry on educational television programs in cooperation with the school systems under contract?

Mr. CRABBE. That is what we do now, KVIE and KQED, operate a little differently in terms of our contractual arrangement, but the net result is the same: that the public school district contracts with us for instructional services.

Mr. Moss. Is there an existing agency which would be able to take over the responsibility of developing a plan to meet the requirements of the two principles now before the committee?

Mr. CRABBE. Not at the moment, unless by mandate the Governor should give that particular charge to the existing Advisory Committee and change its character somewhat in the type of thing that was called for in the report, an agency with more than advisory responsibilities. This could well come about.

Mr. Moss. Is there legislation presently pending in California creating that authority in an existing agency?

Mr. CRABBE. There is in the State law a provision that would permit the Department of Finance to undertake this in exactly the same fashion as the Department of Finance undertook that responsibility with the Surplus Property Act. And subsequently, created an agency within the Department of Education to handle it. The Department of Finance is authorized to assume this type of leadership pending the creation of such an agency.

There is no existing legislation at this moment calling for the creation of such an agency.

The question is whether or not it would have to be created through legislative act or by appointment of the Governor. This is possible. At least, as I understand it, it is possible. And I am not the best man to speak about some of these legislative processes at the moment.

Mr. Moss. I, particularly, suggest at this time while the legislature is in session, that your Advisory Committee explore that question. In the event that one of the pending bills is enacted, there will be an agency to take on the assignment.

Mr. CRABBE. This has been thought of, and you are focusing attention on it very strongly at this point.

Mr. Moss. Would you be able to utilize a million dollars if it were voted?

Mr. CRABBE. Absolutely.

Mr. MOSS. Would you favor any kind of a provision in the law limiting the portion of the total of a million dollars which could go to any one station or facility?

Mr. CRABBE. No, I do not believe so. I believe that this determination must be made by such an agency as we are talking about, if such a responsible group is created—and we assume that it will—it would, undoubtedly, be requisite to the acceptance of a grant that that responsibility should lie with them, because they know better the needs.

It occurs to me that this is their responsibility and not something that you can put in at this level.

Mr. MOSS. Do you feel that the State, if it were to have such an official or board, would make certain that the funds available would be fairly and equitably employed?

Mr. CRABBE. I do.

Mr. ROGERS of Texas. What would be your thinking on proceeding in this manner: permitting the State to set up a separate authority as a communications authority, shall we say, and leave education out of it, for the utilization of the public's part of these channels as opposed to the commercial part, and let that group, authority or commission, whatever it might be, allocate the time on these stations, on these channels, to the different school groups.

What do you think of that? Or operate on a Federal basis, if you wanted to.

Mr. CRABBE. I am not sure that I follow all of the question, but let me say this: that there is in existence in California a division of communications, a part of the department of finance, who will certainly become involved with reference to the allocations and where they may reside and, undoubtedly, will become involved with reference to the equipping of these various channels as they may become activated.

As to the use of the channels, if I interpret your question correctly, as to the use of the channels, it seems to me that the only place where this can be determined accurately and most efficiently, is at the local level. That is, the individual schools, the individual school districts or the individual institutions, as the case may be, will know its own needs and in which direction it wants to go.

California is a pretty big State. We have a wide difference between north and south. There are a lot of differences in needs between those two areas. And to have a mandate from Sacramento, for example, would be, in my judgment, unwise as to how these channels should be used, if I interpret your question correctly.

Mr. ROGERS of Texas (presiding). What I have in mind is the final authority insofar as the utilization of these channels is concerned. You will have questions insofar as education is concerned as between the schools, generally, would you not?

Mr. CRABBE. I do not believe so. I think that as I see television growing in the State of California, for example, any sizable community that might want to establish a television station will use that channel for its own purposes and to meet its own needs.

There may be a statewide network develop at the university level—this is another story, at the higher educational level—and, obviously, there will be a coordination problem there between the various

branches of the university. This is something for the board of regents of the university to work out, to determine where that coordination point is.

Mr. ROGERS of Texas. What we must remember is that although it is a highway—it is not like a highway—you only have so many channels.

Mr. CRABBE. Yes.

Mr. ROGERS of Texas. And suppose you have five or six universities that want to participate, you are going to have an umpire somewhere to say university A, it can be on from 10 to 12 in the morning, and university B can be on from 3 to 4 in the afternoon. And that same problem will be faced on all levels of education. I mean that is the way I see it.

Mr. CRABBE. Geographically in the State, if there was a statewide ETV network for the University of California, which has, as I mentioned a moment ago, now seven separate campuses in seven different parts of the State, separated by many miles, there, undoubtedly, will develop here a coordination group, a point of coordination, I presume, at the Berkeley campus, which is home base. The State colleges are independent units, not tied together in the same fashion.

However, there is now in existence the coordinating council on higher education in the State that can serve in the capacity of coordination of some of these things and make some of these determinations.

Let me cite for you an example of how, at the public school district level, we work, because I think it may be an example. We serve 15 counties. We have about 160 independent school districts that contract with us for elementary and secondary service. They at the county level have appointed a coordinating committee. And we present an instructional service 3½ hours a day that meets the majority needs of the 15 counties, some 20,000 miles of geography that we cover.

So these coordination things can be accomplished. We have demonstrated that they can be.

Mr. ROGERS of Texas. You say at the public school level. Do any of the parochial schools participate?

Mr. CRABBE. Not in our particular area; not in our service at all at this point.

Mr. ROGERS of Texas. Of course, when we move in to this thing on the Federal basis, we will have this problem. You will have a great deal more institutions of learning than you have channels to utilize. If we are going into the area of, say, a certain institution here in Mississippi wants a channel, so they are all set up and we will give them a chance and let them operate; that is one channel that is gone, unless some authority can be worked out to make that channel be shared with other groups and other people.

The parochial schools as well, whether they be Baptist, Lutheran, or whatever, are going to begin to want to participate in the programs, once these channels are opened up. And since we have only a limited number of channels, it seems to me that we will have to work this problem out in some manner to create an authority to allocate this time and to control these different channels, either within the State, as a State organization, or State authority, or we are going to have to do

it on a Federal basis, recognizing the fact that the television beams go across State lines.

Mr. CRABBE. If you were to ask me, I would recommend such an authority at the State level. I think this is important.

Mr. ROGERS of Texas. At the State level?

Mr. CRABBE. Yes.

Mr. ROGERS of Texas. That would be in my opinion the best approach to the problem. I think it would be much better than having the Federal Government in there.

But so far as the operational situation is concerned, it would seem to me that it would be easier to get those operational costs by allocating these channels on a pay-as-you-go basis rather than it would be to try to give these channels to one institution and then everybody fuss with that institution trying to get a little time. I know some people like to control the time. I have had experience with that.

Mr. CRABBE. No one formula works everywhere, is the only answer that I can give you. I think it is at the local level.

Mr. ROGERS of Texas. I am sure that we will have that problem.

Mr. CRABBE. I think the local situation will dictate what will happen.

Mr. ROGERS of Texas. Thank you.

Mr. MOSS (presiding). Mr. Avery, do you have any questions?

Mr. AVERY. Well, like every committee member, the longer you sit here, the greater inspiration there is to ask some questions, too.

I am sorry that I was not here for your initial presentation.

As I had this bill explained to me—and I did not realize it at first—in addition to the authority for the broadcasting facility itself on the channels that have been assigned, there is authority in this bill to finance closed-circuit television. That opens another concept on this entire program.

I have not done much thinking about that, frankly, up to this point. Actually, it is conceivable to me we could spend our time talking about what is going to go over the transmitter into the assigned channel itself and actually that portion might only utilize a very small part of the funds in the bill. Is that correct?

Mr. CRABBE. I will put the shoe on the other foot.

Mr. AVERY. That is what I wanted to ask you. How do you think this program will be divided between open and closed circuit.

Mr. CRABBE. I think that the amount of any appropriation that might be forthcoming that would go toward closed-circuit application would be relatively small in comparison to that which would go toward open-circuit television, because we are dealing here with a very vital public franchise and we are sitting on a very important resource that is not fully developed for the benefit not only of schools but of the general citizenry, the people.

Mr. AVERY. If you would enlighten me just how this follows. I do not quite understand the relationship of the closed circuit, so far as the spectrum is concerned, to the open circuit.

Mr. CRABBE. The closed circuit has no bearing whatsoever on the spectrum.

Mr. AVERY. None at all?

Mr. CRABBE. None whatsoever. It occupies no channels. It is strictly by telephone wire point to point.

Mr. AVERY. Or microwave?

Mr. CRABBE. Or microwave, or whatever connection might be used. That is the only place that the broadcast spectrum gets into the closed-circuit picture would be where the delivery of picture from point to point would use a microwave channel.

Mr. AVERY. But those would be channels that have been already assigned—it would be channels other than the ones assigned for education or for other purposes?

Mr. CRABBE. They are not in this.

Mr. AVERY. In another part of the spectrum?

Mr. CRABBE. A different part of the spectrum. And you may use many, because there is no interference from one to the other in general; that is to say, when you put up a microwave connection from point to point, you can have several operating side by side without interference, whereas in the open circuits, the VHF and UHF bands, you have to worry about channel separations and other things.

Mr. AVERY. It has been called to my attention this morning, actually, so far as supplementing actual classroom space is concerned, these might have a greater need for closed circuit operation than an open circuit operation. On the open circuit you would have one program going at one time and when you stop to think about the thousands or hundreds, possibly, of classrooms that might be utilizing that, it would not serve very many units. There could be many separate programs out in 1 day, if you relied simply on the open circuit.

Mr. CRABBE. Well, unless you used multiple closed circuit channels, then you are only going to have one service. If you are talking about trying to increase the number of channels—

Mr. AVERY. I am not talking about that.

Mr. CRABBE. What I am saying is this: Take any given school district that might be here originating program materials for a group of classrooms, it would have to have as many closed circuit channels as there are individual programs that it would want to originate.

Mr. AVERY. I understand that.

Mr. CRABBE. It is the same thing exactly. If you are on open circuits, you have got one. If you have got one closed circuit channel, you have one.

So you have to add channels as you go.

Mr. YOUNGER. Will you yield there?

Mr. AVERY. Yes.

Mr. YOUNGER. As to closed circuits, if you had a coaxial cable you could have a number of programs going through the cable at the same time.

Mr. CRABBE. This is conceivable. I cannot speak too intelligently to that point.

Mr. YOUNGER. They have it now in the telephone company—you have any number of messages going through the cable at one time.

Mr. CRABBE. I do not know what the limit is of the number of programs that can go on it. I do not know that.

Mr. YOUNGER. That is probably what you would use, at the university. It would be more satisfactory to all branches, I should think.

Mr. AVERY. We are getting into a rather technical phase of this.

Mr. CRABBE. I would rather stay out of it myself, frankly.

Mr. AVERY. I am happy that it did come up and that we discussed it a little bit because I think it has opened up a phase that we will have to go into and and get information on.

Thank you very much.

Mr. Moss. Any other questions?

Mr. Crabbe, I want to thank you for your excellent statement. And I want to express my thanks for seeing you here in Washington.

Mr. CRABBE. Thank you.

Mr. Moss. And I hope that you return home safely.

Mr. CRABBE. Thank you.

Mr. Moss. The committee will be in recess until 10 o'clock tomorrow morning.

(Whereupon, at 3:40 p.m., the committee recessed, to reconvene at 10 a.m., Thursday, March 23, 1961.)

Faint, illegible text at the top of the page, possibly a header or introductory paragraph.

EDUCATIONAL TELEVISION

THURSDAY, MARCH 23, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND POWER
OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10 a.m., in room 1334, New House Office Building, the Honorable Morgan M. Moulder (chairman of the subcommittee) presiding.

Present: Representatives Moulder, Harris, Williams, Rogers of Texas, Moss, Rostenkowski, Younger, Avery and Sibal.

Mr. MOULDER. The subcommittee will be in order.

The subcommittee will recognize David C. Stewart, Secretary of the Joint Council on Educational Broadcasting.

STATEMENT OF DAVID C. STEWART, SECRETARY, JOINT COUNCIL ON EDUCATIONAL BROADCASTING

Mr. STEWART. Thank you, Mr. Chairman.

I am here today representing the Joint Council on Educational Broadcasting. We appeared yesterday, as you recall.

On March 17, 1961, the Joint Council on Educational Broadcasting, through its chairman, Lawrence Dennis, wrote to Gov. LeRoy Collins, president of the National Association of Broadcasters, in order to solicit his views in connection with this legislation.

On the 20th of March 1961, we received a response from Governor Collins, and because of the content of the response and, indeed, the content of the request for his views, and because Governor Collins has had an abiding interest in educational television in Florida, and because he is now, of course, in the position of president of the National Association of Broadcasters, I would like your permission to introduce this correspondence into the record at this time.

Mr. MOULDER. The correspondence will be admitted in the record at this point.

Mr. STEWART. Thank you.

(The correspondence follows:)

MARCH 17, 1961.

Gov. LeROY COLLINS,
President, National Association of Broadcasters,
Washington, D.C.

DEAR GOVERNOR COLLINS: As you know, the Congress is presently considering legislation which would provide Federal financial assistance for the construction of educational television facilities in each of the separate States and the District of Columbia. Various legislative plans have been introduced, each of which would provide a total of at least \$51 million to stimulate the continued growth of noncommercial, educational television throughout the country.

Such legislation has been introduced previously in both the Senate and the House of Representatives. It has twice passed the Senate. While it has never reached the floor of the House, it was reported favorably out of the House Committee on Interstate and Foreign Commerce in the 86th Congress.

The Joint Council on Educational Broadcasting, representing American education at all levels through national educational organizations, has strongly supported this congressional legislation. We view the potential effects of the legislation as having a most important and salutary effect upon the cultural and educational life of this Nation.

We know of your great personal interest in the advantages of educational television and your vigorous support of the outstanding program of statewide ETV in the State of Florida during your service as Governor. We are likewise aware that as president of the National Association of Broadcasters you are deeply concerned with the accomplishments of all aspects of American broadcasting.

In view of your wealth of knowledge and experience, both in the field of education and broadcasting, we would greatly appreciate your views upon the aforementioned legislation. We sincerely feel that your thoughts on this subject will reflect a wise and considered judgment of the principles which underlie the educational television legislation now before the Congress.

Very sincerely,

(Signed) LAWRENCE E. DENNIS,
Chairman, Joint Council on Educational Broadcasting.

MARCH 20, 1961.

Mr. LAWRENCE E. DENNIS,
Chairman, Joint Council on Educational Broadcasting,
Washington, D.C.

DEAR MR. DENNIS: Thank you for your letter of March 17, requesting my views on proposed legislation for Federal financial stimulation of educational television facilities now being considered by the Congress.

As you indicated in your letter, my interest in educational television grows out of the practical experience gained through the pioneering efforts in establishing statewide ETV facilities during my recent tenure as Governor of Florida.

In addition, I had the opportunity to serve as chairman of the Southern Regional Education Board during the period in which that interstate compact agency serving the needs of higher education in 16 States began its plans for the establishment of a regional ETV facility for the Southern States.

And, currently, I am a member of the Commission on Goals for Higher Education in the South, a group of lay citizens seeking to outline the objectives of southern higher education in the next two decades. This group is also keenly interested in the potentials of instruction by means of television.

Of course, in my present capacity as president of the National Association of Broadcasters, I am concerned with the best uses of all phases of broadcasting for the service of the public interest.

It seems to me that the principal issues are involved in the pending legislation before the Congress:

1. *The efficacy and desirability of television as a means of education*

There was a time when this was debatable. In the past several years, however, a large body of practical experience in educational television has been gained. It has come from virtually every field of educational activity—elementary, secondary, and higher education, as well as adult education, in the classroom and out. No longer is there any question about the efficacy or desirability of television as an extremely valuable educational tool. It is now an established fact that students who have had educational experiences through televised instruction learn as well as, and in some cases even better than, students who have not had such experiences.

Nor is there any longer a question about the practical dollars-and-cents savings which well-planned and competently executed educational television can bring to all levels of education. ETV offers a magnificent hope for breaking through the major problem facing American education: how to provide improved quality instruction to an ever-increasing number of students without an equivalent increase in cost.

No one would suggest that televised instruction replace the flesh-and-blood teacher and the personal contact with the individual student. On the contrary, when intelligently used, televised instruction can become a liberating force in the

professional life of teachers, freeing them from much of their routine and enabling them to devote more time to the individual requirements of their pupils.

It can, in short, importantly supplement conventional instruction—bringing an increase in the quality of instruction to large numbers of students and, consequently, at costs lower than otherwise would be required.

As an example, in my own State of Florida, the use of ETV in the Dade County (Miami) public schools alone has resulted in the savings of some \$4 million which otherwise would have been required for new classroom construction. In the next decade, it is expected to accomplish an additional savings of \$12 million in that single county.

In Florida, we concentrated on increasing the quality of classroom instruction through ETV. Thanks in no small part to the enthusiastic cooperation of commercial broadcasters in Florida, the State now has five ETV-VHF stations—one-tenth of the national total and more than any other State—which are part of a video-tape network that brings to 14 junior colleges, public schools and homes in 33 counties some of the finest instruction from the four State universities.

I learned from experience in Florida that ETV works—and works well.

Education is, in the final analysis, the communication of ideas. There no longer is any question about the ability of the television medium to communicate effectively with vast numbers of people. It is a natural for education.

2. *The desirability of Federal assistance to educational television*

As one who has been involved for the past 25 years, as a member of both the legislative and executive branches of State government, in public support of education, I am firmly committed to the concept of local control of education.

Like most Americans, I do not wish to see control of education transferred from local and State levels to the Federal Government.

But I can see nothing in the proposed legislation now pending in the Congress which in the slightest degree would deprive States and localities of control of their educational processes.

On the contrary, this legislation will stimulate the States to undertake greater responsibilities in the field of education. The range and effectiveness of State activity will be enhanced, not reduced.

In Florida, we established our statewide ETV program on State and local financing and without Federal assistance. But other States have not had the good fortune of Florida's growing economy. Those States especially can make significant use of the proposed Federal assistance, which is designed to give them the start they need to get their ETV programs on their feet and going.

As one who believes in the rights of States to control their educational programs—and the equivalent responsibility of those States to undertake those programs—I see no danger in the form of Federal assistance contained in this proposed legislation.

3. *The involvement of the national interest*

There is yet another very important, though somewhat indirect, reason recommending this legislation. The survival of this Nation as a democracy is going to depend upon the ability of its world neighbors to choose intelligently between freedom and totalitarianism. It is impossible for that choice to be made intelligently by people who are uneducated.

Our time is running out, and I am convinced the only effective means left in the time remaining is education through the broadcast media on a worldwide scale.

The majority of the world's population can neither read nor write. If the essential first step toward an enlightened free world citizenry is the elimination of illiteracy throughout the world, then there is no question that the instrument which must be employed is broadcasting, especially television.

We must develop in America the techniques for education through television if America—rather than some other nation—is to offer the leadership for the education of the rest of the world. We must develop a body of practical nationwide experience in educational telecasting upon which the Nation can draw in meeting its responsibilities throughout the world.

This whole development of ETV should occur, of course, with careful regard for the preservation of our free-enterprise system of commercial broadcasting. Commercial TV and educational TV have separate missions to perform and the strength of each depends upon keeping this separateness firmly in place.

Sincerely,

(Signed) LEROY COLLINS,

President, National Association of Broadcasters.

Mr. MOULDER. I join with my colleagues, Congressman Younger, of California, and Congressman Rogers, of Texas, in recognizing our colleague, Congressman McIntire, of Maine, to introduce Dr. Elliott, president of the University of Maine.

**STATEMENT OF HON. CLIFFORD McINTIRE, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF MAINE**

Mr. McINTIRE. I appreciate the opportunity to introduce to the committee a very distinguished citizen of my State who is president of our land-grant college, the University of Maine.

And I might advise the committee that while he is a native of West Virginia, he served for a number of years as assistant to the president of Cornell University, and has in more recent years come to our State to head up our fine land-grant college.

He is here this morning to testify in connection with legislation before this committee. And I must say that he is a very competent man in the field of education.

We have been interested in this subject matter for some time. We have had very careful surveys made of our State in relation to the possibilities of educational TV.

And I am delighted to have the privilege to introduce to this distinguished committee, Dr. Lloyd H. Elliott, president of the University of Maine. Dr. Elliott.

Mr. MOULDER. We certainly appreciate having you here to give us the benefit of your statement and the information that you have on this important subject.

**STATEMENT OF LLOYD H. ELLIOTT, PRESIDENT, UNIVERSITY OF
MAINE**

Dr. ELLIOTT. Mr. Chairman and members of the committee, my name is Lloyd H. Elliott and I am president of the University of Maine. I appear before you as a representative of the American Association of Land-Grant Colleges and State Universities and in behalf of educational interests of the State of Maine.

The land-grant colleges and State universities, which include 70 member colleges and universities in every State and Puerto Rico, wish to reaffirm in principle our support of legislation to provide aid for the construction of educational television facilities in the various States. Full advantage should be taken of this means of strengthening the entire educational efforts of the Nation, and one effective way to quicken the pace of the development is through enactment of such legislation.

General cultural programs, special courses to meet particular needs, collegiate, secondary, and elementary levels will all be benefited.

In addition, the University of Maine will make valuable use of such facilities in agricultural and general extension work. Since progress in the country's affairs, both internal and external, rests increasingly upon the effectiveness of our entire educational effort, further delay in the full utilization of television for this purpose is hazardous.

In Maine, we are viewing congressional activity in this field with special concern and considerable hope. Educational television is a matter of widespread public interest in the State.

There are several reasons for heightened activity at this time.

First, the people of Maine are endeavoring to strengthen the educational program at all levels. They believe the use of television is a realistic way to proceed.

Second, with limited resources the State is faced with the unwelcome possibility of falling still further behind in educational achievement. Maine is composed largely of small communities and extensive rural areas. These villages and sparsely populated areas have in the main been unable to finance an adequate educational program.

In fact, Maine has 1,600 children who reside in the unorganized territories of the State and do not have the benefit, therefore, of school district organization. Thirty-four Maine communities are too small to maintain schools; 139 have a total school population of less than 100. The State has 240 high schools and academies. Yet, only 29 of these 240 received "accredited" ratings during 1960.

Of the 458 Maine communities operating public schools, only 35 have formal art programs, and only 207 have organized music programs.

Running through the entire educational problem in the State is a common lack of adequately equipped science and language laboratories.

It has been firmly established that educational television can do much toward the correction of many of Maine's educational deficiencies, and that it will upgrade education at all levels across the State.

Third, it has been determined that a statewide educational television network reaching 98 percent of Maine's population and schools is technically and economically feasible. In short, Maine is so situated as to be able to take full advantage of educational television.

Through a Ford Foundation grant, the University of Maine, using nationally known ETV authorities and consultants, conducted a survey on ETV potential in the State. This survey was conducted on behalf of all educational interests in the State and resulted in the filing of a petition with the Federal Communications Commission to enable the full educational use of three unactivated VHF channels in the State.

When connected with the one VHF channel already assigned for educational use, but not yet activated because of lack of funds, the 98-percent population and school coverage would be achieved. This petition to the FCC is currently receiving the Commission's consideration, and a major factor in its final approval apparently centers upon the availability of funds to capitalize and operate the proposed network.

The people of Maine and the Maine Legislature have not been remiss in attempting to meet their local responsibilities in this vital matter. Before the 100th Maine Legislature, currently in session, is a bill calling for more than \$1 million for the construction of part of the educational television network.

In addition to this, three major private colleges in the State are cooperating in an effort to procure for Maine the much-needed advantages of educational television. These colleges—Bates, Bowdoin, and Colby—have purchased the license to one of the three channels men-

tioned earlier, and are currently constructing an educational station to serve the populated southern section of the State. This construction, estimated to cost approximately \$500,000, is to be financed from private sources, and neither State nor Federal funds are being sought.

However, the activity of the private colleges, although coordinated with the proposed statewide network, will not provide educational coverage to the less-populated sections of the State, where its value can be even more dramatically demonstrated.

In addition to the proposal for construction costs, currently before the Maine Legislature, the State University is requesting funds for the construction of central studio facilities to serve three of the channels of the proposed network. Operating funds must also be requested.

In total, about \$1.5 million in capital costs for the network is being requested from State legislature, and an additional \$160,000 for operating funds for the next biennium is being sought.

Appeals to the Maine Legislature from a multitude of educational, civic, and business groups seeking support of the proposed ETV network have been filed, to say nothing of scores of letters and wires to the State legislators from individual citizens across the State.

The people of Maine recognize the need for these educational television facilities to help upgrade the State's educational standards. No opposition to the project has been voiced, but there still remains the difficult task of financing the initial construction and providing the operating funds necessary from year to year.

With limited resources and a multitude of growing needs, the State is hard-pressed to find sufficient funds. If substantial help could be provided from the Federal level for the capital construction, it is reasonable to expect the State to provide funds for annual operations.

Fourth, commercial companies have recently evidenced serious interest in the procurement of the undeveloped channels. Should this happen, the opportunity for statewide education television in Maine may be lost entirely.

Fifth, an eastern educational network has now been organized and is in process of being incorporated under the laws of Massachusetts. Its facilities are such as to make it practical to bring to the most remote village of the region those cultural and educational resources of the great metropolitan centers.

Of course, it is now feasible, as well, to exchange special programs or whole courses of instruction with other stations, thus giving any one station the full benefit of all the past work that has gone into the production of educational programs.

Because of the many advances in education through television, it is now economically feasible for a State such as Maine to assume the annual operating cost of a network such as that proposed. I hope the Congress may see fit to help financially with the capital construction which will permit Maine, as well as many other States, to move forward educationally through the use of television.

Mr. MOULDER. Thank you, Dr. Elliott. Dr. Elliott, we appreciate our distinguished colleague coming before us to present you, a distinguished educator of this Nation, and, also, representing the American Association of Land-Grant Colleges and State Universities.

Mr. Younger?

Mr. YOUNGER. I want to thank you very much for your very able presentation. Yours is the first presentation wherein there is an indication that one station could serve the whole State.

Dr. ELLIOTT. One network.

Mr. YOUNGER. One channel. Do you mean more than one channel?

Dr. ELLIOTT. There would be four channels but they would be tied together in a State network system.

Mr. YOUNGER. I was rather interested in that. I did not know that you had in the State as many districts which were not covered by public schools at the present time as you have.

Dr. ELLIOTT. There is a lot of open country.

Mr. YOUNGER. So, evidently, Maine would offer a fertile ground for testing this educational system more than most other States we have heard from.

Dr. ELLIOTT. We are told, sir, that the unique distribution of the population making possible this 98-percent coverage is unusual in the entire country. Of course, it is purely accidental.

Mr. YOUNGER. Thank you very much.

Mr. MOULDER. Thank you very much, Dr. Elliott.

Dr. ELLIOTT. Thank you.

Mr. MOULDER. We will recess for a period of 5 minutes.

(Short recess taken.)

Mr. MOULDER. The subcommittee will be in order.

We will hear from Mr. R. F. Landry, assistant vice president of the American Telephone & Telegraph Co. Mr. Landry, we are pleased to have you here.

STATEMENT OF ROBERT F. LANDRY, ASSISTANT VICE PRESIDENT, BELL TELEPHONE SYSTEM

Mr. LANDRY. Thank you very much, Mr. Chairman.

I am Robert F. Landry, assistant vice president, marketing, of the American Telephone & Telegraph Co. We appreciate this opportunity to present, on behalf of the Bell System companies, for your consideration some views with regard to our interest in the bills you have before you relative to educational television.

A brief résumé of my background and experience in the Bell System may be of interest. I am a graduate of the University of Rhode Island with a degree in electrical engineering.

I have been with American Telephone & Telegraph Co. or its subsidiary companies for 15 years with experience in the engineering field, particularly as it relates to long-range planning. Also in forecasting the amount and scope of future customer service needs, rate and revenue requirement work, as division commercial manager concerned with negotiations and servicing of customers, as assistant vice president of the Michigan Bell Telephone Co. subsidiary, in charge of the commercial staff, and finally in my present position in determining the market for, and assisting the associated companies to sell and promote new service offerings designed to meet customers' present and future needs.

While in Michigan, I represented our company as its member on the board of the Detroit Educational Television Foundation which supported channel 56, the ETV broadcast station in Detroit, and also

served as a member of the State superintendent of public instruction's citizens committee on educational television.

At the outset I think I should make it clear that while the Bell System recognizes the value of television in education, we are not here to take any position, pro or con, with regard to the bills which you now have before you, nor with respect to the basic question of whether Federal funds should be used for educational television purposes. We do not feel that we have any competency to form these judgments.

However, the bills before you cause us considerable concern because, as drafted, they all seem to limit the use of the funds to be provided only for the purchase of the necessary facilities for television. They would thus preclude the leasing of interconnecting facilities from common carriers such as the operating companies of the Bell System, which presently provide such facilities extensively for both commercial and for educational television systems.

By the term "interconnecting facilities" I mean the coaxial cable or microwave radio equipment necessary to transmit a television signal from the broadcast point of origin to the transmitter location, or between various locations in a closed circuit network.

Accordingly, our purpose here is to urge you in considering these various bills to amend them in a manner appropriate to make it possible for the funds to be used by educational authorities to lease, as well as purchase, interconnecting facilities in those cases where it is desirable to do so. In other words, to give those who are setting up or expanding educational television freedom of choice in this regard.

I understand that during the hearings on March 20, Congressman Roberts proposed an amendment to his bill, H.R. 132, which covered this very point and that the amendment would be accomplished by the addition of the following sentence:

The funds provided for under this bill may be used to purchase or lease the interconnecting facilities between broadcasting stations and transmitter locations, or between locations on a closed circuit television network.

We feel that this amendment would adequately resolve our concern with these bills, and we respectfully endorse it.

I think that it might be helpful to the members of the subcommittee if I elaborated on our interest and concern in these bills by reviewing briefly the Bell System's involvement with commercial broadcasting in general, and with educational television in particular.

From the very earliest inception of commercial network broadcasting, both in the radio and TV fields, the Bell System has been intimately involved in providing the interpremises and intercity cable and radio facilities required for network operations.

In the commercial TV field, specifically, we are now providing facilities to more than 380 commercial television stations which involves, throughout the country, a total of about 84,000 channel miles of intercity video facilities.

In addition, in almost every major city the telephone companies provide extensive cable and microwave systems to interconnect studios with transmitter towers and to pick up programs from many public places. Our particular contribution in these fields is to provide facilities with uniform nationwide standards of transmission which are essential to effective network operation where high technical

quality and reliable full-time service with an absolute minimum of interruption are essential.

The Bell System is, we feel, especially qualified to do this kind of a job. We have the research facilities and personnel in the Bell Telephone Laboratories as well as the construction and operational know-how in the Long Lines Department of American Telephone & Telegraph Co. and in our 18 associated companies that are especially trained to do this kind of a job.

I digress here to say that the technical and operational service requirements for educational television, in the broad sense, are essentially the same as those for commercial TV. We already provide the kind of facilities required for television in substantial quantities on every major intercity route throughout the United States.

In many cases additional channels can be provided on these same routes with a minimum of new construction. We have a nationwide, highly trained organization to assure high quality, dependable service.

In short, any integrated network system such as television, be it educational or commercial, by its very nature requires overall system engineering and operation such as that which is basic in the day-to-day job of a common carrier like ourselves.

You may be aware of our continuing interest in the constant improvement and diversification of public education. Education in the broader sense has always been of prime interest to the Bell Telephone Cos., their managements and their employees. Over the years we have been directly involved, in the ways in which it seemed appropriate for us to be, in lending assistance to education.

Our "Science Series," for example, originally presented on network TV in recent years has gotten very wide distribution. Thousands of copies of these films distributed throughout our school systems have been recognized by many educators as a very helpful means of developing a greater appreciation of the need for knowledge in basic sciences in today's life.

We have been one of several contributors to the support of the continental classroom program on network TV during the past 3 years which is geared to direct instruction for credit of both teachers and students in the fields of physics, chemistry, and mathematics.

Mr. MOULDER. Is that in connection with correspondence courses given, or totally through television?

Mr. LANDRY. These are credit courses, through television medium, but the students have to have textbooks and have to pass tests that are controlled by the institution which is giving the credit for the course.

Mr. MOULDER. How many?

Mr. LANDRY. There are a number of them.

To proceed: Since the earliest awareness in the educational field about the use of television as a teaching tool, we have tried to stay in contact with school authorities, expressing our willingness to advise and assist them in any way possible in whatever use they may wish to make of this new medium for education.

Specifically, the telephone companies were very much involved in some of the earliest applications of educational television such as the Washington County, Md., system; the network around Cortland,

N.Y.; the network at San Jose State College, Calif.; and more recently the statewide system in South Carolina.

I understand that Congressman Hemphill commented about this system in South Carolina very favorably. And I noticed that Dr. Anderson referred to this system, also.

Our total involvement, as of the most recent information in the educational television field, includes the following two broad areas:

First, there are 54 educational TV broadcast stations on the air throughout the country. We provide facilities to 12 of these 54.

These facilities are used primarily for interconnection between studio and transmitter locations.

The second area of our activity is the closed circuit field, where we are providing facilities in seven different locations ranging in size from the system at San Jose State College which involves 3.3 miles of coaxial cable facilities, up to the system in South Carolina which involves over 400 miles of intercity facilities, both microwave radio and coaxial cable.

Our associated companies at a recent count were actively involved in negotiations with educational interests to provide facilities in 25 additional locations.

In summarizing our interests and what we feel we can offer, I would like to state that we feel the Bell Telephone Cos. are especially well equipped to assist in the engineering and provision of ETV systems. We feel that the business of providing these facilities is something that a common carrier like ourselves can do in the best interests of educators, the schools and the public. We are ready and willing to actively help wherever educators want our services.

Finally, we know that the service we can provide will be of the highest quality, in many cases is competitive pricewise with what can be obtained from other suppliers, and that we can meet almost any reasonable service date even on very short notice.

To emphasize this latter point, I will mention that a firm order for the statewide network in South Carolina to which I referred before was obtained only 2 months prior to the time the complete network of about 400 miles of facilities connecting almost 30 schools in 11 different cities was turned over for service to the customer.

I would like to repeat that all we ask on behalf of the Bell System is the opportunity to be of service. We ask for no advantages in this regard but simply a chance to do a prompt, dependable and high-quality job for public education on reasonably equal terms with any other prospective supplier of interconnecting facilities, whether they are to be purchased outright by the local school district or State, or whether they are to be leased either from us or any other supplier.

Before closing, there are two other observations we would like to make with regard to these bills which may be of interest to you. First, we believe the language in some of these bills unintentionally puts too much emphasis on "transmission apparatus" as contrasted to the television equipment itself, such as cameras, viewers, lighting systems, monitoring equipment, and so forth.

Second, in a relatively new and rapidly developing field such as educational TV, the diversion of any substantial amount of capital funds such as those contemplated in these bills to relatively secondary uses like interconnecting facilities as contrasted to television equipment would, we believe, slow down rather than expedite development

of the medium, especially when others, like ourselves, stand ready to provide the services required.

To clarify the last point, information available to us from many sources indicates that substantial amounts of capital are required to set up a good studio and production center for developing ETV programs. Further, substantial amounts of money are required to equip an ETV broadcasting station. Both of these factors have been brought out by several of the witnesses with experience in the ETV field who have preceded me.

Finally, even though the unit cost of television receivers or viewers as used in the classrooms is relatively small, because the number of classrooms involved in a given State could be in the hundreds if not thousands, and because in many cases two or more receivers are required per classroom, substantial amounts of money would be involved to provide even this essential equipment.

In summary, on this point, we are sure that the Congress would want to get the most out of any funds that may be made available for the promotion of educational television.

The interconnecting facilities required in these systems are of the types the telephone companies already have available in many areas or can provide readily using much of their existing basic plant. To the extent that the leasing of telephone company facilities minimizes the capital funds required to establish an effective system, greater use can be made of the available funds.

In closing, I would like to repeat the major points I have tried to make for your consideration. The Bell Telephone Cos. feel that, in all modesty, they can take considerable credit for the development of high quality, reliable commercial TV broadcasting networks which have been made possible over the years largely through facilities designed, provided, and operated by the telephone industry.

We are ready and willing, indeed we are eager, to provide the same service in the educational television field. We have the research, engineering, and operational know-how to do the job well. In many cases we can make use in whole or in part of existing plant thus avoiding costly duplication. In most other cases any new construction required to provide the desired facilities can make effective use of already existing plant such as poles, underground conduits, microwave towers, testing equipment and many other things.

While we want to participate in this business, we also feel we can provide a service that is in the public interest. We recognize that there are some others who can provide the same services and we are willing to compete with them on the quality of service, reliability and price, provided we have an equal opportunity to do so. All we ask of you gentlemen is to give us that opportunity.

Thank you again, Mr. Chairman and members of the subcommittee, for your kindness in letting us make this presentation.

Mr. MOULDER. Mr. Landry, we want to thank you for the fine presentation you have made. It is very informative and interesting.

Mr. LANDRY. Thank you, Mr. Chairman.

Mr. MOULDER. Mr. Williams, any questions?

Mr. WILLIAMS. No questions.

Mr. MOULDER. Mr. Sibal, any questions?

Mr. SIBAL. No questions.

Mr. MOULDER. Thank you very much.

Mr. LANDRY. I would like to mention before I leave that if time permits later on, we have a witness from the New York State Department of Education, who is using our services in the educational TV field, a Mr. Almstead, whom we would like to have before the committee whenever time is convenient.

Mr. MOULDER. We will give him that opportunity.

(The following supplementary information was later submitted for the record:)

AMERICAN TELEPHONE & TELEGRAPH Co.,
Washington D.C., April 27, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power,
Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN MOULDER: As you know, during the hearings by the Subcommittee on Communications and Power on various bills to provide funds for educational television purposes, the Bell System spoke in favor of an amendment to permit the funds to be used for the leasing, as well as the purchasing, of interconnecting facilities. Subsequently, witnesses for two ETV associations opposed leasing principally on the basis that it would constitute an "operating expense."

We feel that this "operating expense" argument requires an answer, and we respectfully request that we be permitted to extend our testimony by the inclusion in the record of the enclosed supplementary statement. We will give a copy of this supplementary statement to Chairman Harris, to each member of the subcommittee, and to the staff.

Very truly yours,

JAMES W. GRADY, Jr.

SUPPLEMENTARY STATEMENT BY THE BELL TELEPHONE SYSTEM IN CONNECTION WITH VARIOUS BILLS TO PROVIDE FUNDS FOR EDUCATIONAL TELEVISION PURPOSES

During the hearings on the above bills, witnesses for both the National Educational Television and Radio Center and the National Association of Educational Broadcasters opposed an amendment to permit the funds to be used for the lease,¹ as well as the purchase, of interconnecting facilities between broadcast studio and transmitter locations, or between locations on a closed-circuit network. The principal stated basis for this opposition was that leasing involves an "operating expense" for which the funds should not be used.

Because we feel that this argument against leasing obscures the real issue of freedom of choice, we think it warrants discussion in some detail.

The interest of the Bell System in this legislation, and our present involvement in educational television and related fields, was reviewed in testimony by Mr. R. F. Landry of the American Telephone & Telegraph Co. The ability of the Bell System, with its cable and microwave distribution systems and its specialized technical competence, to perform services for educators which they cannot as a practical matter perform for themselves was indicated in testimony by Mr. F. E. Almstead of the New York State Education Department. A brief review of some of the points brought out in the testimony of these witnesses may be of assistance in considering the leasing question:

The Bell System has been extensively involved in rendering services to commercial radio and television broadcasters since the inception of those industries. Much of the present high-quality transmission in both fields is the result of Bell System engineering and research. With regard to educational television, we are presently furnishing interconnecting services for about 20 such systems of both the broadcast and the closed-circuit type, and we are bidding in connection with some 25 proposed systems. Both broadcast and closed-circuit systems are important in the ETV field, but each has its particular advantages and limitations.

¹ The word "lease" will be used extensively herein. It was also used in testimony by Mr. Landry. In all cases we intend "lease" in its common parlance as connoting a concept different than ownership. However, in order to completely clarify the matter, we respectfully suggest that if the funds are to be available for the leasing of interconnecting facilities, the committee's report indicate that "lease" is intended to encompass the obtaining of interconnecting services from a common carrier.

A broadcast system is confined to a single program at a given time but can reach a very large audience. A closed-circuit system reaches a limited, selected audience but can distribute multiple simultaneous programs by either microwave, cable, or both. In New York State, for example, interconnecting services are provided by the New York Telephone Co. for a broadcast system operating in New York City (by cable connecting the studio and the transmitter), and for a closed-circuit system in Cortland, N.Y. (by cable connecting the studio and each receiving location on the system). In both instances, according to Mr. Almstead's testimony, there was no feasible alternative to obtaining service from the telephone company. In Cortland, six programs can be transmitted simultaneously—a situation not possible in any practical manner without the use of interconnection by cable. Likewise in Hagerstown, Md., a closed-circuit system interconnected by cable (which is furnished by the Chesapeake & Potomac Telephone Co.) permits six simultaneous programs. If the cable is to be used, obtaining service from a common carrier which has all or a substantial part of such a distribution system already in existence has practical and economic advantages which make it almost a necessity. And the situation is not substantially different in many instances where the connection is to be made by microwave, either for a broadcast or a closed-circuit system.

It is against this background that the Bell System has urged that if Federal funds are to be available for interconnecting purposes, the recipient should be left full freedom of choice either to purchase or lease the necessary facilities. We are not asking to be placed in any position of preference, as Mr. Landry emphasized in his testimony. But we feel that we can provide services in the ETV field which many educators desire, and which have economic and technical advantages. In our view, a question of basic policy is involved. Should the Federal Government, in providing a subsidy for educational television, proceed in a manner which will force the construction of facilities in competition with facilities available from a common carrier, and irrespective of whether such construction either is desirable from the standpoint of the recipient or will provide service comparable in kind and quality to that obtainable from a common carrier? We believe it would be a serious mistake if this question were to be answered in the affirmative.

Furthermore, as the subcommittee is aware, most of the witnesses who appeared spoke in behalf of broadcast ETV, and the witnesses who opposed leasing were representatives of broadcast associations. We are not for or against broadcast ETV as contrasted with closed-circuit ETV. We now render services to 13 broadcast ETV systems and we hope to render services to many more. But our services may be of greater comparative importance to a closed-circuit system. First, interconnecting facilities comprise a greater proportion of the total necessary facilities in a closed-circuit system than in a broadcast system. Second, we can perform functions for a closed-circuit system (i.e., make available our cable distribution network for simultaneous multiple channel transmission) which the educator cannot in a practical way accomplish in any other manner. Consequently we also believe it would be a mistake if the legislation were to favor, however inadvertently, the broadcast method by prohibiting the use of the funds to lease a vital portion of closed-circuit facilities which cannot feasibly be constructed.

This then is our position and the basis for our request that leasing of interconnecting facilities be permitted. Let us consider now the stated objection to leasing. It is of interest that this objection was not based upon any claim that leasing was unnecessary or undesirable. Rather a technical argument was presented—that leasing involved an operating expense; that operating expenses were repetitive and not within the purview of the bills under consideration; and that the funds should be available only for single grants for capital purposes.

We appreciate that the various bills as drafted probably contemplate a single grant, and may well not contemplate that the funds be used for "operating expenses." But "operating expenses" are not defined, and we submit that any intended definition should not encompass the situation we are now considering. All of the bills intend to provide funds for the acquisition of transmission apparatus, which would include interconnecting facilities. We are concerned with two alternative ways of acquiring those interconnecting facilities, by purchase or by lease. In fact because leasing would be alternative to purchasing, we believe that in a broad sense it would be a form of capital expenditure, despite the technical accounting classification into which it might fall. Since lease charges relate to the acquisition of facilities, to making them available for use, they are readily distinguishable from the kinds of operating expenses which we

believe the bills contemplate, i.e., those expenses which are not alternatives to ownership but which are associated with using the ETV facilities after acquisition. Nor does the argument that the Government should avoid charges that are repetitive in nature have any application. Only a single grant need be made, with the lease charges in effect capitalized and included as part of the overall ETV plan. The duration of the lease period could vary, but there would be no necessity that it ever exceed the useful life of similar facilities constructed and owned.

Thus, from the standpoint of the Federal Government, purchase and lease under these circumstances differ only in form. The objective to be obtained in the ETV field is identical in either case. The participation of the Federal Government can be identical. The only difference is the accounting tag derived from the way the recipient chooses to expend the funds to accomplish the same basic purpose. We suggest that this semantic difference hardly seems adequate to justify a purchase requirement.

Accordingly we strongly urge that a limitation upon the use of the funds to one of two essentially alternative ways would be both unwise and unjustified. We respectfully suggest that the objective to be accomplished should be the controlling factor. And if sufficient control exists in the Federal Government to insure that the funds will be used for proper ETV purposes, we feel that the recipient should be free to obtain interconnecting facilities in the manner considered most advantageous. If it is considered desirable, it could be required that justification for either lease or purchase be demonstrated to the satisfaction of the Secretary of Health, Education, and Welfare or the Commissioner of Education, as the case may be. But the choice should be available.

Finally, if for any reason it is felt that the funds cannot be made available for the leasing of interconnecting facilities, then we submit that the funds should not be available for interconnecting facilities at all. Such facilities would then have to be obtained with funds from other sources, and the Federal Government would not in effect be providing an incentive for construction and ownership which might not otherwise be desired. In fact, representatives of the broadcasting associations also objected to leasing on the subsidiary ground that it would result in a diversion of Federal funds that could otherwise be used to establish a maximum number of new broadcast ETV stations. On this basis the broadcast associations should, a fortiori, be opposed to the use of the funds to purchase interconnecting facilities, since purchase could divert a greater proportion of the available moneys than lease.

Mr. MOULDER. Our next witness is Mr. T. E. Tyler of Arkansas. We are glad to have you here. We appreciate having you with us from the great State of Arkansas—the chairman of our committee, one of the most able, distinguished chairmen of the Congress, comes from Arkansas. We are glad to have you here.

STATEMENT OF T. E. TYLER, CHAIRMAN, ARKANSAS STATE COMMITTEE TO STUDY THE EDUCATIONAL POSSIBILITIES OF TELEVISION

Mr. TYLER. Mr. Chairman, a gentleman asked me if I was here on behalf of the Governor. I am appearing before this committee on behalf of the State of Arkansas as chairman of the committee that the Governor, President of Senate, and Speaker of the House appointed to study the possibilities of television education.

We in Arkansas have given recognition to the possibilities in the enrichment of education through television. In 1952, the general assembly created an educational TV study committee with the request that the committee report back to the 1961 general assembly with a complete report.

A copy of that report is furnished you today. It is factual and gives a comprehensive report of the committee findings and recommendations.

The 63d general assembly gave recognition to the committee report (except for the appropriation of sufficient funds) by passing a measure creating an ETV commission with appropriations of \$20,000 for its functions during the years 1961-62.

Having served in the House, I can understand the general assembly's problem as to financing, which I shall briefly relate to you.

The average annual Arkansas teacher's salary in 1955 was \$2,378, and in 1960, \$3,550. It is estimated that in 1961, we will pay an average of \$4,100. Since 1950-51, Arkansas has increased her teacher's salaries by 91.8 percent.

This gives a rating of sixth in the Nation in increased salary for teachers, plus a substantial increase to each of our seven colleges, also, a new University Medical School, and built and financed a system for the teaching of exceptional children at the Arkansas Childrens Colony, thereby spending 50.8 percent of our State's revenue for education. The national average is 40.1 percent.

All of this was brought about by an increase of sales tax from 2 percent to 3 percent and an increase of State income tax.

Records reveal that in 1959, the Arkansas per capita income was \$1,322, whereas the national average is over \$2,000. We had over 91 percent of our school age children (5-17) in school, whereas the national average is 82.7 percent; 23.7 percent of our total population seeks an education, whereas the national average is 20.8 percent; and, for every 1,000 adults, we have 569 school age children, whereas the national average is 470; 97.8 percent attend public schools with only 2.2 percent attending private schools, whereas the national average attending private schools is 13.1 percent.

Within the area of one of the allocated ETV channels, we have approximately 197,000 illiterates. We recognize our great need for educational television.

We recognize, also, that in addition to the many advantages mentioned in our committee report, that ETV would greatly enrich our economy because our State is predominantly agricultural. We are now spending \$2.5 million in agricultural extension services through our university. This could be greatly extended through the use of educational television.

In the report which you have, we stated that ETV is a much needed instructional tool for our classroom teachers to use in enriching and extending classroom instruction. Within the telecast range of the capital city of Little Rock, where channel 2 is allocated, five colleges are located which could not only utilize ETV but provide programing to correlate with the curriculum needs of our classroom teachers. Our university in Fayetteville, Ark., where one station is allocated, would be ideal for a production and programing station not only for live but also video tape programs.

ETV would enable families throughout the Nation in every age and economic bracket to benefit from the abundance of technology harnessed effectively to their desires and needs. They could participate in science, music, and arts in their broadest form. Skills and earning power can be enhanced in the adult field.

Therefore, I urge you to give every consideration to the recommendation of the passage of legislation to provide assistance in the field of educational television.

Arkansas has a high dropout of students on the high school level. The percentage shows 48 percent. Once these people are out of school and start a family, many realize the mistake they have made in discontinuing their formal education. At present there are few places (none in most communities) where they can go for educational opportunities they have missed. Educational television programs of adult education can be of great help in supplying educational opportunities to these people.

The first crop of "war babies" will hit our colleges next fall not only in Arkansas but over the whole of our United States. Most colleges are ill prepared for the great numbers of students who will be clamoring for college training within the years ahead.

In our ETV committee study we found many college groups getting ready for this student avalanche by gearing appropriate phases of its curriculum to the use of educational television. Arkansas would like to call on such aid as this. It is headed in the right direction, as our activities will show.

With help from Federal funds, Arkansas could activate the educational television stations which have been allocated to us. As I have shown in an earlier statement, Arkansas is doing more educationwise in its ability to pay than most other States. It still is next to last in expenditure for education. This is the best example we can cite to show you the necessity for Federal assistance in the matter which is before us today.

Thank you.

I would like to digress from this statement and say this: These facts and figures pointed out were for a purpose. Arkansas is going beyond her means and her income in paying for education today and we have made great progress, but we feel that with educational television, we can do the job that we are not doing, because we are short on teachers. The percentage of our teachers with doctorate degrees is below the national average, which is, as best I remember, about 7 percent compared to what it was 10 years ago.

It is our conviction that with the aid from the Federal Government, which is the only visible source of immediate finance, we can raise sufficient funds to start our station—one at least, if not, two stations—in the near future; although the general assembly did not have the funds to allocate to us at this time.

Mr. MOULDER. Mr. Tyler, we want to express our gratitude to you for making this trip to Washington to give us the benefit of your knowledge that you have gained from your studies on this important problem.

Mr. TYLER. Thank you.

Mr. MOULDER. We hope that we can pass the legislation that you recommend. Again I want to thank you. We appreciate your appearing here.

Mr. TYLER. Thank you.

Mr. MOULDER. Some of the members may want to ask some questions.

Mr. Williams?

Mr. WILLIAMS. No questions.

Mr. MOULDER. Mr. Younger of California.

Mr. YOUNGER. I have no questions because I just joined the other members of the committee. Our chairman is not here. He regrets

that he is not here, but he is tied up in another committee meeting at this time.

Mr. TYLER. Thank you. I will visit with him later. Thank you, sir.

Mr. MOULDER. Mr. Avery.

Mr. AVERY. Mr. Tyler, in view of the hardship you have described facing Arkansas in the field of education, do you feel that with a \$1 million grant, they would be able to meet this additional expense?

Mr. TYLER. Yes, sir. Let me say this: Some of our municipalities, for instance, have agreed to set it up in their budgets. One of them, North Little Rock, for instance, the mayor voluntarily offered to place in his budget \$25,000 last year toward ETV.

We know that some of our schools will help support it.

Gentlemen, I think that the majority of the funds in your States can be raised from your educational people, from your schools, and from your municipalities. They are interested from the standpoint of adult education.

I do not think we have any larger number than some others—there were over 760 in the adult class in the city of Memphis. I believe they have given assistance to that. Some school districts contribute heavily to it.

Our general assembly can find the necessary funds—they are always able to do so—which they have diverted to some other use that they would use for this if we had some matching funds. I think we could go on—in fact, I am sure that we would start a station if the funds were available by contributions from other sources of revenue before the next general assembly, which is 2 years away.

Mr. AVERY. Witnesses have come before the committee in support of this legislation, stating that they have strained every resource at the State level and, "therefore, we have to ask you to assist," and yet here we are possibly going to make an allocation of a million dollars for facilities, that will cost half a million dollars to operate each year. As stated, if the resources have been virtually exhausted at the State level, I have become more apprehensive each day that the State will be able to bear the cost of operating, as the initial cost, it looks to me now, will be a very small percentage of the total cost of operating the station.

Mr. TYLER. Mr. Avery, I might point out that as evidence of what the States have done, you will note in our report we quoted that out of the 43, I believe it is, stations that are in existence today, none of them have ever gone broke or off the air.

Every State that has started one, that felt like they could not financially support it, not only did they start one but some end up with three or four.

That is evidence to me that my State or any other State, once they prove to their people something that is beneficial to them, in the field of education, will accept it, and you will get the necessary funds.

When we tried to raise our teachers' salaries, some of the boys at first did not know if we could. I happened to be a member of the house myself at that time. If you will note, we have doubled our teachers' salaries in Arkansas in the last 5 years.

Mr. AVERY. I know that.

Mr. TYLER. So if you have a determination to do something, and you prove to your people it is worth it, they will follow.

Mr. AVERY. You have proved my point. Probably, the resources could be had at the State level.

Mr. TYLER. Part of it could be but I do not think we can carry the whole load. What I am trying to tell you is this: that you need an origin. And you need encouragement because ETV has proven in many of the States it is difficult to sell to the General Assembly, I was formerly one of those members.

Mr. AVERY. Do you think we can be persuaded more easily than the State legislatures?

Mr. TYLER. Let us say you have more money than we do on the local level.

Mr. AVERY. No, I am not sure of that, when I see the national debt. We have more debt, but I doubt if we have as much money.

Mr. TYLER. What I am attempting to point out is that many times our Nation has to take the lead in economic matters of education et cetera, to lead the States, whether they like it or not. I do not like to get over into that category too far, but sometimes [laughter]—in fact, I will draw a line.

Mr. AVERY. That is a most unusual statement coming from someone from the State of Arkansas.

Mr. TYLER. I said I would draw a line.

Mr. AVERY. Fine. I do not want to belabor the point. I am in favor of ETV. But nobody has made a very strong case to me yet why the Federal Government should take the responsibility. I want to be perfectly frank with you. I am not against educational television, but I have yet to have proven to me what the responsibility is in that field by the Federal Government.

I thank you very much.

Mr. TYLER. Yes, sir, thank you.

Mr. MOULDER. Mr. Moss.

Mr. MOSS. No questions, thank you.

Mr. MOULDER. I might comment on one statement, the Federal Government does control the spectrum of the air and the facilities and licensing and providing for that. That cannot be done otherwise.

Thank you very much.

Mr. TYLER. Thank you.

Mr. WILLIAMS. Mr. Chairman, as you know, I am not a member of this subcommittee. I am a member of the full committee. I appreciate having you here coming from my sister State of Arkansas, just across the river.

I might state that in the field of education, in the State of Mississippi we have found that we are able, through the necessary sacrifices, to educate our children in the State of Mississippi without Federal help.

I would like to ask you this question: Is the State of Arkansas financially able to set up a program of ETV?

Mr. TYLER. At this time, Mr. Williams, no, sir.

Mr. WILLIAMS. Have you presented a specific program to the State legislature?

Mr. TYLER. Yes, sir, part of that report on the desk of the committee is on that subject. We submitted a specific program. They set up a commission and appropriated \$20,000 for the work of that commission beginning July 1 with the hope that the commission could raise some funds between now and the next General Assembly.

We all recognize and it is in the report, as Mr. Avery mentioned a few minutes ago, the expense of operating once you have the station built. I think Arkansas can finance her own ETV stations once they have been established.

We have not asked the Federal Government to help us with our education so far, financially. This is another field. I do not look upon this just strictly as education. I look upon it from the standpoint of adults as well as teachers, and the students.

Mr. WILLIAMS. I would like to ask you—I am sure that you and I share this view—I would like to ask you if there is any constitutional basis for the expenditure of Federal funds in any field of education?

Mr. TYLER. Not being a lawyer, I do not know. I would say this: it looks like they can do just about what they want to so far as the Constitution is concerned. I do not know that is a question now I cannot answer. I would rather not answer it because I am not positive in my answer.

Mr. WILLIAMS. It would, certainly, appear to me that the State of Arkansas, of all States in the Union, would be rather cautious before they requested any line of Federal intervention or participation in their system of education.

Mr. TYLER. Again, I would like to say, Mr. Williams, that I, personally—I do not know how my Governor would feel—but, personally, I cannot connect educational television into our complete educational system. I believe that you have something here that is more of a tool—well, I do not know how to answer, how to get it over to you, but I just do not see that ETV is like a regular education program.

So far as paying teachers and all of that, you can participate, if you wish. No State has to participate.

I understand, if the bill is like I understand it, that Congressman Harris has, or is a cosponsor of, that you are providing funds for an institution which is your educational television—you are providing funds just like you would for your welfare department, or something like that. I do not see that it is getting over into where the Federal Government is telling us how we should teach our people or what we have to do, any more than they have already done.

Mr. WILLIAMS. You recognize, of course, the fact that the Federal Communications Commission regulates it?

Mr. TYLER. That is correct.

Mr. WILLIAMS. And I am certain that you recognize, also, that through the power vested in the FCC, they can dictate the curriculum, the courses to be taught, and the manner in which they are to be taught over the television stations?

Mr. TYLER. Mr. Williams, if you will permit me to say so, some people might call me a radical, as far as these problems are concerned. I was with the Governor all the way down the line, but I just cannot conceive of the Federal Government, through FCC, telling us how we would have to teach ETV and get into our teaching field.

Mr. WILLIAMS. Could you ever conceive of the Federal Government sending armed troops into the State of Arkansas?

Mr. TYLER. No, sir; I do not think that will ever happen again anywhere.

Mr. WILLIAMS. I hope not. But it has happened.

Mr. TYLER. It happened, that is true.

Mr. WILLIAMS. You indicated that the State of Arkansas is not able to finance this program. How much do you anticipate they will need of Federal funds in order to finance it?

Mr. TYLER. Well, if we created all three of the stations at one time, it would cost us close to \$1 million.

Mr. WILLIAMS. Right close to \$1 million?

Mr. TYLER. Yes, sir. I think one—

Mr. WILLIAMS. With \$500,000 participation by the Federal Government?

Mr. TYLER. That is true.

Mr. WILLIAMS. You say the State of Arkansas is not able to raise \$1 million to put in ETV. What is your annual budget for education?

Mr. TYLER. I believe it is \$112 million. I am just roughly guessing. It is close to \$110 million or \$112 million.

Mr. WILLIAMS. The State of Arkansas is unable to add less than 1 percent to their budget in order to take care of ETV, is that your answer?

Mr. TYLER. Well, I say we are overburdened. I think we can find it, Mr. Williams. Again, if we could convince our people, you know.

Mr. WILLIAMS. It is your business to convince your people.

Mr. TYLER. That is true, sir. But I still say that the Federal Government should give assistance for the construction of ETV stations.

Mr. WILLIAMS. How big is the State football stadium?

Mr. TYLER. How big is what?

Mr. WILLIAMS. How big is the football stadium in Fayetteville?

Mr. TYLER. I have not stepped it off lately but it is a pretty good size.

Mr. WILLIAMS. What would you say that stadium cost?

Mr. TYLER. Oh, I have an idea it cost up close to a million dollars.

Mr. WILLIAMS. You have another stadium in Little Rock that was built by the State, do you not?

Mr. TYLER. That was built by a bond issue.

Mr. WILLIAMS. It does seem to me that if the State of Arkansas can build million-dollar stadiums that they can put a million dollars into the field of education without coming to the Federal Government and asking for a handout.

Mr. TYLER. Mr. Williams, I would prefer that we not state it that way, that Arkansas is here before this committee asking for a "handout." We are here merely saying that we believe that for the betterment of education of the Nation, as a whole, that the Federal Government should give assistance, or make provisions, or to provide the funds, should the States want to use them.

As far as the State of Arkansas is concerned I do not think you will find very many times that anyone from our State has come before you asking for a handout of any kind.

We have faced our educational problems which I pointed out in the beginning. We faced it and we did not expect the Federal Government to help us. In fact, our people would not want it.

Mr. WILLIAMS. It seems strange, permit me to make this observation, that the State of Arkansas is less able than the Federal Government to take care of its educational system. On a per capita basis, the debt of the State of Arkansas, I am certain, is much smaller than the per capita indebtedness of the United States.

Do you know what the indebtedness of the State of Arkansas is?

Mr. TYLER. Well, no, I do not. Roughly, I have a general idea, but not more than that.

Mr. WILLIAMS. It seems rather odd to me that you would contend that you cannot persuade your legislature, or rather that the State is not financially able to add less than 1 percent to its budget for education, in order to take care of its need, but would rather come to the Federal Government asking for aid.

Mr. TYLER. We come to the Federal Government endorsing the bills that the committee has before it, saying that we feel they are good and sound and for the betterment of education and for the economy of the Nation as a whole.

The only reason I pointed out Arkansas' financial problems was to prove to this committee that Arkansas is getting along fine and doing all she can to educate her people. I pointed out 91 percent of our school age children are in schools. I mean, our people are going to school; they are trying to obtain an education.

I would not want this committee to take the view that I, personally, as chairman of the committee that the Governor appointed me to, came here saying, "We want you to give us, the State of Arkansas, money."

We are saying that as a nation over the whole, as a nation as a whole, that we feel that it would be good for us in the field of education, and especially, adult education.

Mr. WILLIAMS. You would like to have the Federal money, but you do not want any Federal control?

Mr. TYLER. Most of our appropriations are made by the Federal Government in the assistance for welfare and all of the other agencies that draw from the Federal Government, and you have a certain amount of control over that.

Mr. WILLIAMS. Yes, sir.

Mr. TYLER. Yes. And I believe there might be one or two that might feel that way, but I cannot conceive that they will have the Federal Communications Commission dictate to Arkansas, Florida, anybody else, or any other State, as to what they will teach on educational television if they participated in the program. It might be possible, but I cannot see it.

Mr. MOULDER. I want to call your attention to H.R. 132—and all of the bills pending before the committee provide that:

The Federal Communications Commission is authorized to provide such assistance in carrying out the provisions of this part as may be requested by the Secretary.

And the reference to the Secretary being the Secretary of Health, Education, and Welfare.

And it provides that:

The Secretary is authorized to make such rules and regulations as may be necessary to carry out this part—

but—

Nothing in this part shall be deemed to give the Secretary any control over television broadcasting.

Mr. Moss?

Mr. Moss. Mr. Tyler, I do not want you, as the representative of the great State of Arkansas, which has supplied me with so many able constituents, to be embarrassed because in my State, where we have

a budget of over \$2 billion, we also feel that the grant of Federal funds for education would be most beneficial in establishing a new tool for education. And we feel that it can be had without interference as a result of the grant.

At the moment, because of being preempted by the Federal Government in the allocation of channels in the broadcast spectrums, all of the control which you might experience in relationship with the Federal Government is already in the law. And in the proposed legislation now under consideration by the committee, we have provided specifically:

Nothing in this Act shall be deemed (a) to give the Commissioner of Education any control over television broadcasting.

It does not take away the control or the authority already vested in the FCC, but the control by the Commission of a broadcast facility is no different than in the case of the licensing of a television channel. For education, it would be no different than the licensing of a channel for commercial broadcasting.

It very clearly provides this measure of assistance as a stimulus, so that you can have this important tool in education; education in the broadest possible sense.

I have tremendous respect for my very good friend from Mississippi. I know that he has some very important reservations. I think those reservations should be given every consideration by the committee.

But the fact is that we have, also, in the course of Federal activities preempted some things.

In my State we have imposed heavy burdens in order to provide education, at a time when we needed it. They almost stagger the imagination and certainly taxes the ability of local governments to meet these costs.

We are getting about 19 to 1 in matching funds for the construction of the State highways. I believe that in this bill \$50 million is what we are talking about. That is a sum of money equal to about 10 miles of freeway in an urban area. It is \$50 million here.

I believe we have many areas where freeways would run about \$5 million a mile. In some of the more congested areas, it might exceed that.

I just wanted to express my understanding and my appreciation of the problems that you have. It is difficult. I repeat, it is difficult to get the stimulus, to get the start.

In my own community we have an operating facility at the present time. The State laws do not permit the ownership by school districts. The foundation has started two stations in California. And they are supported entirely by voluntary contributions. But we are doing a minimum job. With this little bit of help, we would be able to do a much better job, much nearer the maximum required to solve some of the problems in education.

Mr. TYLER. Thank you.

Mr. YOUNGER. This conversation that you have just experienced leads me to this subject: Would it not be better, probably less obnoxious to my colleagues and to the people of Arkansas, if we had started calling this a noncommercial station, leaving out the word "education" entirely?

I think that we developed the thought here yesterday in the testimony that we would have avoided a lot of discussion if we had just simply called this a noncommercial station, and the other channels commercial stations. We are dealing with a noncommercial station.

Would that, probably, be more palatable if it were dealt with in that way than if the word "education" was not used?

Mr. TYLER. It might solve one of the problems that I think most of our States have gone through: that of educational television. That is, the teachers' resentment of a machine, she thinks will take her place in the classroom, which is not true. But you might eliminate some of those thoughts if it had not been called educational television to start with.

Now, you have, I believe, 30 some States that already have educational television, of some nature, and I guess they have overcome the resentment and the rest of us can, if we want to.

Mr. YOUNGER. That is all, Mr. Chairman.

Mr. AVERY. The members of the subcommittee have provided most of the testimony here. I would like to insert a small part in the record at this point.

This would be mostly in response to the admonition from my colleague from California, Mr. Moss, about the impact of Federal control on programing itself.

Some of the members of the committee earlier this week heard the new Chairman of the Federal Communications Commission answer a question from me that it was his philosophy that the Federal Communications Commission did have a great responsibility of programing. And that particular comment applied, particularly, to commercial programing.

In reply to a further question, he agreed that the authority of the Department of Health, Education, and Welfare terminated after they had made an administrative allocation of the funds authorized under this bill.

From there on the responsibility of educational television would be directly passed upon by the Federal Communications Commission; that they expect to further inject themselves into the field of television programing.

We have no experience yet as to how far the new Chairman of the Federal Communications Commission would go in the field of attempting to influence television programing, but he says he is moving that way. I think it is most appropriate that we look at the educational television program in that light that it may come very directly under the control and, certainly, under the scrutiny and, ultimately, under the control of the Federal Communications Commission.

Mr. Moss. Will you yield? We have already by law entered into that field requiring that in return for this very valuable right the station be operated in the public interest; that the station provide equal time for the discussion of controversial subjects; that political candidates be accorded equal treatment; that it perform a certain amount of public service broadcasting. I was not at all shocked by the statement of the new Chairman because on our committee we had rather extended hearings on the question of program standards.

And if I might add, I can conceive of a tremendous volume of complaints by those who share my own views, when you turn on the TV set and get westerns and the other things, that they, the stations,

are not fulfilling their obligation to meet the public service needs of the Nation.

Broadcasting standards are not in any way censorship. Censorship, I think, is a specific matter that applies to the specific content. Of course, that I would oppose. I do not think it should be. But I would submit that to give some reasonable assurance that the public interest should be served would not go beyond the intent of the original act of this Congress in setting up standards for the broadcast user.

Mr. WILLIAMS. Let me say this, Mr. Chairman, I hope that my questions of you have not been misconstrued.

Mr. TYLER. I understand.

Mr. WILLIAMS. As a matter of fact, I recognize the great value that this can be to public education. My questions were as to the underlying philosophy which suggests that the Federal Government should participate in the field. Under the Constitution, public education is, primarily, if not exclusively, a responsibility of the State, limited by those specific powers delegated or surrendered to the Federal Government in the Constitution, as you well know.

I would like to ask you as to the underlying philosophy that predicates your suggestion that the Federal Government should provide a stimulus to encourage the State to do that which they are already obligated to do.

Mr. TYLER. Again, Mr. Williams, I would like to restate I am in sympathy with what you say.

Mr. WILLIAMS. There is a suggestion, or an inference that the Federal Government is better able to determine the needs of the State of Arkansas than the legislature of the State of Arkansas, would you say that?

Mr. TYLER. No, I do not think so. I am saying that the Federal Government gets most of our income to the extent of where they could be of assistance in this particular field. I mean nationwide, Mr. Williams.

Mr. WILLIAMS. What has brought about that situation so that the State is coming in asking for money?

Mr. TYLER. Again, I want to emphasize the State of Arkansas—and I think my good Congressman would say this—is not asking for a handout. We are saying that we believe just like in your highway program or anything else, that you have a tool here that can be used for this Nation to the advantage of all of its people, not just Arkansas, but in educational television in its broad field we just get over into the field of adult education. And there is a change in the trends today, our economy is changing, ours is in Arkansas, and I am sure yours is in Mississippi. We have gained quite a bit of industry in Arkansas. And with educational television we could be of assistance to many of our adults in that field, and in the fields of labor.

We have one vocational education school at Pine Bluff that we started 2 or 3 years ago. We appropriated some \$200,000 for that and started it in the field of vocational education.

To me educational television can be of assistance to that institution along with many others.

Mr. WILLIAMS. No question about that.

Mr. TYLER. I did not answer your question. You are getting back to the problem that each State should educate her own people, which

is true. I will go along with you on that. But, I still go back to the theory that this is not actually—well, as the gentleman said a while ago, if we called it noncommercial, maybe it would make it sound a little better, but to me it is a tool that can be used by the educational people.

And, frankly, our educational people, our teachers of education in Arkansas, I think the majority of them, are against educational television.

Mr. WILLIAMS. Regardless of that——

Mr. TYLER. But you still——

Mr. WILLIAMS. It is still the responsibility and obligation exclusively of the State of Arkansas to educate its own.

Mr. TYLER. That is correct. And I am not saying otherwise. We are doing that.

Mr. WILLIAMS. What is the difference in requesting Federal financing of educational television and Federal financing of our public school systems?

Mr. TYLER. I believe, Mr. Williams, if the bill that the Chairman read from a few minutes ago called my attention to some facts in the bill, I believe that you are suggesting the appropriation of a million dollars for each State, and I do not recall how it was phrased in the bill, but is it not something to just give assistance in setting up your educational television stations? The State still has to furnish the teachers and the production and all of that and that expense. You are right back to your providing education through that one medium that maybe the Federal Government participated in originally in setting it up for you.

Mr. WILLIAMS. You indicated that your budget for education was \$112 million.

Mr. TYLER. In the neighborhood of that. I am not positive of that.

Mr. WILLIAMS. Let us use that. It is somewhere in that vicinity. Let us assume that you make maximum use of this bill. Then the State of Arkansas would have to put up what? A million dollars?

Mr. TYLER. A million dollars.

Mr. WILLIAMS. You indicated that you would need only a million dollars, so you would have only to put up \$500,000. If it could put up \$500,000, why can it not put up a million, to put up a million, to finance the whole thing.

Mr. TYLER. I believe in all cases, Mr. Williams, when you make appropriations by the Federal Government, there are times that we cannot take advantage of all of that. In our highway program we do not have enough funds to match all you provide for us there. I do not think just because you appropriate a million dollars for the State of Arkansas, or any other State, that they will try to match it, to spend it all. We are still spending taxpayers' money. If we can get by with \$500,000, fine. I do not know, but it is the estimate which we gave in our report, and the facts and figures reveal that it will cost us around close to a half million or a million dollars to do what we should in the field of educational television, in the State of Arkansas, to cover the State.

Mr. WILLIAMS. If you can raise half a million dollars to match Federal funds, you could, also, raise a million dollars to do it yourself.

Mr. TYLER. Mr. Williams, we probably could. It is a selling point that you have; I mean let us face it. You have got to start somewhere. Like I mentioned earlier, some of our municipalities would participate in the fundraising. You ordinarily do not get that kind of cooperation on educational measures.

Mr. WILLIAMS. Thank you.

Mr. MOULDER. The chairman of our committee, Mr. Harris, is with us now; Mr. Harris.

Mr. HARRIS. Thank you, Mr. Chairman. I wanted to say to a fellow Arkansan, I regret that I was not able to be here throughout your testimony because of the press of other business of this committee.

I have read over your statement and I want to join in commending you, Mr. Tyler, and to extend our welcome to you before this committee in representing the State of Arkansas as chairman of the committee I believe, are you not?

Mr. TYLER. Yes, sir.

Mr. HARRIS. And the Governor of our State as well as the general assembly. I have not had an opportunity to go over the report which you have presented. I will not take the time to ask you any questions, because of fear of repetition, and because our time is limited. I do not know whether the subcommittee knows this or not, but I will have to break up the session in a few minutes for a executive session of the full committee to attend to some matters that we have before the committee.

So, consequently, we will not have any further opportunity to inquire as to the program in Arkansas.

Mr. Williams said something about matching. There are several bills here that would require no matching unless the Secretary would in his discretion, as these bills would authorize, would require the State to put up certain funds. There are some other bills pending that would require some matching of funds. Mr. Roberts' bill, I think, is one that does. That bill was the result of the committee action at the last session of Congress where the committee agreed to compromise so that some kind of legislation would be reported out. We were not satisfied with the bills that passed the Senate the last session.

I said I was not satisfied with the bill reported out of the committee last year because I thought it was a compromise without a record to sustain it.

I have asked the subcommittee to obtain for this record information from all of the States as to their capability to carry out a program and to what extent they would be ready to cooperate. I hope that you have given that information on behalf of our State as to what our State intends to do. I think we are going to direct a letter to each State Governor asking for certain information as to what the States will do if this legislation should be enacted.

I am one of those who feel this is a great natural resource which belongs to the public. No State or educational system within a State can obtain and own and operate any facility that uses any part of the spectrum of the airways without the Federal Government authorizing that State to do it. So, consequently, to start with, because of the use of radio and television frequencies, the Federal Government is a party to the program in that respect. No individual institution, State organization, and otherwise, can use any part of the spectrum unless it is authorized to do so by the Federal Government.

So, consequently, in this particular type of operation, the total responsibility is not that of the States but the Federal Government is a party to it.

Consequently, I would see no particular problem if a program can be worked out that would go a step beyond the function which the Federal Government exercises through the allocation of frequencies, and which would involve assisting the States further in carrying out their own plans for using these valuable resources; and I am for putting these valuable resources to use.

This has been going on since 1950, and many channels reserved for educational television are not in use. Commercial people want to use them. The military wants to use them. And now we are getting into the fields of missiles, rockets, and all kinds of other types of equipment requiring the use of valuable and important radio frequencies. They want the benefit of them. But if the American people are going to get the benefit of these channels for educational television they will have to be utilized. We will have to work out something.

It will be my purpose to see if we cannot do that. Thank you very much.

Mr. MOULDER. The report of your committee will be made a part of the files of the subcommittee.

(The report will be found in the files of the subcommittee, entitled "Report to Hon. Orval E. Faubus, Governor, and Members of the 63d General Assembly, Dated January 9, 1961.")

Mr. MOULDER. Those witnesses who have not been called are asked to return to the hearing room this afternoon at 2:30 o'clock.

Thank you very much, Mr. Taylor.

Mr. HARRIS. Thank you. We have been glad to have you with us.

Mr. TYLER. Thank you.

(Whereupon, at 11:50 a.m., the hearing was recessed, to reconvene at 2:30 p.m.)

AFTERNOON SESSION

Mr. MOULDER. The committee will be in order.

The first witness this afternoon is our colleague from Delaware, the Honorable Harris B. McDowell, Jr. Mr. McDowell, we will be glad to hear from you at this time.

STATEMENT OF HON. HARRIS B. McDOWELL, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF DELAWARE

Mr. McDOWELL. Mr. Chairman and members of the Commerce Committee, I appear here in support of the bills introduced by myself and others to provide a program of matching grants for educational television.

My own bill is H.R. 5536, but I would not insist on its acceptance, and I would be perfectly willing to see any of the fine bills before this committee having similar purposes adopted.

The purpose of my bill and the others before this committee is simply to speed up the establishment of additional educational television stations by assisting States to develop such facilities.

There is very broad support in Delaware for educational television programing on channel 12. This support is mobilized in the Delaware

Educational Television Association and represents the finest elements in our State.

I feel that it is essential that additional educational television stations go on the air and one of my reasons for such a conclusion is that our young people must be exposed to something more challenging than hillbilly and rock 'n' roll music, or an endless expanse of soap operas, or insipid westerns, or the violence of the many private-eye programs.

Our young people are being educated right now by these programs which are being broadcast on the commercial channels and stations. They are learning all the latest devices for "doing people in."

We'll never be able to prevent the Soviet Union from burying us with the kind of programs we're getting on most of the commercial television stations these days.

WHYY in Philadelphia is trying to obtain a license to operate VHF channel 12, now available in the Delaware, New Jersey, and Pennsylvania area, but it is in competition with two commercial stations who are seeking to obtain the channel.

Station WHYY went on the air in 1954 as an FM radio station with good music, discussions, and public affairs programs. In 1957 WHYY began television programs on HHH channel 35 and, at the present time, is currently broadcasting to more than 500 schools in the States of Delaware, New Jersey, and Pennsylvania.

The station produces programs for the National Educational Television and Radio Center and it is one of the half-dozen stations producing adult education programs for national distribution and which are seen by people from coast to coast.

WHYY is a nonprofit organization. Its board of directors consists of representatives from Delaware, New Jersey, and Philadelphia, boards of education, private schools, religious groups; and it is financed by private contributions from business and industry as well as from individuals and it has income from other sources such as special projects and contracts which it has entered into.

Fifty-one major organizations throughout Delaware have endorsed the use of channel 12 by a nonprofit, public service broadcaster. These groups include the Delaware State Education Association, the Catholic Diocese of Wilmington, and the American Association of University Women. Delaware's able Governor, Hon. Elbert N. Carvel, also supports this use of channel 12.

It may come as a surprise to many people, but only about 20 percent of the channels designated by the Federal Communications Commission for educational television stations have been utilized.

Undoubtedly a much higher percentage of educational stations would be operation today if a bill such as those we are considering here today had been adopted a number of years ago.

Federal aid is needed to get these educational television stations going, but once launched they are generally successful, and they also have been successful in another way, in helping the commercial stations establish higher standards and better programs through competition for audience approval.

Educational television programs are making important contributions to education and are being used in many, many schools.

I was very interested in the figures given to the Senate Commerce Committee when it held hearings on S. 205 by Senator Magnuson and

others. Charles H. Boehm, superintendent of public instruction of Pennsylvania, said that:

During the 1959-60 school year, some 124,800 students in public, private, and parochial schools received some portion of their instruction through WQED. Complete courses were offered last year to 1,940 classrooms in 92 school districts, and supplemental subjects were broadcast into 1,626 classrooms in 437 schools. In all, 3,566 classrooms in 10 western Pennsylvania counties were tuned to WQED and its sister station, WQEX. Last year WQED and WQEX provided a total of 1,629 hours of inschool viewers and 4,522 hours of total educational television programming for the community, including adult education and symphony concerts. In 1959 summer courses were offered to 906 students by television, and in 1960, some 1,400 students took summer high school courses.

If any of the bills before this committee were adopted, the States of Delaware, Pennsylvania, and New Jersey could get together and use and jointly share educational television facilities and thus increase the usefulness and heighten the success of the program.

Mr. MOULDER. We appreciate your appearance and testimony, Mr. McDowell.

Mr. McDOWELL. Thank you, Mr. Chairman.

Mr. MOULDER. Miss Martha Gable.

Miss Gable is the director of the division of radio-television education, Philadelphia public schools, representing the American Association of University Women.

We are pleased to have you with us, Miss Gable.

STATEMENT OF MARTHA A. GABLE, DIRECTOR, RADIO-TELEVISION EDUCATION, PHILADELPHIA PUBLIC SCHOOLS, ON BEHALF OF THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN

MISS GABLE. Thank you, sir. It is a privilege.

I am Miss Martha A. Gable, speaking for the American Association of University Women. I am here to represent the association's mass media committee, of which I am a member, and the committee on legislative program.

The AAUW has a membership of approximately 145,000 college graduates organized in 1,470 branches in the 50 States, Guam, and the District of Columbia.

Ever since its inception in 1882, the association has worked to raise educational standards and to extend educational opportunities. For several decades AAUW has urged that the Federal Government assume a greater share of responsibility for the educational progress of the Nation. Last week an AAUW spokesman appeared before another committee of the House of Representatives in support of Federal aid to the public schools. I am today expressing the association's view that Federal assistance in the establishment of educational television facilities as proposed in the several bills now before this committee would make an important and urgently needed contribution to educational progress.

I shall not discuss the critical needs of our schools. The serious problems confronting education have already been presented to the Congress. From my own experience as director of radio and television education for the Philadelphia public schools and as a participant in nationwide experiments on educational television, I am convinced that this medium of instruction can help to meet emergency

needs. Even more important are the lasting contributions that television can make to the improvement of instruction and to the extension of educational opportunities.

In the first place, television provides a facility through which the talents of gifted, unusual teachers may be shared with many. Through the use of television, self-contained classrooms in elementary schools where one teacher teaches all subjects can be enriched through instruction by experts in such highly specialized subjects as language, science, music, art, and health.

At the secondary level, TV makes it possible for small rural high schools to offer college preparatory programs in such subjects as physics and advanced algebra. Even in school systems where there are qualified teachers for all subjects in the curriculum, the televising of lessons and demonstrations by outstanding specialists, with materials unavailable to most classrooms, contribute to both pupils and teachers. The inservice training value for classroom teachers is especially important at present, when both course content and methods of instruction are undergoing rapid change to meet the challenge of the times.

Reports from centers where TV instruction has been used for several years underline the fact that the rich resources of the community, of the country, in fact of the world are brought to the classroom via television. Such lessons also provide each student with a front-row view which frequently is missed by those in the back row in classrooms and on field trips.

To bring these benefits to all schools where they are needed, an increase in the number of noncommercial educational television stations is urgent. It is unrealistic to expect commercial stations, generous as they have been in some areas, to coordinate their program schedules with school schedules to any great extent. My experience, dating back to 1941 when TV was still in the experimental stage, indicates that business considerations severely limit the amount of time that commercial stations can devote to in-school programing.

There is a great need also for a larger proportion of quality programs for out-of-school viewing by children and young people. The results of an extensive study, published last month under the title "Television in the Lives of Our Children," spotlight this need. Another recent study conducted at Stanford University shows that most noncommercial educational stations direct about one-sixth of their program time specifically to children out of school. Furthermore, these programs are produced to meet the needs of the child audience without the pressure of meeting advertiser requirements.

The pressure to reach ever-larger mass audiences also makes it difficult for commercial stations to satisfy the varied tastes of adult viewers. While presenting excellent news and public affairs reports on matters of general concern, and a few outstanding quality programs, commercial broadcasters may meet limited needs to a very limited extent, but noncommercial educational stations can afford to serve segments of the audience, and, therefore, are able to meet educational needs at every level—from elementary reading for illiterates to the history of English literature for college credit. Their daily schedules also offer the adult viewer a wide range of cultural programs—music, talks, panel discussions, such as many commercial stations usually confine to Sunday afternoon.

In short, noncommercial educational television provides a service that is but partially supplied by commercial stations. Both of these services complement each other; in extending this service to additional communities, many program resources are available.

The National Educational Television and Radio Center provides 8 hours of programming each week to ETV stations. Local resources are also plentiful. ETV stations can count on the cooperation of schools, colleges, libraries, museums, performing arts groups, and such voluntary associations as AAUW. These agencies have much to offer, and need the technical facilities in order to extend their services to a broader public.

The fact that only 54 educational stations are now on the air can be traced largely to financial problems rather than lack of interest. It is difficult, in fact almost impossible for many communities to raise the large sums needed for the establishment of transmission facilities. This initial capital requirement presents the major obstacle to the establishment of ETV. This is where financial aid is of crucial importance.

The first educational stations on the air were aided by generous grants for capital outlay from the Fund for Adult Education. This assistance is no longer available as such. There are some areas of the country where the benefits of ETV will never be realized without outside help. Once an ETV station is established, experience shows that citizens recognize the value of its programs and find means of financing its operation. They value it as an important cultural service similar to that of a public library, worthy of public support.

It is especially unfortunate that communities which are remote from the cultural resources of large cities and, therefore, have most to gain from educational television are least able to finance such a service. In the interest of equalizing opportunity, some State departments of public instruction and State universities have created or planned state-wide ETV networks. In some areas interstate and regional cooperation has been initiated.

Federal aid would give tremendous impetus to this development. As the association pointed out in supporting Federal aid to public schools, the tax structure in many States is unable to support educational programs commensurate with current needs. Some of the States which would receive the greatest benefits from educational television facilities are least able to invest in transmission equipment.

The proposed Federal assistance in the procurement of facilities would act as a catalyst, bringing a great potential to reality. Passage of such legislation would signify recognition of the increasingly important role that television will play in education. This farsighted leadership by the Congress would undoubtedly serve to stimulate State and local action.

In the association's view, this impetus to the development of educational television would place in the hands of classroom teachers a powerful, effective tool for the improvement of instruction, and would help to give our children and adult citizens more nearly equal access to our cultural resources.

We wish to express our appreciation of the privilege of appearing before this subcommittee.

Mr. MOULDER. Thank you, Miss Gable.

Congressman Moss of California may have some questions that he may wish to ask you.

No questions?

Mr. Younger of California.

Mr. YOUNGER. One remark that you make in the early part about the fact that television provides the facilities through which the talents of gifted and unusual teachers may be shared with many: do you envision that this will give rise to a new class of teachers who will be much above in pay scale and so forth as compared with the classroom teacher?

Miss GABLE. I don't believe that this is inconsistent, sir, with educational policy now in operation. For instance, in a number of cities they have what they call demonstration schools where other teachers go to observe experienced teachers. By this I mean that is the newly appointed teacher, for instance; the teacher who has possibly less background in her given subject than some others; and so these teachers observe what is called the demonstration teacher, and in some cities, including my own, these demonstration teachers are paid slightly more than the regular classroom teachers. This is understood. And we have placed our television teachers in the category of demonstration teachers.

We do not envision a caste system, if this is implied in your remark, but we do see that this is an opportunity to make it rewarding for our outstanding teachers. And, by the way, let me say these teachers who teach by television cannot be successful unless they are accepted by the teachers who receive the programs.

Mr. YOUNGER. Then in the last of your statement you said that this would place in the hands of the classroom teacher a powerful, effective tool for the improvement of instruction.

Miss GABLE. That is true.

Mr. YOUNGER. How do you correlate those two statements?

Miss GABLE. Yes. Television brings to the classroom enrichment or direct instruction in the same manner as other teaching aids. For instance, many school systems have a library of films. Sometimes they have guest experts. Sometimes they use other kinds of audiovisual aids.

Now the classroom teacher utilizes a teaching tool, and the effectiveness of this teaching tool in some measure is due to the ingenuity and imagination and the skill of the classroom teacher. So, hand in hand with using television as an effective tool, goes also the responsibility of school administrators in education to educate the classroom teacher in the use of audiovisual aids, of which television is one.

Mr. YOUNGER. Then you do not believe that this will decrease the number of teachers but will increase the number of teachers and the extent of instruction.

Miss GABLE. Let me say this, sir: First of all, the first part of your question; I think many of us in education who utilize television instruction utilize it as a service for the improvement of instruction, and we do not contemplate the reduction of the number of teachers.

Now, research has shown in cities where this has been conducted that with youngsters in classes receiving television and youngsters in controlled groups, matching controlled groups, the research has been in favor of the television instruction in many places. So we do not

believe that this is going to do away with teachers. But if we are going to provide a service in the schools which will improve instruction, just like any other service which has improved instruction down through the years, it costs more, and I think each school administrator must evaluate in terms of the services rendered the outlay of money.

Mr. YOUNGER. That is all, Mr. Chairman.

Mr. MOULDER. Miss Gable, we certainly do appreciate your coming to the committee and giving us the benefit of your statement and knowledge on this subject. Thank you very much.

Miss GABLE. Thank you. We appreciate the courtesy, sir.

Mr. MOULDER. Mrs. Elizabeth Campbell.

STATEMENT OF MRS. EDMUND D. CAMPBELL, PRESIDENT, THE GREATER WASHINGTON EDUCATIONAL TELEVISION ASSOCIATION, INC.

Mrs. CAMPBELL. Thank you, Mr. Chairman and members of the committee.

Mr. MOULDER. Mrs. Campbell is president of the Greater Washington Educational Television Association.

Mrs. CAMPBELL. Yes, sir.

I have prepared a statement, but I thought, because of the statements you have had to listen to so patiently, I would simply comment briefly and file my statement with you.

Mr. MOULDER. Yes, the statement will be made—

Mrs. CAMPBELL. A part of the record if possible.

Mr. MOULDER. It will be inserted in the record.

(The statement referred to is as follows:)

TESTIMONY OF MRS. EDMUND D. CAMPBELL, PRESIDENT OF THE GREATER WASHINGTON EDUCATIONAL TELEVISION ASSOCIATION, INC., IN SUPPORT OF BILL H.R. 965

Chairman Harris and members of the committee, I appeared before you in May 1959 in support of H.R. 32. I appear today in support of H.R. 965 with my conviction as to importance of this bill made stronger by the experience of the 2 intervening years.

The problems of education do not decrease. We continue to be bogged down between the increasing number of pupils and the decreasing proportionate number of teachers; the expansion of school budgets and the decrease of local funds to support them; the increasing amount of information on many subjects and the diminishing time available to teachers for the study and mastery of current and essential knowledge.

The proper and judicious use of electronic devices in the classrooms of the United States is as important as the use of modern equipment in our kitchens. The women of the United States have not been released from the kitchen by these devices, but their time there has been shortened so that they can assume the exacting role of wife and mother in a society on wheels. So, the teachers in the schools of the United States must be given an opportunity to learn how to use television as a tool. There is growing awareness of its importance and, in many State and local school systems an enthusiastic desire to explore the many possibilities which this medium has for teaching and learning.

Wherever television facilities are being made available for the use of schools, colleges, cultural institutions, and other educational groups, quality of education in the schools and the community is being raised. Each school subject presented over TV brings up for scrutiny the content, the organization of material, the method of presentation, so that supervisors and teachers are forming new ideas as to how subjects can best be taught. Inequalities between schools and classrooms are compensated for by the sharing of the teachers who are most able to present the subject or the special skill. Music, art, and languages, often taught in only a few schools, by the use of TV are being made a part of the program

offered in every school. The television teacher and the classroom teacher become a team.

By the use of TV parents may visit classrooms without intruding. Teachers, who seldom have an opportunity to observe another teacher, now have this opportunity. All teachers can receive in-service education. Preschool children can have creative entertainment. Adult citizens whose formal education ended before the beginning of this science motivated electronic age can learn some of the facts necessary for an intelligent reading of the news without the embarrassment of displaying their ignorance. The homebound can find stimulation for their minds.

The Greater Washington Educational Television Association, Inc., now has a lease-purchase option on a transmitter building. A grant of \$50,000 from the Old Dominion Foundation in January 1961 will equip a limited facility and make it possible for us to go on the air with channel 26 in September.

This operation will be supported by 17 school systems in Maryland, the District of Columbia, and Virginia, with an enrollment of more than 200,000 elementary-school children. The programs will be planned cooperatively and will be paid for by the schools on the basis of 50 cents per elementary-school child enrolled. Under this arrangement the Washington metropolitan area schools will be provided with a relatively inexpensive laboratory situation in which they can learn how to use **this mass medium, this electronic tool most effectively** in their own schools. A planning meeting on April 11 for the final determination of the cooperative programs to be presented during 1961-62 for in-school viewing, will include representation from each of the 17 school systems that will support the program.

It is inconceivable to me that any school system, faced with the problems of education, would be unwilling to participate in such an operation. A tool must be used to be fully evaluated. No amount of reading about how others use it can qualify the users. Few school systems can afford to undertake such experimentation alone. On the other hand, no school system can afford to be so provincial as to refuse to make it possible for its teachers to be allowed to explore the potential of TV, which, like the potential of all other media, has yet to be adequately measured.

It has been proved by carefully controlled experimentation that the things which can be tested by objective achievement tests can be learned just as well, and, in some instances, better, when taught by TV. What does this tell us about the role of the teacher? If teachers could be released from the preparation for and the performance of some of the teaching tasks which are now a part of the daily schedule in the average large class they would have more time and strength to work with individual pupils and small groups. Inequalities between classrooms and schools, frequently due to varying strengths and weaknesses of teachers, could be largely eliminated.

Perhaps one of the reasons why more young men and women of ability are not entering the teaching profession is that we expect the impossible of our teachers. In a world in which changes are so rapid and overwhelming that last year's theories are this year's facts. In a world in which textbooks on many subjects are out-dated before they can be adopted and purchased. In a world in which developments in communication have brought once-remote places into the public consciousness and into the classrooms. In a world in which it is growing more and more apparent that a truly liberal education includes the ability to speak a second language. In a world in which science has opened up a whole new body of knowledge, much of which is the basis for the technical skills without which industry cannot develop. In a world in which the arts must be taught and appreciated if we are to survive the boredom of the leisure which technology brings. In a world in which a longer life-span is multiplying the number of "senior citizens" whose minds as well as bodies will need to be fed. In a world in which the school population is increasing while the proportionate number of teachers seems to be decreasing. In this world we, the people, are demanding not only more schools but better schools. We are demanding quality education.

John L. Burns, president of the Radio Corp. of America, has said "ETV is the tool for effecting a massive upgrading in the quality of education." And all the experimentation which has been done with TV seems to encourage this belief. Now, who is going to use this tool? Can we afford to let it go by default because we will not make a contribution to the initial cost of the TV facility. The commercial TV stations are being closed to instructional education.

Education must have the facility, the tool, in order that educators may learn how to use it most effectively and most economically.

Many of us are convinced that TV is the least expensive way by which to bring quality and a measure of equality into our schools—now. And, gentlemen, time is running out on us. Our school problems are increasing daily. TV is not the only answer, but it is one answer to many felt needs.

The National Defense Education Act of 1958, in its "Title VII—Communications Media," is making it possible for schools to get the facts "by means of research and experimentation in the development and evaluation of communications." The facts of television, however, cannot be fully explored, the promise of its almost unlimited future is denied to many school systems because there is as yet no plan whereby there can be established enough ETV stations to make this experimentation local yet general. Once an ETV station is on the air the community served by it will keep it on. This is being proven as each new ETV station is licensed.

U.S. education needs a break, the break that TV can give, the break that it is already giving in other countries without local controls.

The Greater Washington Educational Television Association, Inc., was organized in 1953 to bring ETV to Washington. Its membership is broad, as broad as the TV signal which it will originate over channel 26. (See enclosed list of association and board members.) It can serve the schools and the community and will in turn provide an opportunity for its member institutions to develop techniques of presentation and use.

The operation now planned for September 1961 will be limited by the minimum facilities. The station will be on the air 4 hours a day, 5 days a week with programs for the elementary schools and their teachers. The passage of the bill H.R. 965 would enable the Greater Washington Educational Television Association to purchase equipment and facilities for an ETV operation which could provide programs for you, gentlemen, and for your constituents. By means of adequate production facilities, including a mobile unit, the unique resources of this the Capital City of our country can be taken to the other States and to foreign countries. Similarly, with the establishment of the educational TV network which H.R. bill 965 would make possible the vast resources of the other parts of our country and of the world can come to us who are residents of the District of Columbia, Maryland, and Virginia. Weary of entertainment and news interspersed with advertisements we Washington metropolitan area citizens would have the opportunity of tuning our dials to programs planned specifically for education. For the ETV station in the District of Columbia will be owned and operated by the Greater Washington Educational Television Association, Inc., and will serve the schools, colleges, and families of the whole Washington metropolitan area.

Most of the suburban Maryland and Virginia communities are more closely related to a TV station in Washington than they would be to an ETV station using the channels set aside for education in their own States. In some cases it may be necessary for the signal from UHF 26 to be translated or boosted, for the interest in educational programing extends for a radius of 50 miles from Washington. The facilities necessary for this extended coverage must be made available.

The interest in ETV for adults has been kindled by the early morning and weekend educational programing over the commercial channels. Citizens want more of these strictly educational programs at other hours of the day and of the week.

The interest in ETV for the schools is largely due to the highly motivating elementary "Time for Science" series, planned cooperatively by the schools and carried for this, the third year, over WTTG, channel 5.

Because school superintendents have seen how science instruction can be given over television with followup by classroom teachers, they are interested in trying other subjects over TV, especially those subjects where improvement in quality can be achieved by specialization (music, art, languages, including English), by demonstration (geography, science, arithmetic) and by inspiration (outstanding guests, art objects). One of these superintendents, Mr. William R. Schmidt, of Prince Georges County, a member of the board of trustees of the Greater Washington Educational Television Association, is with me today. I have requested time for a statement from him as to what this ETV station can mean to the schools in the Washington metropolitan area and the importance of having a complete facility for our own operation as soon as possible.

We need the capital funds—now for the Washington metropolitan area and for each of the other States. We need the passage of H.R. 965. Thank you, gentlemen. I introduce to you Mr. William R. Schmidt.

THE GREATER WASHINGTON EDUCATIONAL TELEVISION ASSOCIATION, INC.

Officers:

- Vice chairman, board of trustees: Willard M. Kiplinger, chairman of the board, Kiplinger Washington Editors, Inc., 1729 H Street NW.
 President: Mrs. Edmund D. Campbell, vice chairman, Arlington School Board, 2912 North Glebe Road, Arlington, Va.
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 Second vice president: Mrs. Zeldia Horner Kosh (formerly supervisor of speech, radio, television, Arlington schools), 3606 North Woodstock, Arlington, Va.
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Consultants:

- Engineering: John Mullaney, 2000 P Street NW.
 Legal: Norman Jorgensen, Krieger & Jorgensen, 514 Wyatt Building.
 Public relations: Ludwig Caminita, Jr., Thayer Building, Silver Spring, Md.
 Publicity: Mrs. Julia Wecksler, 8313 Woodhaven Boulevard, Bethesda, Md.

Trustees

Universities:

- American University: Stafford Cassell (term expires 1963), vice president, American University, Massachusetts and Nebraska Avenues NW.
 Catholic University of America: Rt. Rev. John J. McClafferty (term expires 1962), assistant to the rector in charge of university development, Catholic University of America.
 Georgetown University: Rev. Daniel E. Power, S.J. (term expires 1963), director of public relations, Georgetown University.
 George Washington University: Mrs. Lillian Brown, director of radio and television, the George Washington University.
 Howard University: Dr. William Stuart Nelson (term expires 1962), vice president, Howard University.
 University of Maryland: Robert J. McCartney (term expires 1963), director of university relations, University of Maryland, College Park, Md.

NOTE.—Provision is made in the bylaws for a seventh trustee who would represent a university or college which might become a member institution.

Cultural institutions:

- *Brookings Institution: James M. Mitchell (term expires 1962), director, conference program on public affairs, 1775 Massachusetts Avenue NW.
 *Library of Congress: Mrs. Elizabeth E. Hamer (term expires 1964), assistant librarian for public affairs, Washington, D.C.
 *National Gallery of Art: Ernest R. Feidler (term expires 1963), administrator, Washington, D.C.
 *Phillips Gallery: Miss Elmira Bier (term expires 1963), assistant to director in charge of music, 1600 21st Street NW.
 *Smithsonian Institution: Paul Oehser (term expires 1964), director of publications, Washington, D.C.
 *Folger Shakespeare Library: Dr. Louis B. Wright, director (term expires 1964), 201 East Capitol Street.
 *Public Libraries, District of Columbia: Harry N. Peterson, director (term expires 1964), 499 Pennsylvania Avenue NW.
 Corcoran Gallery of Art: Herman W. Williams, Jr., director, 17th Street and New York Avenue NW.
 National Symphony Orchestra Association: Carson Fraley, president, Roosevelt Hotel.
 Public Libraries of Montgomery County, 214 East Diamond Avenue, Gaithersburg, Md.

*Trustee representation.

Elementary and secondary schools:

School Boards of Virginia:

Irvin Schmitt (term expires 1963), superintendent of schools, Falls Church, 300 Park Avenue, Falls Church, Va.

Dr. Barnard Joy, chairman, Arlington County School Board, 3111 North Monroe Street, Arlington, Va.

District of Columbia Public Schools: Lawson J. Cantrell, Deputy Superintendent (term expires 1963), Franklin Administration Building, 13th and K Streets NW.

School Boards of Maryland:

William Schmidt (term expires 1962), superintendent of schools, Prince Georges County Board of Education, Upper Marlboro, Md.

Robert R. Morrow, member, Montgomery County School Board, Norwood Road, R.F.D. 1, Silver Spring, Md.

Parochial schools: The Very Reverend Monsignor John S. Spence (term expires 1964), director of education, parochial schools, Archdiocese of Washington, 1721 Rhode Island Avenue.

Independent Schools Association: Barton Biggs (term expires 1963), Landon School, Wilson Lane, Bethesda, Md.

Schools and school systems participating in elementary science and arts series:

Alexandria, Arlington County, Archdiocese of Washington, Berkley Springs, W. Va., Calvert County, Charles County, Charles Town, W. Va., Diocese of

Richmond, Fairfax County, Falls Church, Fort Myer, Fredericksburg,

Independent Schools Association, Loudoun County, Montgomery County,

Prince Georges County, Prince William County, St. Marys County.

Representing the public:

Mrs. Gertrude Broderick (term expires 1964), radio-TV education specialist, U.S. Office of Education, Washington, D.C.

Monroe Bush (term expires 1964), assistant to president, Old Dominion Foundation, 1729 H Street NW.

Ludwig Caminita, Jr. (term expires 1963), Sessions & Caminita (public relations), Thayer Building, Silver Spring, Md.

Mrs. Henry Grattan Doyle (term expires 1964), 5500 33d Street NW. (educator and civic leader), Washington, D.C.

Hon. Arthur S. Flemming (term expires 1964), president, University of Oregon, 7108 Lenhart Drive, Bethesda, Md.

Rabbi Norman Gerstenfeld (term expires 1964), 3935 Macomb Street NW.

Col. West A. Hamilton (term expires 1962), 1353 U Street NW. (member District of Columbia Board of Education).

Willard M. Kiplinger (term expires 1963), 1729 H Street NW.

David Lloyd Kreeger (term expires 1964), senior vice president, Government Employees Insurance Co., Wisconsin and Western Avenues.

Mrs. Donald Larrabee (term expires 1964), 4704 Jamestown Road (Junior League), Westmorland Hills, Washington, D.C.

Harry N. Rosenfield (term expires 1963), vice president, Jewish Community Council of Greater Washington, 1735 DeSales Street NW.

Douglas R. Smith (term expires 1963), president, National Savings & Trust Co., 15th Street and Pennsylvania Avenue NW.

Michael W. Straus (term expires 1964), 2714 Quebec Street NW.

J. C. Turner (term expires 1963), Greater Washington Central Labor Council, AFL-CIO, 1311 L Street NW.

Mrs. Louise S. Walker (term expires 1963), Montgomery County Board of Education, Rockville, Md.

Mrs. CAMPBELL. I would also like to state that Mr. William Schmidt, who is the superintendent of schools of Prince Georges County, had an emergency this morning and could not come. He would like to send a letter to be included in the testimony, if he may. Thank you.

Mr. MOULDER. He can write the letter, and the committee will then—

Mrs. CAMPBELL. He will write the letter and send it in to you.

Mr. MOULDER. Very well.

(The document referred to is as follows:)

TESTIMONY OF WILLIAM S. SCHMIDT, SUPERINTENDENT OF SCHOOLS, BOARD OF EDUCATION OF PRINCE GEORGES COUNTY, MD., APRIL 11, 1961

Chairman Harris and members of the committee, I am William S. Schmidt, superintendent of schools for the Board of Education of Prince Georges County, Md. I appreciate the privilege at this time of submitting to you my statement in support of bill H.R. 965, which would make available Federal aid to the 50 States and the District of Columbia for the acquisition and installation of educational television transmission facilities, including closed circuit television but not including the buildings.

I regret that, because of illness, I was unable to appear before this committee on Thursday, March 23, as scheduled, with Mrs. Edmund D. Campbell, president of the Greater Washington Educational Television Association, Inc., to emphasize to this committee our great interest in and concern for the further development of educational television facilities for the children and youth and adult citizens of our Nation.

In this great period of scientific innovation and change, it is essential that we use to the utmost advantage and to the best advantage all available tools for the instruction of our future citizens and for the enlightenment and education of our senior citizens as well.

Television has since its inception proved to be probably the most effective means of communication. We know its power as a medium of mass communication, its timeliness and its personal impact on the individual.

We, too, have in our use of our educational television programs realized that these very qualities which have made television a success as a commercial venture in the field of mass communication can also work to the advantage of educational programming for the people of our Nation.

You are familiar with the programs "Time for Science" presented to elementary school children in the metropolitan area by the Greater Washington Educational Television Association, Inc. Probably, when GWETA was established here in the metropolitan area, no one fully realized that these educational television programs would have such an important influence on the learning situation both in the classroom and outside the classroom.

It is not possible to have in each and every classroom in this Nation an expert in every field of knowledge to assist the children with their programs of education. It is possible, however, through an educational television program, to bring into the classrooms the great teachers and experts in the many fields of study. Each of us today needs to be and must be quickly and accurately informed on political, social, and educational developments as they affect our daily lives and influence our effectiveness as citizens of this great Nation.

Certainly, it can be seen that we cannot rely upon commercial television to support to the extent necessary for the people of our Nation the type of programming that is fast becoming an essential and truly effective instrument of learning, one that will enhance the cultural and educational background of our citizens. From the few educational programs that have been produced on commercial television, we know the value of this means of learning and of communication. "Continental Classroom" is an excellent example, of course.

Another important factor is to review what has been accomplished in many areas of our country by such independently organized groups as the Greater Washington Educational Television Association.

The educational television stations now on the air, located in cities from coast to coast, serve a total area that includes a population of about 60 million. For the 50 stations on the air in October 1960, capital investments totaled \$24,500,000. Operating budgets totaled \$11,760,000 annually and the trend toward larger operating budgets suggests a growing public awareness of educational television services, as Mrs. Campbell has mentioned to you in her statement.

In support, therefore, of bill H.R. 965, I would like to review these points:

The personal impact of the television medium itself upon the public.

The value of bringing into the classrooms and into the homes, through television, the experts in various fields of knowledge for the benefit and enlightenment of our citizens.

The increasing difficulty in providing experienced, talented, and expert teachers for a constantly rapidly increasing school population.

The innumerable possibilities inherent in television as a tool for instruction.

The lack of interest and support from commercially owned television stations to sponsor educational programing.

The inability, financially perhaps, of commercially owned television networks to provide the type of educational programing that would be truly effective for use in the classroom.

Finally, may I bring to the attention of the committee the fine report of the Joint Council on Educational Television, called Current Developments in Educational Television, December 1960, which outlines the progress of educational television in the United States since 1953. (I believe you have a copy of this report.) The report indicates the great interest throughout the Nation in support of developing educational television, through the number of stations that are now in existence.

We in the field of education realize with you the need for the full development of the talents of our citizens, enriching the sum total of their learning experiences that enable them to be effective and competent individuals. Perhaps, as a tool for learning and for instruction, educational television programing may well be one of our most valuable assets.

Mrs. CAMPBELL. Thank you.

I wanted to make three special points on this, and these have been made several times, but I want to make them again.

First of all, that television is a tool and, in order to learn to use a tool, you must use it; just as a woman would have a hard time learning how to cook if all she had was a cookbook and no stove. So people in education have a very hard time learning how to use this terrific tool when they can't get to it. And up to the present time it has been very difficult for people in education to establish the stations on which they can really do the kind of laboratory experimenting that they need to do.

Now, this is one of the reasons why I feel that this bill is terribly important, because the potentials of this medium cannot really be explored until we have the facilities over which to explore them. The National Defense Education Act set up the category of trying to find out how to use television, but you can't find out how to use television if all you have is a television receiver to receive the commercial programs. We must have the other end, and it seems to me that this bill provides for the other end of that experimentation.

I would like to say also that I can't think of any better way to enlist the cooperation and the support of a community through the use of television by noncommercial, if you wish, agencies. The community then has an opportunity to see what is really being taught in the schools. They have an opportunity to learn some of the things that we people who are adults today feel so ignorant about but hesitate to show our ignorance by going back to school with those who are now going, or we don't have time to take ourselves to the colleges and universities. We need to learn more. So I feel that this is one of the reasons why television facilities should be made available.

Also, television does not stop at State lines. It does not stop at school lines. You get the television signal as far as it can be carried, and we know today with networks it can go even farther.

Therefore, you can't really think in terms of just what a State should provide, and our organization here illustrates that. We are the Greater Washington Educational Television Association. We now have 17 school systems participating with us in this program we started 2 years ago. This is the third year of "A Time for Science" program done 1 day a week over a commercial station. Our

schoolchildren, 50,000 to 60,000 of them, reside in Maryland, Virginia, and the District of Columbia. They are all receiving this program, planned cooperatively.

Here again if the citizens of this area had the use of this facility, they would be citizens who would be living in Washington, D.C., Maryland, and Virginia. They would be receiving the signals there. So this really goes beyond one State.

Now this is not true just here. I come from North Carolina. I know that there are school systems in Virginia that are participating in the North Carolina program. Here again they can get the signal; they are using the program.

So I wanted to call that to your attention.

The second point I want to make is that we are going on the air with a minimum operation, September 1961, if God willing. We have struggled with this for a number of years, 8 years now. We have finally gotten foundation support to put a minimum operation on the air. We have a tower under lease option. We have the participation of 17 school systems who have pledged operational support. But when we go on we will have to go on with a very small operation to serve the elementary schools in this area because we do not have the capital funds as we have not yet been able to raise them. I can't say that it would be impossible. I don't like to say anything is impossible that needs to be done, and this needs to be done. But we will go on the air with a small operation in the Washington metropolitan area where we have resources, gentlemen, that ought to be a part of the education of this whole country. We ought to be and we are needed to be the resource for education of many, many important programs. We need a total operation here, and this total operation we could have and we could maintain.

Now as a person who has been interested in education all my life—I think I was born into it—I think that education needs the facilities of television. I am unwilling to see this tool that is so terrific used only by the commercial people. I feel that it is unfair to our children. And the children in the United States of America do not stay in one place very long to be educated. And you people who live in this Washington metropolitan area know that. I live in Arlington. The children come from all over the United States to be educated in Arlington. The same thing is true in Fairfax, and the same thing is true in Montgomery, Prince Georges. They come here. They come with the background of education that they have had. They have to be educated here. Often they move on.

We are living in a day when children move and families move and we can no longer think in terms of one State.

Thank you very much.

Mr. MOULDER. We certainly thank you very much, Mrs. Campbell. The committee will have to recess. There is a quorum call.

Mr. YOUNGER. I have only one question to ask, and we can dismiss this witness.

Mr. MOULDER. Very well.

Mr. YOUNGER. Do you think this will be helpful to the parents so they can solve the problems with the children?

Mrs. CAMPBELL. Yes, sir. We have examples of that already. We have parents who watch "A Time For Science" program every day,

and they say the one thing the children talk about at night that they can understand is the science program. They will say, "Mom, did you see it this morning?"

I am sure of this.

Mr. YOUNGER. That is all I have.

Mrs. CAMPBELL. Thank you very much.

Mr. MOULDER. We will be in recess for approximately 15 minutes, and then we will hear the other witnesses.

(Short recess.)

Mr. MOULDER. The committee will be in order.

Mr. Jack White. Mr. White is president of the National Educational Television and Radio Center.

STATEMENT OF JOHN F. WHITE, PRESIDENT, THE NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER; ACCOMPANIED BY DAVID STEWART, DIRECTOR

Mr. WHITE. That is correct.

Mr. Chairman and gentlemen, I would first like to introduce my colleague, David Stewart, who is director of our Washington office.

My name is John F. White. I am the president of the National Educational Television and Radio Center, which serves as program network headquarters and leading spokesman for 50 of the 54 non-commercial educational television stations now on the air across the country. As a matter of fact, last Saturday in Mayaguez, P.R., our 55th station came on the air.

We are an independent, nonprofit corporation and have been in operation since 1952. A list of our board of directors, composed of leading educators, prominent businessmen, and other distinguished citizens, is attached to the transcript of this testimony.

From a very small organization serving only four stations 6 years ago, we have constantly moved forward to assist the growing number of educational television broadcasters until we now find ourselves serving an area with a combined population of over 60 million people.

Our major responsibility to this network of noncommercial stations is that of providing 10 hours each week of filmed and videotaped programming of a nature which is beyond the reach of the individual station.

This program service, aimed at aiding the average American to better understand all aspects of the world in which he finds himself, is furnished by NET to its affiliated stations. Some of our programs include Glenn Seaborg and Edward Teller in science, Pablo Casals and the Boston Symphony in music, "The Age of Kings" Shakespearean dramas acquired from the BBC in theater, Martha Graham in the dance, Robert Frost in poetry, plus series in foreign languages, parent education, driver training, and an exciting new daily half-hour experimental program to try to find effective and worthwhile television fare for children. These few examples are cited to indicate the types of fine programs noncommercial stations across the country are offering during out-of-school hours.

Incidentally, we have just made available to the members of this committee a reprint from the recent center publication which graphically outlines some of those programs.

In addition to furnishing this program service, we work to help each station to grow stronger and more significant in its own community, and we also assist communities and institutions in their efforts to activate new noncommercial stations. To these ends our station relations department is constantly visiting cities across the country trying to help with local problems. We hold conferences for station executives twice each year, supply several kinds of ETV publications and training materials, and offer consultation services of many types. As an extension of such service we established on February 1 our own Washington office and absorbed the professional staff of the former Joint Council on Educational Television. This is how David Stewart became a member of our staff.

My point in reviewing the activities of NET is to furnish this committee with some notion of the experience we have had with existing ETV stations and with those who wish to activate new stations. We are in almost daily contact with the 50 independent stations affiliated with us. We know their successes and potentialities. We also know the obstacles they face. It is against such a background that this testimony is submitted.

Why aren't there more ETV stations on the air?

One might say merely that other communities and institutions should follow the lead of those that have already activated stations, for certainly once a community has a station its benefits are immediately apparent.

The answer is not that simple because of two factors—channel allocations and money.

A look at the map and the educational television allocations suggests strongly that unactivated channels may remain so for some time if not given special aid. In most instances where educational reservations do permit an ETV station full access to all television receivers in that community, stations have gone on the air. As of today, every VHF channel assignment in cities of 300,000 population and over has been activated, the single exception being San Antonio where an activating group is at work now and the station is expected on the air shortly.

In many large cities UHF channels are reserved in VHF markets, and it is extremely difficult to obtain local citizen support for a station that the local citizen at home cannot see unless he spends up to \$50 to convert his set to receive that UHF signal. Even in these situations, however, limited funds are often available for operation from schools which benefit from direct services. But the drive for capital funds for construction and equipment lacks response from individual citizens because adult education and cultural programming in out-of-school hours would not be readily available to them. Because of this obstacle, a total of 25 million people in such key cities as New York, Washington, Baltimore, Cleveland, and Los Angeles are denied the full scale service which an educational channel provides.

I would like to depart from my written statement only to point out what you gentlemen may have seen in the paper, and that is that at the present time in New York City a group of six citizens, of which I am a member, have quietly worked for 2 years and just recently have had to make a bid of \$5.5 million in order to buy out a failing commercial station in order that we can obtain for New York City,

which is the most important cultural and communications center of this country, an outlet for this important movement.

We are engaged in that effort now, and we have received very significant support from all elements of the community, from the Board of Regents which have declared partnership with us, to the New York City schools, to the cardinal, to the commercial broadcasters, to the New York Times, the New York Herald Tribune, and the leading elements of the community.

Mr. Moss. Is this a VHF station?

Mr. White. That is a VHF channel. New York City was assigned channel 35 which in an area of 7 V's would mean that we would be walking into a closet, shutting the door, and talking to ourselves.

I would add to the record the stature of the citizens who have worked for this channel because I think it would indicate to the committee the importance that the citizens of New York feel toward obtaining this effort.

The group includes as chairman Mr. Howard Shepherd, recently retired chairman of the board of the First National City Bank; Mr. John D. Rockefeller III; Mr. Devereux Josephs, the retired chairman of the New York Life Insurance Co.; Mr. Arthur Houghton, president of the Steuben Glass; and Mr. George Stoddard, chancellor of New York University.

Now this effort is impossible in other areas than New York City. New York tried before in an effort with a group which had every high intention but no power, and the kind of power necessary to do this in this community and in other communities does not exist except in a New York City. And, therefore, I point it out only to indicate that the citizens do support this venture.

Beyond this, one finds blank spots on the educational TV map, blank spots representing smaller communities and sparsely settled regions of our land where educational and cultural resources are often limited. Here, too, of course, construction dollars are difficult to obtain when they must be raised along with operational dollars. Yet the service that activated ETV stations, sharing the resources of richer educational and cultural centers, could provide for boys and girls in the one-room schools and the adults in isolated areas would be tremendous. The need for this service will be even greater in the years ahead when our schools become more crowded and adequate teaching staffs are even harder to come by.

Interconnections among the stations in a State or region will be necessary if the smaller communities are to receive the invaluable service available from schools, universities, libraries, museums, and other cultural institutions of larger State and regional population centers. The State of Alabama has realized this factor for some time, and remote areas benefit greatly from the three interconnected stations of the Alabama network. In addition, the ETV stations in Boston, Mass., and Durham, N.H., those in Jacksonville and Gainesville, Fla., and those in Sacramento and San Francisco, Calif., already share their resources through live interconnection.

One other important factor in the activation of present ETV stations must also be noted. The early stimulation of ETV was aided immeasurably by large grants from the fund for adult education which gave up to \$150,000 to a community or institution on a matching basis for station activation.

The Ford Foundation, through its various funds, has contributed nearly \$50 million to the establishment of ETV. It made these grants because it believed that television could make an immense contribution to American education at all levels, and that this new educational tool had to be developed.

The fund for adult education is now being dissolved and the Ford Foundation is turning to other areas of interest in the honest belief that its task of launching the movement and proving its effectiveness has been completed. The foundation cannot and should not be expected to undertake the major portion of the task itself. If ultimate success in the use of educational television as a natural resource is to be achieved on a national basis, financing as well as utilization must be shared.

Therefore, the total job can be completed promptly only if the Federal Government, in the public interest, assumes some responsibility for the stimulation of ETV and accepts a share of the financing of its development. The airwaves are a precious natural resource.

The record is clear that a portion of these airwaves is to be used for education and culture. The Federal Government itself has reserved channels for this purpose, envisioning a national noncommercial educational television service. Given the present set of circumstances of allocation, assistance in the construction of these facilities seems essential despite the ability of local communities to finance operations once the stations are on the air.

Of the 54 stations now on the air, approximately 40 percent derive the major portion of their operational dollars from university budgets. Approximately 20 percent receive their basic financing from public school systems. The remaining 40 percent, located for the most part in the larger cities such as Boston, Pittsburgh, Chicago, Minneapolis-St. Paul, New Orleans, St. Louis, San Francisco, are independently organized, nonprofit corporations receiving capital and operating funds through voluntary contributions from individual citizens and business and industry, and additional funds in return for services performed for schools and colleges and universities.

Thus, the total picture is one of diversified control and diversified support. This, in our opinion, is to be desired. Just as public and private schools and colleges in America have served to bolster, challenge, and lead one another, so too, do these stations. This diversity must be preserved. But in the spirit of its GI bills, its research grants to universities, its Morrill Acts, the Federal Government should make money available without Federal control to bring into full and prompt effectiveness this important educational and communications resource.

The overriding consideration in these deliberations seems to me to be the matter of time. I have no doubt that given 20 or 30 years, a generation or two, America will have a comprehensive system of educational television service. The question is, Can we afford to wait that long? Are the times in which we live such that we can afford to ignore the development of this natural resource, this proven tool of education, while another generation grows up?

We have been contacted by dozens of local communities and institutions across this land where Americans recognize the potential of educational television and its importance to all of us. Under the local financial circumstances which prevail, however, they are often

unable to put this great educational instrument to work. If Congress fails to pass this legislation it could well mean that many Americans will be deprived, because they lack cultural and educational resources, for many years of educational television service they desire and need in their elementary and secondary schools, in their colleges, and in their homes.

We earnestly urge the passage of this legislation.

Mr. MOULDER. Mr. Moss?

Mr. MOSS. Mr. White, you represent all of the going, operating educational TV stations?

Mr. WHITE. We represent 51 out of 55.

Mr. MOSS. Fifty-one out of fifty-five.

Mr. WHITE. Yes.

Mr. MOSS. And you have been in contact with quite a number of groups in communities across the Nation who indicate an interest in activating additional channels?

Mr. WHITE. Yes.

Mr. MOSS. Have you any estimate of the number of such channels that might be expected to become activated if this legislation is passed?

Mr. WHITE. If this legislation is passed, sir, I would predict that within the next 5 years there will be no major population regions of this country not served by educational television.

I would go a step further. You will see State and regional cooperation on interconnection and sharing of resources among these stations. You will see some of the cities with more than one channel. As you gentlemen, I believe, know, Pittsburgh, Pa., and Oklahoma City already have two stations each because one channel couldn't do their job. Miami, Fla., Milwaukee, Wis., and several others have applied to the Commission for additional channels. And I would predict, gentlemen, that if this legislation is passed, this Nation of ours will in the next 5 years receive almost total service.

Mr. MOULDER. Mr. Younger?

Mr. YOUNGER. I did not thoroughly understand why you had to pay \$5 million for this station in New York.

Mr. WHITE. Mr. Younger, this is not reserved for educational purposes.

Mr. YOUNGER. What station was reserved?

Mr. WHITE. Channel 35, UHF. No VHF assignment.

Mr. YOUNGER. For New York?

Mr. WHITE. For New York City.

Now, in fairness to the Commission, gentlemen, I must state here that all seven available VHF channels in New York City were taken over before the freeze was put on, before the Commission began to reserve for educational facilities. So the fact that there is not one among the seven was not a decision on their part. It was an act of the times.

On the other hand, if the New York metropolitan region is to be served, it can only be served if you are interested in adult education, if you are interested in what we call alternative programming by a VHF where you can reach the people. Therefore, our problem was to compete among commercial bidders for this channel when it became available, and this we have done, and this we intend to stay with

because it is important to this movement that New York be served.

Mr. YOUNGER. That is all, Mr. Chairman.

Mr. MOULDER. I have this question in my mind:

When you were asked by Mr. Moss if you represent so many stations, your answer was 51. By "representing" just what do you mean? Could you clarify that, as to whether or not all of the educational television stations might come under the control of one central point whereby all of the programs would emanate from, say, your center?

Mr. WHITE. No, absolutely not.

Mr. MOULDER. You have no contractual representation which gives you a monopoly over all of the time—

Mr. WHITE. Oh, no. Each of these 50 stations which are affiliates of the center pay an annual fee of approximately \$10,000. In return for this, they receive 10 hours of programing material each week. Now this is offered to them. They may, and frequently do not, use some elements in that 10 hours, and if they don't want this package, they can take another one out of the library, because, as you well know, program content must be a determination at the local level.

There is owned and operated station in educational television. We are a service agency.

Mr. MOULDER. That is the point I wanted to get clear.

Mr. WHITE. Yes.

I understand that before I arrived here it was suggested that these funds might be made available for the leasing of lines, and I think that on behalf of our group I must say that our attitude would be that the leasing of equipment would be an operational expense, not a capital expense, and this bill, as we favor it, is limited to capital improvement.

Mr. MOULDER. In other words, as it is now it would be up to the local station as to whether or not they wanted—

Mr. WHITE. Whether they want a lease line; that is their option. They carry on a local operating budget. I was manager of the Pittsburgh stations before I moved to the center, and we did lease lines, but this was our local decision and we paid the bill. And we view this bill as one which provides communities the opportunity to create facilities and the kind of proposals here, it seems to me to be a later decision made at the local level.

Mr. MOULDER. Mr. Moss?

Mr. Moss. Was the commercial channel acquired by the New York group being operated by the original licensee?

Mr. WHITE. No. It had failed once before, sir, and it was in trouble again. Their statement, which was published in the paper, indicated they were losing money and they were open for offers.

I should point out it has not yet been acquired. We are currently in competition with two other bidders for this channel. We have not won the battle yet.

Mr. Moss. Do you know what it sold for the last time it changed hands?

Mr. WHITE. The last time, which was 2½ to 3 years ago, this channel and FM and AM radio stations sold for \$3.5 million.

Mr. MOSS. It was an AM and FM affiliate?

Mr. WHITE. Radio in addition to the television.

Mr. MOSS. Yes.

Mr. WHITE. Yes.

Mr. MOSS. And the total package sold for \$3.5 million?

Mr. WHITE. For \$3.5 million.

Mr. MOSS. I assume then that the AM and FM are paying concerns at the moment.

Mr. WHITE. That is right. They are not in the package which is being bid upon at the moment.

Mr. MOSS. Exclusively the—

Mr. WHITE. The television channel.

Mr. MOSS. The VHF channel.

Mr. WHITE. Yes, sir.

Mr. MOSS. I assume it does not have a network affiliation.

Mr. WHITE. It does not, sir.

If we are successful, if I could add, if we are successful, it is our intent to ask the FCC to place the asterisks next to it and make it an educational noncommercial channel. We are not seeking to operate this as a commercial channel. We will ask for conversion. And to operate it as a regional station serving New York, that section of New Jersey and that section of Connecticut.

Mr. MOULDER. Thank you very much, Mr. White.

Mr. WHITE. You are welcome, sir.

Mr. MOULDER. Mr. Francis Almstead. Mr. Almstead is director of the division of educational communications for the New York State Education Department.

STATEMENT OF FRANCIS E. ALMSTEAD, DIRECTOR, DIVISION OF EDUCATIONAL COMMUNICATIONS, NEW YORK STATE DEPARTMENT OF EDUCATION

Mr. ALMSTEAD. My name is Francis E. Almstead. I am a member of the New York State Education Department. I am director of the division of educational communications which is responsible for the statewide supervision and development of television, radio, and audiovisual aids.

I want to concur and support the statements given by other witnesses concerning the importance and need for the television medium in the field of education. In my judgment, all forms of the medium are important, practical, and useful.

Television is a transmission belt for carrying ideas from sender to receiver—teacher to viewer. Essentially, the transmission may be over the air—broadcast transmission or over a controlled system—cable or microwave transmission.

In carrying out the wide variety of objectives in education, the educator must call upon both types of transmission systems. It is not a case that one system is better than the other—it is not an "either or" situation—educators must rely on engineers to design the system appropriate to meet the specific objectives to be achieved.

We in New York State have had experience in the use of both types. Since 1956 the legislators have made available to the State education department money for the development of techniques for using television in education and for the operation of certain pilot

and experimental projects. Our appropriation has been in the order of \$500,000 to \$600,000 per year. This coupled with local expenditures throughout the State has amounted to at least a million dollars per year.

Broadcast transmission has a fundamental place in the spectrum of use—there can be no doubt it will give educators a means of communicating with potential learners wherever they are within a viewing area. We can point to many successful undertakings throughout the Nation using educational or commercial stations. In New York we employ both. There is one educational station on the air and at least two others under construction.

The three board-of-regents-chartered educational television councils are using free time on commercial stations for educational and cultural programs.

The education department has been engaged in what may be the largest in-school broadcasting operation in the Nation. The regents educational television project, now in its third year, leases time on WPIX, channel 11 in New York City.

Department personnel, college professors, and public school teachers join in producing in-school lessons, college level courses, teacher training courses, and adult interest telecasts. We are on the air during the school year 5 days a week, 5 hours a day. We make kinescope recordings of the in-school lessons available to television councils and public schools throughout the State.

To accomplish the recording, the department leases from the New York Telephone Co. a video cable between the WPIX studio and the recording facilities. In our situation there was no other practical way to achieve our recording goal.

The in-school telecasts from the regents educational television project have a potential viewing audience of 2 million public school pupils. It is perfectly clear, as indicated by our experience with broadcast transmission, that all objectives in education are not equally well achieved.

Therefore, other forms become equally important, such as: small portable camera systems, cable transmission (closed circuit) systems joining classrooms within a building or in several buildings and micro-link systems.

The other pilot project sponsored by the State education department is a large cable transmission (closed circuit) installation in Cortland County. The cable connects schools in three school districts: Cities of Cortland, Truxton, and Virgil. The State leases 25 miles of video cable facilities and telephone line facilities used for pupil to teacher communication from the New York Telephone Co.

When we planned the project in 1957, we investigated the feasibility of using broadcast transmission, microlink systems and video cable. Further we explored the economic difference between owning the connecting facilities and leasing the facilities from a common carrier company.

First, we decided to use cable because it offered the following advantages:

1. Guarantees a consistently high quality signal at each building.
2. Requires no license of any kind for operation.
3. Makes the equivalent of six broadcast channels available.

4. Gives an opportunity for experimentation on band or channel width leading to an improvement in the definition of televised pictures.

Second, we chose to lease cable facilities from the New York Telephone Co. This decision was made after careful thought was given to construction costs, management, and cost of maintaining daily operation. We soon discovered that the department did not have adequate staff and technical competence for such an undertaking.

We also realized that leasing of facilities would relieve the project and State of not only the construction problems, right-of-way problems and engineering, but also the problems associated with daily operation.

Our decisions to use cable and to lease from a common carrier company were wise indeed. Our choices eliminated the hazards of technical failures due to inexperienced or inadequate technical staff.

At the beginning of the project, school personnel wondered how they could possibly make full use of one channel. But as they gained experience and learned to use television in their classrooms, they demanded more channels. I am sure that within the next year or two they will be using all six channels available on the cable.

The experience of the use of a similar ETV system at Hagerstown, Md., supports my belief. It is important to observe at this point that demands of this magnitude by school districts for television precludes the sole use of broadcast transmission—there just are not enough air channels available in such a limited area. Broadcast channels should be used to serve other interests in education.

In New York State there is a great deal of interest in television by faculties in both schools and colleges. The Heald Commission appointed by the commissioner of education and the Governor of the State has recommended that a study be undertaken to determine what statewide television facilities are required to serve higher education. The Department expects to begin this study after April. No doubt the results of this study will demonstrate the need for a variety of television facilities—broadcast, closed circuit, production centers, video distribution, and interconnection of broadcasting stations.

There are many public school districts actively planning television facilities. The Department has requested the State legislature for funds to be allocated for State aid for the growth of television in public schools. Currently there are several districts with their own operating systems. Some of these use community antenna system cables to connect their several schools.

There are about 15 districts ready if some financial help becomes available to set up their own systems either within a single building or to cover all schools in their districts. There is one district involved in constructing its own low power broadcast system.

This is to give you an order of magnitude of interest and to indicate the variety of interest in New York State. I have tried to demonstrate that broadcast is important and is needed. I have also tried to impress upon you my conviction that school systems and colleges in New York State and elsewhere will require facilities other than broadcast. The magnitude of such facilities because of their very nature may be in greater demand than broadcast. This is not to say that one is more important than the other.

In conclusion then, I should like to urge your subcommittee to consider most thoughtfully the advisability of permitting any Federal money that may be provided to be used for leasing common carrier facilities for interconnection purposes. If your bill denies this choice, the use and development of television—especially in schools and colleges—will be greatly reduced and handicapped. In my judgment and in our experience in New York State, leased interconnection facilities—that is, microlinks and cable—are just as essential as purchased equipment.

Mr. MOULDER. Mr. MOSS.

Mr. MOSS. I am going to express my personal concern that it was not the essential intent of the legislation before this committee, as I understood it originally, to assist meeting operational expenses or costs of maintenance expense. And if it were, we may, indeed, be opening up Pandora's box.

My understanding is that this committee considered some 3 years ago the question of stimulating through some means the activation of the reserved channels. We were concerned, primarily, with getting those channels on the air and operating in a manner for the benefit of the public.

There is no question that within any school system there are very pertinent and pressing problems, which might be more appropriately considered by the Committee on Education and Labor for some form of Federal assistance in connection with the overall needs of the school systems.

But for this committee at this time to go into underwriting recurring costs, I think, would be a major mistake, and would go beyond the intent or the desires of a number of us who have introduced bills in the hope that we could stimulate the activation of the reserved broadcast channels.

That is all.

Mr. ALMSTEAD. I am thoroughly in accord, that we should not pay for teachers' salaries and for personnel operating facilities, but I do believe that in some cases the interconnection is just as important as the equipment itself because, without that interconnection, the efficient operation of that which was purchased will be impaired.

Mr. MOSS. I have no doubt of that. But is it not a recurring cost to lease a facility on an annual basis or a monthly basis? And expenses of maintaining and operating your system are recurring costs.

Mr. ALMSTEAD. You are right; that it is a recurring cost. But I think it can be demonstrated that over a sufficient period of time there will be very little difference between the purchase of the equipment and its obsolescence, and the cost of leasing it.

Mr. MOSS. I would agree with you, but where do we draw the line on the underwriting of those recurring costs? If we want to look at that area of the problem, for a community, then there is really no logical line that we might have between one item of expense and another. The same logical argument could be made that if you allow this there is as much equity in allowing the next item. Where would we draw the line in meeting this problem from what is envisioned as a single shot approach of Federal aid to stimulate the activation of the reserved channels?

Mr. ALMSTEAD. I respect your opinion. But I would like to say that—

Mr. MOSS. That is not my opinion.

Mr. ALMSTEAD. I would like to say that a situation such as you are operating with great success at Cortland and the system that is operating with great success at Hagerstown, Md., would, probably, not have gotten off the ground, so to speak, without leased facilities. And—

Mr. MOSS. If you can meet the cost of a leased facility—and we are going beyond the interconnection, we will say of two operational stations—we are getting into a different type of system actually.

Mr. ALMSTEAD. That is right.

Mr. MOSS. If the sponsors of the system feel that they can undertake and continue that cost, they can do it without any stimulation from the Federal funds, because they have to face squarely the fact that they are going to have to meet that each and every month. I do not think we will have acquired anything of a permanent nature to enhance the possibilities of further utilizing the reserved channels which are primarily what we are concerned with.

Mr. ALMSTEAD. May I make one more observation?

Mr. MOSS. Certainly.

Mr. ALMSTEAD. Certainly, the system at Cortland would not have gotten off the ground if the educational department had not been able to step in with some funds for stimulation. We are in the process now of turning the system over to the Cortland County schools for operation. In other words, it is true, our stimulation is very much like the stimulation which you would develop here with your funds. As a result, these schools have gotten started and will have television of their own. Without that stimulation, they would not have had it.

Mr. MOSS. Would we not stimulate just a little more and a little better if we, also, provided a first year operational budget?

Mr. ALMSTEAD. Well, I believe, there should be matching. I think there should be matching. For these sums, the localities should be responsible.

Mr. MOSS. In my judgment, this is too broad, and if it is too broad, it will be an interesting topic for discussion but hardly likely to achieve any success in legislation.

Mr. MOULDER. Mr. Younger.

Mr. YOUNGER. Just one question. On page 2 of your statement, line 5, you say: "In New York we employ both."

Mr. ALMSTEAD. New York State, sir.

Mr. YOUNGER. Do you mean the city?

Mr. ALMSTEAD. No, the State. That could apply—no, it has to be New York State.

Mr. YOUNGER. I was wondering about that. We had testimony there was no station in New York City.

Mr. ALMSTEAD. The education department—the board of regents has channel 25 in New York, but because it is a UHF station, in the wisdom of the board of regents, it has been against activating it.

Mr. YOUNGER. That is all.

Mr. MOULDER. Thank you very much.

Mr. ALMSTEAD. Thank you.

Mr. MOULDER. The next witness that will be heard by the committee is Mr. William G. Harley, president of the National Association of Educational Broadcasters, who is accompanied by Mr. Vernon Bronson.

We are pleased to have you here, Mr. Harley.

STATEMENTS OF WILLIAM G. HARLEY, PRESIDENT, NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS; AND VERNON BRONSON, DIRECTOR OF SURVEY OF EDUCATIONAL NEEDS FOR TELEVISION SPECTRUM SPACE

Mr. HARLEY. Thank you. My appearance is simply to introduce two letters, a statement, and an expert witness.

The letters are addressed to me from a man who is now the President of the United States, and from a former Vice President and candidate for the office of President.

In preparation for our national convention in October last year, I solicited comments from both candidates concerning their views on Federal aid to educational television development. Both sent affirmative statements which reflected need for the type of legislation being considered here. And I offer them in full for the record; but at this time, with your permission, Mr. Chairman, I would like to read just briefly pertinent paragraphs from both replies.

From Mr. Kennedy's letter:

Today our schools and colleges face a crisis of appalling proportions in terms of deficits in dollars, teachers, classrooms, and services. American progress and even our national survival is directly dependent on what we as a nation do now about the shameful weaknesses and deficiencies of our educational system.

We must seize all means at hand to help education cope with these dire shortages and improve both the quality and quantity of educational opportunities available to our citizens at all levels, both in and out of school. * * *

Despite the heroic efforts of people such as yourselves to establish educational television stations across the country, only a small part of the total potential has been achieved. To date, only 50 of the 256 channels reserved for education have been activated and two-thirds of the population still has no access to educational television service. This is not for lack of zeal or interest on the part of educators or State or local officials, but, primarily, for lack of funds for the initial capital investment required for construction of stations.

Since education is a matter of national concern, the Federal Government should assist in expediting and accelerating the use of television, as a tested aid to education in the schools and colleges of the Nation and as a means of meeting the needs of adult education. A useful start has already been made in this direction by the Government through the National Defense Education Act; more should be done to assist the development of educational television for the benefit of all our people. I pledge you that I will back actively suitable legislation aimed at this objective in the next session of the Congress and will urge its support by my Democratic colleagues.

Now, here is a portion of a letter from the then Vice President:

The headlines almost daily remind us of the challenges which our children and our children's children face in the years ahead. To meet these challenges the continued strengthening of our educational system is of crucial importance. We now have in this country the resources and the technical means of granting to every citizen of our country his birthright—the right to adequate education. All tested means of aiding and improving instruction must be given support and encouragement. We must also be ingenious in using radio and television. They are proved instructional tools which have an immense potential for the benefit of American education and the welfare of our country. * * *

I pledge my cooperation in the development of a national educational television policy to help realize the goal of the fullest possible educational opportunity for every American. This policy should have set forth the basic objectives of the Nation in the field of educational television and it should define respective roles of the Federal and other levels of government, broadcasters, educational institutions, and others concerned. Within its assigned role, Federal assistance in the stimulation of the use of television as an aid to education will have my sympathy and support.

I submit, gentlemen, that statements from the spokesmen of both the major political parties in these letters indicate bipartisan support for Federal assistance in fostering the full development of and establishment for the public benefit which is recommended by leaders of both parties as a vital force of the strengthening of our American education and of the survival of our Nation.

At this point, I would like to just comment on the recent testimony to say that our association firmly subscribes to the positions which Congressman Moss so ably stated: that we think that in consideration of this bill, we must preserve the distinction between the use of Federal funds for capital outlay and for operating costs. Once you get over into the other side of the ledger, as he suggested, you open up a Pandora's box, and when you begin providing funds for leasing lines, the question arises, why you should not, also, use the same funds for leasing property, for hiring writers, and so on, and you get very close to the dangerous area of involving the Federal Government directly in the operation of the station and providing recurrent appropriations for a recurring item in the budget.

So we would like to state that our position is that we feel that the distinction between Federal funds for physical facilities should be preserved as opposed to using these funds for operating costs.

At this point I would like to submit for the record the association's prepared statement which is largely directed at questions which have been raised in the hearing relating to the State of interest and readiness of the several States for making use of Federal funds for educational television, should these funds become available.

Since this is a rather lengthy report, I propose to introduce the man responsible for preparing this portion of the statement, and have him talk to the report and respond to questions.

This is Mr. Vernon Bronson, who is the founder and former manager of station WHPS, in Miami, a veteran public school administrator. For the past 3 months Mr. Bronson has been in charge of a survey being conducted by the National Association of Educational Broadcasters, under a contract with the U.S. Office of Education, to survey the long-range needs of education for frequencies for television broadcasting.

And since, as a starting point, it was necessary to compile up-to-date information on the status of the art in each of the States, we have derived a good deal of information about ETV development in each State and the readiness of the States to utilize funds for educational television, should such funds be provided.

This compilation is by no means full and complete, or definitive, but is, at least, a considerable start toward answering the question that Chairman Harris has raised about the readiness of the States to take advantage of this legislation. We will be working closely with the Joint Council on Educational Broadcasting, of which NAEB is a constituent member, in helping to develop this information fully within the time remaining before the record of the hearings is closed.

In the meantime, however, we felt this committee would be interested in this preliminary inventory, and since Mr. Bronson is in charge of the survey which produced this information, he is uniquely qualified to discuss these findings.

Mr. Bronson.

Mr. BRONSON. Thank you, Mr. Harley.

Mr. Chairman and members of the committee, we have been particularly concerned with the suggestions which seem to come up from time to time that, perhaps, if these funds were made available that they might not be used by the States, that there might not be a readiness within the States, and by a further suggestion there might not be a great deal of urgency for these funds.

This report which we have prepared, and Mr. Harley is submitting for the record here, is a sort of brief of some of the major findings which we have come upon in the survey throughout the country during the past 3 months, and it, of course, indicates that there is tremendous readiness in the country. I think that if I may just read a few passages here, in the introduction to the roster of States, the NAEB study indicates that the passage of legislation lending assistance to educational television construction would immediately expedite this enormous amount of bogged down development and create an additional surge toward complete and effective use of all of the reserved channels.

The schools, colleges, and communities, in every State, are ready and eager to make effective use of these resources, for formal and informal education, as soon as they can be financed.

I would like to make a parenthetical statement there that it occurred to me during some of the previous testimony—some this morning, that is—as to where this information might be compiled in the States. They think, "Is this State ready?" Or, "Is that State ready?" Or, "Are the States ready?" They spoke of contacting the Governor of the State, or somebody else in the State.

There is one thing that we have found, that I think my colleagues will substantiate: There is no such thing as some particular source of information in the State that can indicate whether or not that State is ready to take advantage of these resources or of the funds for the resources.

You have your private colleges and your State colleges which operate differently from your public schools. You have your community areas. In almost every instance, you have a different kind of an impetus in each different State.

The way that our 53, 54 stations, 55 with Puerto Rico now, have been financed, indicates the unique patterns that exist in all of the different localities. Therefore, in order to give the committee an intelligent answer as to whether or not the States are ready, we have to consider what has been done in the States, not only by the Governor—Governors change—not only by the legislatures, because legislatures change, and have changed, and their positions have changed in the past 8 years—but by the communities themselves, by the various forces which go to make up the communities, by the various areas of education; that is, the private school system, the private college system, the State system of higher education, even a sort of a separate system which is developing, as I think Mr. Moss knows in California, and in my State of Florida, the junior college system which is a little bit separate from the other part. And then your system of public education, your kindergarten through the 12th grade.

So all of these forces bear upon this readiness.

In some areas the impetus has been from one direction, and in other areas the emphasis has been from another direction, but it is the total

emphasis as to readiness that I think this committee should be concerned with, and that we recognized in determining and reporting whether or not there is a readiness in the State.

Legislative action, administrative order, that is where the Governor has without legislative action set up special committees for educational television, private philanthropy and community cooperation have all contributed to the preparation that now awaits fulfillment through congressional action. This is significant.

Forty-five States have now actively participated in and supported the development of educational television. And 25 States have formed State educational television commissions by direction of their respective legislatures. In all of the States in some degree or other the public schools, the institutions of higher learning, and the communities have all been involved.

We have a rollcall of States here. We have a brief summary of these 45 States as to what has been done. I will not take up your time unless you desire, to go over all of these now, but they are here. They certainly indicate, I think, in each instance whether or not there has been legislative action, whether there has been administrative interest, whether there has been community interest, whether there has been development, and whether public money has been expended and private money has been expended, and whether the groundwork has been laid for further development.

One thing that occurs at this particular point that has bothered us and has caused some, I think, misunderstanding throughout the country, that if a community or a State has developed an educational television station, they say, "Well they have an educational television station in Nebraska, so what do they need with another educational television station? They do not need any money. They have a station."

But, of course, this is only the beginning of the development. It is true, taking one State at random, Nebraska has an educational television station, a very fine station. It serves not only its university interests and public school interests in the area of the capital and in Omaha, but they also have a State plan that they have just developed, and in order to serve the immediate needs of that State they need five more VHF channels and they have asked the FCC to reserve those channels for education. They are going to have to be developed, but this is just a beginning of the need that we have discovered that would be evidenced in Nebraska.

As soon as these five are develop, they are going to develop other needs and they will have the resources by that time to do it.

We found in my own State, in Florida, that we already need additional stations. We probably have more stations developed there than any other State. I guess we do. We have five VHF stations on the air; two of them are interconnected and two of the production centers are interconnected, and we have a State network that is fed by cable, but at the same time we find that right now we could use from three to four additional channels in Florida.

Preparations are being made to institute those channels. We have already made application for one in the city of Miami. I am sure there will be more needed there.

I has not been easy; this has not been a State development. This is, I think, in Florida, one tremendous example of the kind of sources you

have to go to for information as to what a State can do or may be able to do or may be able to take advantage of.

With the five developed stations in Florida today which were developed over a period of 8 years and through a great deal of effort on the part of a great deal of people, we had all sorts of financing. We had all sorts of efforts. We had public support, we had community support, we had county support, we had school support, philanthropic support, foundation support, cooperation from the legislature after a certain length of time. But one thing developed another and it was only through the beginnings that we had here, there, and the other place that we were able to make this development.

But we still, with the recognition of all of the needs that we have there, do not have the resources to continue the kind of capital investment immediately that we need immediately.

I am sure that exactly what was said here before—I think Mr. White said it, and I am in thorough accord with him—that if given time enough, that the United States, and all of the States, will develop an educational television system that will tend to serve the large educational needs of our communities, and for continuing education as well as preparatory education, but I do not believe we can wait for that. And to my mind, and I think to the minds of my associates, this is the crux of this particular legislation: whether or not we are going to stimulate now the development of these undeveloped channels as originally stimulated by the Fund for Adult Education some 8 years ago.

The second question that comes up, of course, is a little continuation perhaps of this same idea of whether or not there would be any serious consequence if there was undue delay or if this legislation did not occur at this time.

We have indicated in here—maybe I should read you a few paragraphs from this report:

Most of the States and many of the localities throughout the country have done a great deal of preliminary planning for ETV looking toward the time when Federal assistance would be made available.

Having traveled throughout this country and in all sorts of communities and most of the States where they do not have television, as well as those which do have some developed, I find there has been a great deal of hope pinned on this idea that Federal assistance will be forthcoming.

In many areas local effort has been kept alive for the past 2 years by the promise of ETV legislation. Much preliminary legislative support in the States, and this is true, and promises of ETV operating support, have been based upon the hopes of Federal assistance. If congressional action fails again at this time, or were to be postponed through another Congress, much of the work and planning of the past 2 years would be lost. The educational and community interests working for ETV would lose much of their legislative support to other programs.

This is because there are, as you all know, many programs in the States demanding support.

This would be especially difficult to overcome in the States which have biennial legislatures. The time, energy, and local money lost to the development of ETV would be incalculable if there were to be any great delay in Federal assistance.

There are 28 States now where substantial investments have already been made in ETV. These States are all ready to go ahead because they have some background on which to base their continuing efforts. Of these 28 States, there are 7 Western States, 8 Midwestern States, 4 Eastern States, and 9 Southern States.

But in all of these States further development is now largely dependent on Federal assistance, and in many instances a prolonged delay would seriously retard program development and cooperative school utilization.

This is not a thing that can occur overnight. Mrs. Campbell, I think, testified somewhat about that a little earlier.

There are 21 localities which have applied for ETV station construction permits or which have asked for specific channels to be reserved preliminarily to applying, and in most instances the action was based upon the hopes of the proposed legislation.

Postponement at this point would seriously jeopardize these developments.

There are 26 States which either have State or local planning for new ETV development which is contingent upon Federal assistance. In many of these, planning has advanced to a critical stage and prolonged delay would be disastrous and in any event would retard beginning development through another biennium.

A listing of some of those States will better illustrate the situation.

Kansas: This State has a State plan now just developed through the past 2 years, a much needed ETV facility to provide for 85 percent of its population. The legislature, which is now in session, apparently can see its way clear to provide only one-sixth of the development money needed in the hope that Federal assistance will add enough to this to make an encouraging start. Delay now will jeopardize 2 years' work, and may cause the loss of several of the proposed channels to commercial interests. One such channel which is included in the State plan is already slipping away from the State schools because of the pressure from outside interests.

And so we go through a number of these States in which the situation is critical, which I will not take up your time with now, but we have some of the advanced States—Florida, Georgia, and Alabama—all have advanced State plans and advanced State developments, large developments, but every one of these States needs additional assistance to preserve the gains they have made and to meet their increasing needs.

Mississippi, Arkansas, Wyoming, and Idaho are all just beginning to get organized for ETV. Their only hope in these States, it seems to me, is for outside assistance, and inordinate delay will set them back considerably.

New York, Michigan, Wisconsin, and Texas have all made good starts, but are now, for diverse reasons—and these reasons are diverse in every State—at a critical point where no effective progress can be made without some help. These are comparatively rich States, but at this point seed money is essential, and delay in all of these areas puts serious pressure on the reserved channels.

Nineteen States now have more or less elaborate State plans for ETV or are in the planning stage. In every instance some phase of the planning hinges upon immediate Federal assistance.

There are several States—such as West Virginia and Idaho and, perhaps, Mississippi—where interest has been kindled only because of the hope of the proposed legislation. These States cannot, possibly, have any development, in my opinion, through local resources unless and until outside assistance is available.

Postponement now would, probably, destroy the possibility for years.

The sum total of this recital is that all over the country work and plans for ETV development have been sparked by the hope and promise of Federal legislation. A large proportion of the plans have been guided by this promise. The time is crucial, as the description of the situation in the several States and in the many localities indicates. Another postponement or serious delay at this time would seriously handicap this development for years, in some cases many years.

In addition to this, there is always the threat, which is not a small threat, of losing the reserved channels, or of being too late to drop in a necessary channel. And this is just as important.

The need is now, and a dollar now would be worth several in the future. There is a time for all progressive developments to move. ETV has reached that critical movement; it moves now, or endangers its total progress.

Thank you.

Mr. MOULDER. The letter that was referred to by Mr. Harley and Mr. Bronson's statement will be inserted in the record at this point.

(The letter and statement follow:)

STATEMENTS ON FEDERAL AID TO EDUCATIONAL TELEVISION BY THE TWO PRESIDENTIAL CANDIDATES TO THE NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS

OCTOBER 14, 1960.

MR. WILLIAM G. HARLEY,

*President, National Association of Educational Broadcasters,
Washington, D.C.*

DEAR MR. HARLEY: It is a pleasure to extend greetings and good wishes to the 36th Convention of the National Association of Educational Broadcasters.

You are meeting at a time when American leadership is challenged as never before in its history; at a time when our well-being as a Nation is in jeopardy. If we are to defend ourselves effectively in a world of international tension and move ahead, we must rely no less upon the strength of our educational system than upon the strength of our Military Establishment. Jefferson attached the utmost importance to "the diffusion of knowledge among the people. No other sure foundation can be devised," he said, "for the preservation of freedom and happiness." The issue of education is clearly bound up with our national stature; one cannot and has not through American history been achieved without the other.

Today our schools and colleges face a crisis of appalling proportions in terms of deficits in dollars, teachers, classrooms, and services. American progress and even our national survival is directly dependent on what we as a nation do now about the shameful weaknesses and deficiencies of our educational system.

We must seize all means at hand to help education cope with these dire shortages and improve both the quality and quantity of educational opportunities available to our citizens at all levels, both in and out of school.

Television, a device which has the potential to teach more things to more people in less time than anything yet devised, seems a providential instrument to come to education's aid. Educational television has already proved that it can be a valuable supplement to formal education and a direct medium for non-formal education.

Despite the heroic efforts of people such as yourselves to establish educational television stations across the country, only a small part of the total potential has been achieved. To date, only 50 of the 256 channels reserved for education have been activated and two-thirds of the population still has no access to educational

television service. This is not for lack of zeal or interest on the part of educators or State or local officials, but, primarily, for lack of funds for the initial capital investment required for construction of stations.

Since education is a matter of national concern, the Federal Government should assist in expediting and accelerating the use of television, as a tested aid to education in the schools and colleges of the Nation and as a means of meeting the needs of adult education. A useful start has already been made in this direction by the Government through the National Defense Education Act; more should be done to assist the development of educational television for the benefit of all our people. I pledge you that I will back actively suitable legislation aimed at this objective in the next session of the Congress and will urge its support by my Democratic colleagues.

Finally, I should like to congratulate the National Association of Educational Broadcasters for its distinguished accomplishments to date and wish it continued success in seeking to project the electronic media into the full usefulness of which they are capable in the service of American education and the welfare of our country.

Sincerely,

JOHN F. KENNEDY.

OFFICE OF THE VICE PRESIDENT,
Washington, D.C., October 10, 1960.

Mr. WILLIAM G. HARLEY,
Chairman of the Board,
National Association of Educational Broadcasters,
Washington, D.C.

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS,
Washington, D.C.:

It is a great pleasure to extend greetings to the National Association of Educational Broadcasters upon the occasion of its 36th convention and to wish you a fruitful outcome in your deliberations. Those of you who are actively working in the field of educational radio and television bear a grave responsibility. This Nation must improve and make the fullest use of all educational means at its disposal in order to adjust the institutions and methods of democracy to the demands of a speeding world. In this regard, the leaders in educational broadcasting have a great opportunity as well as an obligation.

The headlines almost daily remind us of the challenges which our children and our children's children face in the years ahead. To meet these challenges the continued strengthening of our educational system is of crucial importance. We now have in this country the resources and the technical means of granting to every citizen of our country his birthright—the right to adequate education. All tested means of aiding and improving instruction must be given support and encouragement. We must also be ingenious in using radio and television. They are proved instructional tools which have an immense potential for the benefit of American education and the welfare of our country.

In the program of education that I recently announced, I stressed the fact that education is a matter of vital public concern, and that the Federal Government has an obligation to encourage and assist public and private efforts to improve the quality and scope of education at all levels.

The importance of radio and television as educational tools has been recognized in a variety of ways. These include the assignment of FM and TV frequencies for educational use, the inclusion in the Office of Education's cooperative research program of projects related to television instruction and the research program in new educational media authorized by title VII of the National Defense Education Act.

In this latter respect, as you well know, the U.S. Office of Education has developed a program designed to assist and foster needed research to provide a sound basis for the orderly and effective development of television as a tool of education.

I pledge my cooperation in the development of a national educational television policy to help realize the goal of the fullest possible educational opportunity for every American. This policy should have set forth the basic objectives of the Nation in the field of educational television and it should define respective roles of the Federal and other levels of government, broadcasters, educational institutions, and others concerned. Within its assigned role Federal

assistance in the stimulation of the use of television as an aid to education will have my sympathy and support.

Also, as I have indicated in my education program, I have pledged my support to a continuing program of Federal assistance in strengthening education at all levels without interfering with private and local control of our educational system.

And now, may I congratulate the National Association of Educational Broadcasters on its 35 years of service to American education and wish it success both in its convention and in its continuing work of promoting educational, cultural, and public service broadcasting.

Sincerely,

RICHARD NIXON.

STATEMENT BY NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS, MARCH
23, 1961

The National Association of Educational Broadcasters reaffirms its previous statements in support of educational television legislation and the testimony of its president, William G. Harley, before this committee of the 86th Congress.

The need for the provisions of this legislation has become more acute since it was last considered, and in further support of this proposed legislation the association herewith reemphasizes certain statements and presents additional information for the consideration of the committee.

The crisis confronting education in this country regarding the lack of facilities and teachers to cope with ever mounting enrollments has been too well documented to need repeating here. By increasing the productivity of good teachers, and making adjustments possible in teacher loads and functions, educational television can greatly assist with this problem.

Educational television also provides a type of general public programming service which commercial television so far has not been able to offer in anything like adequate quantity or quality. Educational television makes the best minds of America's great educational institutions available to the whole country. It expands the public service potential of State and Federal agencies. This sort of programming provides eloquent testimony of the social, educational, and general public service responsibility of educational television as it is emerging in the United States.

The record of educational television's contributions to education at all levels is an impressive one. But it exists in all too few spots to provide the national assistance our educational effort requires now. Well over 50 percent of the people in this country live in areas not served by educational television. All but some 25 of the great universities of the United States have no television stations. All but some 200 of the 40,000 school systems of the Nation are years away from access to this electronic miracle unless Federal assistance is provided. Without Federal support there may well be considerably fewer than 100 educational television stations in the Nation for many years, while 150 to 175 other frequencies, allocated for education, lie fallow. With few exceptions, potential State, regional, and national networks will remain unrealized dreams unless and until Federal funds are made available. It is not necessary to remind this committee how precarious is the position of the channels allocated for educational television. Commercial broadcasters, industry, the armed services, and others remind the Federal Communications Commission periodically of the "unused resource" contained in these channels. This pressure is daily increasing as the competition for more room in the spectrum intensifies. This legislation, if approved, would give great impetus to educational station activation. In many States, the use of public funds to develop educational television stations has been delayed, or prevented, by the belief that, if State funds are to be used to support educational television, the service must be available to the entire State—not merely to those fortunate few who are within the service area of the university, or school system, or proposed organization seeking to launch it. Funds of the order proposed by the bill, though not sufficient to solve this problem fully, would break this deadlock, by making State systems, capable of service to the majority of the population and the schools of the State, a more realizable objective.

In the past year, the educational forces in various localities have made progress in developing the use of television for education, and in organizing their limited resources and planning for further development. The NAEB has been

conducting a continuous study of these efforts and of the multiplying needs which impel such efforts.

The NAEB study indicates that the passage of legislation lending assistance to educational television construction would immediately expedite this enormous amount of bogged-down development and create an additional surge toward complete and effective use of all the reserved channels.

The schools, colleges, and communities in every State are ready and eager to make effective use of these resources for formal and informal education as soon as they can be financed. In the several States a variety of actions and forces have worked together to weigh the value of this medium to education generally and to pave the way for its use. Legislative action, administrative order, private philanthropy, and community cooperation have all contributed to the preparation that now awaits fulfillment through congressional action.

Forty-five States have now actively participated in and supported the development of educational television, and 25 of them have formed State ETV commissions by direction of their respective legislatures. In all of these States, in some degree or other, the public schools, the institutions of higher learning, and the communities have all been involved.

The recall of the States follows:

Alabama.—In 1953 Alabama established an ETV commission and appropriated a total of \$772,000 for a State network. It now has three ETV stations on the air and has spent approximately \$3 million to date on this development. It has proven need of at least three more stations at the present time to provide for its basic service.

Arizona.—This State has two ETV stations now on the air. The first station went on the air in 1959 at the University of Arizona, Tucson; and the second station went on the air in February of this year under the auspices of Arizona State College at Tempe. The transmitter is actually located in Phoenix and serves the entire surrounding community.

Arkansas.—This State has been investigating possibilities of providing ETV to its people since 1958; the activities of the State committee established by the legislature in 1957 have been recently revived.

California.—In 1952 the Governor appointed an advisory committee on ETV, and twice since then the legislature has taken action to encourage its development. This State now has ETV broadcasting stations at San Francisco and Sacramento, and two more planned at San Bernardino and San Diego. It also has several well-developed closed-circuit operations. But the demonstrated need for more broadcast stations grows every day. Its largest metropolitan areas are not being served.

Colorado.—In 1956 the public school system of Denver put an ETV station on the air as a part of its general and adult education program. In 1960 the legislature passed an act to allow various school districts to operate television translator facilities. At least three more stations are needed now.

Connecticut.—In 1958 the legislative council, acting on previous instructions of the legislature, recommended funds for experiment in ETV. Previously the general assembly had appropriated \$150,000 for ETV programing.

Florida.—The legislature first appropriated money for the investigation of ETV in 1953 and 4 years later established a permanent ETV commission and initially appropriated \$600,000 for the development and construction of a State network. In the meantime, the three large metropolitan areas of the State and the two State universities planned and constructed stations on the five available ETV channels. The costs of the university stations were derived from State sources, and the funds for the stations in Miami, Tampa, St. Petersburg, and Jacksonville came from cooperative public school funds, private philanthropy, public donations, and special State grants. Three more much-needed stations are now being planned for the immediate future, but capital outlay financing is still a serious problem.

Georgia.—ETV has been encouraged in Georgia since 1953, when funds were appropriated for a continuing education center at the University of Georgia. In 1958 the Atlanta public schools put a station on the air and developed a program service for the schools that is now being widely shared. In 1960 the University of Georgia at Athens went on the air with a comprehensive ETV service. The State board of education has construction permits on channels at Waycross and Savannah, and one is being planned in the western part of the State at Columbus. If sufficient State funds had been available all of these stations would now be in operation; but even so this only touches the need for ETV in Georgia.

Illinois.—The State legislature in 1955 authorized school boards to participate in ETV. In 1955 the State university at Urbana went on the air with its own ETV station, after winning a long court fight to use general funds. Southern Illinois University now has a construction permit for a station at Carbondale. Chicago has been operating a cooperative community ETV station since 1955, and now the program schedule demands the use of additional channels.

Iowa.—The State university at Ames pioneered in the use of television for education, and in 1959 the Des Moines school system went on the air with its own station. The university, at Iowa City, has extensive plans, but is handicapped by the lack of funds.

Indiana.—This State has constructed no ETV facilities yet, but in 1959 the legislature authorized public schools to use funds for the production of ETV programming. Production centers have been established at Purdue and Indiana Universities, and several public school systems are using ETV programs broadcast from commercial stations or coming across State line from ETV stations in Louisville and Chicago.

Kansas.—In 1959 the legislature appropriated \$25,000 for the study of a State ETV network plan. The study was made over a 2-year period and a State plan has been recommended to the current legislature. It calls for the construction of six transmitters and three major production centers. The legislature is now trying to find funds to make a start on this urgently needed program. In the meantime the cities of Wichita, Topeka, and Kansas City have been experimenting with ETV in the classroom, with uniformly encouraging results.

Kentucky.—The only station in the State is in Louisville where the public school system, with help from a foundation grant and commercial stations, operates a modest facility. This year the legislature directed its research committee to make a survey of the potential of ETV for Kentucky and the State advisory committee, appointed by the Lieutenant Governor, is currently developing a plan for a State ETV network.

Louisiana.—This State has encouraged the development of ETV since 1952. In 1954 it created the Louisiana ETV Commission, and appropriated \$150,000 for facilities. The State has two ETV stations now operating, but definitely needs help for further development.

Maine.—Originally established a State committee on ETV in 1955 and reactivated it by legislative act in 1957. Much study and planning have been accomplished, and now two ETV stations are planned for the near future and two additional reservations have been requested for later use. The only thing lacking here is sufficient capital funds.

Massachusetts.—The legislature established a commission on ETV in 1952 and enlarged it in 1953 and provided funds for its work. Legislation was enacted to permit public schools to participate financially in ETV programming. In 1955 a cooperatively financed ETV station went on the air in Boston.

Michigan.—This State is now conducting a study to devise a plan for a statewide ETV service. The study is expected to be completed this year. At present ETV stations are on the air in Detroit and East Lansing, and stations are being planned in Mount Pleasant and Kalamazoo.

Minnesota.—Minneapolis and St. Paul put a cooperative community ETV station on the air in 1957, and in 1959 the State approved \$100,000 toward constructing new and better facilities.

Montana.—Received a grant of \$25,000 for a detailed study of a State plan for ETV. The study has just been completed and plans approved for a State network of transmitters and translators which will serve most of the people of Montana at a very economical cost. Funds are not now available to proceed, but the whole plan could be achieved with Federal assistance.

Nebraska.—ETV has been encouraged here since 1953. The State university put its station on the air in 1954, and has since participated in extensive planning for the rest of the State. A State plan has been devised which will provide basic ETV service to most of the people in Nebraska, and an assignment of five or more channels strategically located has been requested of the FCC.

New Hampshire.—Here the legislature established an ETV commission in 1953. Through its efforts a nonprofit corporation was formed to provide financial support for the construction of a station. As a result, an ETV channel was activated at Durham in 1959. At present facilities are limited and further capital outlay needed.

New Jersey.—This State did some fine pioneering in using television for education. In 1953 the legislature established a commission for ETV and appro-

appropriated \$75,000 for experimental work. It has several closed-circuit operations, but has been unable to get on the air with a broadcast station.

New Mexico.—This State has a very successful cooperative ETV operation at Albuquerque which went on the air in 1958. It has a State plan for three more stations which will serve most of the people of New Mexico, but financing the original construction remains a problem.

New York.—Since 1952 this State has made an effort to establish statewide ETV, but has encountered great difficulty with finances. In 1954 the board of regents was empowered to charter nonprofit groups to build and operate ETV stations. Three such regional groups have now been chartered in the State. There has been a great deal of planning and activity. One station is on the air at Buffalo and another is being planned; and two stations are being planned in the Schenectady-Albany-Troy area. In addition to this there are several large closed-circuit operations and production centers. Since 1955 the State has appropriated at various times a total of some \$1,375,000 for ETV programing in the schools.

North Carolina.—The legislature established an ETV commission in 1953 and in the ensuing 2 years appropriated some \$23,000 for its use in planning. In 1955 the ETV station at Chapel Hill went on the air with variously donated funds, and the legislature appropriated \$215,200 for operating expenses. The station now receives cooperative support from the State system of higher education and from public school participation.

North Dakota.—This State has limited resources but has done some planning on ETV and is a member of the planned six-State network.

Ohio.—Every legislature in Ohio since 1953 has given encouragement and support to ETV. It is now completing a State plan for extensive use of ETV. Ohio has activated educational channels at Columbus, Cincinnati, Toledo, and Oxford. Stations are now being planned at Dayton, Athens, and Cleveland.

Oklahoma.—Established a State ETV commission in 1953 and went on the air with its first station in Oklahoma City in 1956 and its second station in Tulsa in 1959. The Oklahoma City schools put a second station on the air in Oklahoma City the same year to serve the increasing school needs. With these three stations the State still needs more facilities.

Oregon.—ETV has been encouraged and supported by the legislature since 1953. The State's system of higher education established an ETV station at Corvallis in 1957. The legislature appropriated funds for programing. In 1961 when Portland went on the air with a cooperative station, the legislature allocated funds for its programing. Both stations are now part of a State system, which needs to expand.

Pennsylvania.—In 1953 the legislature made it possible for public schools to participate in the operation of ETV stations. There are now two stations in Pittsburgh and one in Philadelphia, and another planned at State College.

Rhode Island.—In 1955 the legislature authorized the construction of an ETV station under the direction of the State board of education, \$150,000 was appropriated at the time.

South Carolina.—Through various legislative actions since 1953, the State has developed an extensive statewide closed-circuit ETV system, and also uses time on commercial stations to broadcast to schools not reached by phone lines.

South Dakota.—The legislature has encouraged ETV since 1954 and in 1955 appropriated funds for a closed-circuit installation at the State university at Vermillion. The support of this operation led to the planning of a broadcast station and this year another ETV channel will be activated there.

Tennessee.—In 1955 the State established an ETV commission and appropriated funds for matching contribution toward ETV station operation. In 1956 the cooperative community ETV station went on the air in Memphis. Plans are now underway for stations at Nashville, Knoxville, and Chattanooga.

Texas.—There have been many approaches to ETV in Texas. The State university has a fine production center and is the hub of an institutional closed-circuit network. There are now ETV broadcast stations on the air at Houston, Dallas, and Richardson, and another is on the way in the Austin-San Antonio area. Support is here but this large State needs many more stations.

Utah.—This State has two ETV stations on the air at Salt Lake City and at Ogden. Another one is planned at Ogden, and one at Logan. The university at Provo has also put in its bid for a station. The State legislature supports the operation of the university station.

Vermont.—This State has had a special commission on ETV since 1954 and it is still trying to find ways and means to activate a station.

Virginia.—The legislature passed a bill authorizing State support for ETV in 1959, but the act was vetoed. Local groups are still working to establish stations. ETV is being used in Norfolk and surrounding school districts and in Richmond. These communities are ready for their own stations.

Washington.—Has had State support and encouragement in the development of ETV since 1954. The first ETV channel was activated at the University of Washington in Seattle in 1954, and 6 years later the second station went on the air in Tacoma. Since then Tacoma School District No. 10 has received a construction permit to establish a third station. Extensive planning and experimentation has continued at Pullman and Spokane in the eastern part of the State. But much remains to be done.

Wisconsin.—This State, through its long-established radio council, has a comprehensive State plan, but has been unable to appropriate funds for activation. The ETV station at the University of Wisconsin went on the air in 1954, and the legislature has regularly appropriated operational funds for it. Milwaukee put Wisconsin's second station on the air with public school funds in 1957, and now the program schedule is so heavy a second channel has been requested to handle the school broadcasts.

Surely this brief survey of the interest and activities in the several States indicates a readiness for the proposed legislation. On the other hand, there is ample evidence that any prolonged delay in ETV legislation would have serious adverse consequences.

Most of the States and many of the localities throughout the country have done a great deal of preliminary planning for ETV looking toward the time when Federal assistance would be made available. In many areas local effort has been kept alive for the past 2 years by the promise of ETV legislation. Much preliminary legislative support in the States, and promises of ETV operating support, have been based upon the hopes of Federal assistance. If congressional action fails again at this time, or were to be postponed through another Congress, much of the work and planning of the past 2 years would be lost. The educational and community interests working for ETV would lose much of their legislative support to other programs. This would be especially difficult to overcome in the States which have biennial legislatures. The time, energy, and local money lost to the development of ETV would be incalculable if there were to be any great delay in Federal assistance.

There are 28 States where substantial investments have already been made in ETV. These include seven western States, eight midwestern States, four eastern States, and nine southern States. But in all of these States further development is now largely dependent on Federal assistance and in many instances a prolonged delay would seriously retard program development and cooperative school utilization.

There are 21 localities which have applied for ETV station construction permits or which have asked for specific channels to be reserved preliminary to applying, and in most instances the action was based upon the hopes of the proposed legislation. Postponement at this point would seriously jeopardize these developments. There are 26 States which have either State or local planning for new ETV development which is contingent upon Federal assistance. In many of these, planning has advanced to a critical stage, and prolonged delay would be disastrous, and in any event would retard beginning development through another biennium. A listing of some of these States will better illustrate the situation.

Kansas.—This State has a State plan to provide much-needed ETV facilities to 85 percent of its population. The legislature can see its way clear to provide only one-sixth of the development money needed in the hope that Federal assistance will add enough to make an encouraging start. Delay now will jeopardize 2 years' work, and may cause the loss of several of the proposed channels to commercial interests. One such channel is already slipping away from the State schools.

Kentucky.—This State is currently developing a plan for an ETV network. However, a favorable frequency, basic to the State plan, is already slipping away, and a group of frequencies upon which this network plan depends will be in jeopardy if applications for the channels are long delayed.

Nebraska.—This State has a plan similar to the Kansas plan, but it is entirely dependent upon taking immediate advantage of specific unassigned VHF channels. The State's claim is now being contested, and lack of funds or delay in development will undoubtedly cause the loss of these channels. Here, as in Kansas, the loss of one or two channels would wreck the whole State plan.

New Mexico.—This State has built one ETV station and has plans developed to furnish service to all the schools in the State, but it cannot build the other two stations without assistance, and again delay endangers the necessary channels.

Maine.—This State has a plan, but has been unable to build stations to meet its needs. It is having difficulties defending its proposed use of good channels. Delay at this time weakens Maine's chances of effective ETV development.

Montana.—This State, with a foundation grant, has developed a very economical and effective State plan. Its development depends on outside assistance, and the key channel could be lost by delay.

Tennessee.—Has two channel 2's which are being eyed by commercial interests—these are part of a State plan which must have Federal assistance to get off the ground.

Florida, Georgia, Alabama.—All have advanced State plans and large developments, but all need assistance to preserve their gains and meet their increasing needs.

Mississippi, Arkansas, Wyoming, and Idaho.—All are just beginning to get organized for ETV. Their only hope is outside assistance, and inordinate delay will set them back considerably.

New York, Michigan, Wisconsin, and Texas.—All have made good starts, but are now, for diverse reasons, at a critical point where no effective progress can be made without some help. These are comparatively rich States, but at this point seed money is essential; and delay in all of these areas put serious pressure on the reserved channels.

Nineteen States now have more or less elaborate State plans for ETV, or are in the planning stage. In every instance some phase of the planning hinges upon immediate Federal assistance.

There are several States, such as West Virginia and Idaho, where interest has been kindled only because of the hope of the proposed legislation. These States cannot possibly have any development through local resources unless and until outside assistance is available. Postponement now would probably destroy the possibility for years.

The sum of this recital is that all over the country work and plans for ETV development have been sparked by the hope and promise of Federal legislation. A large proportion of the plans have been guided by this promise. The time is crucial, as the description of the situation in the several States and many localities indicates. Another postponement, or serious delay, at this time would seriously handicap this development for years—in some cases, many years. In addition to this, there is always the threat of losing the reserved channels, or of being too late to drop in a necessary channel.

The need is now, and a dollar now would be worth several in the future. There is a time for all progressive developments to move. ETV has reached that critical moment—it moves now, or endangers its total progress.

Mr. MOULDER. Thank you so much.

Mr. HARLEY. Thank you.

Mr. YOUNGER. Do you think this is going to be an annual appropriation or is this a one-shot deal so far as the Federal Government is concerned?

Mr. BRONSON. I testified before this subcommittee last year and my testimony is a matter of record. I have not changed my opinion. I think that it would be disastrous for the Federal Government to enter upon any kind of a recurring appropriation operating expenditure. I think that the need is for the development of capital equipment of the basic equipment needed to get into business, and I think that experience has proved all over the country—I know it is proved in our community and in all of the communities that I have had personal experience with—that once the operation is financed and underway, and is integrated into the total community and the system, that it will carry itself. I think it would be disastrous for the Federal Government to enter into an operating expenditure.

Mr. YOUNGER. There is \$50 million in this bill for capital expenditures to get television stations built in the various States. Will there be a recurring appropriation each year?

Mr. BRONSON. You, sir, will recall, I think, one word that I used in connection with the larger and richer States, I said seed money. I think it is seed money most everywhere. If I could have my way, I would raise your appropriation to \$250 million, but I think that \$52 million will go very far toward stimulating the kind of effort that will do the job.

Mr. YOUNGER. I think you can answer it "Yes" or "No." Do you think we will have to furnish seed money every year?

Mr. BRONSON. I hope not.

Mr. YOUNGER. It is awfully hard to get a "Yes" or "No" answer. That is all, Mr. Chairman.

Mr. MOULDER. We thank you very much again.

Mr. HARLEY. Thank you.

Mr. MOULDER. Mr. Robert F. Landry asked to be heard again.

Mr. LANDRY. I asked the privilege.

Mr. MOULDER. We have very little time.

Mr. LANDRY. A question was asked of a witness that we requested to come here that I think he was not capable of answering to your satisfaction. Far be it from us to suggest how this might be implemented. And we, certainly, respect that whatever is proposed here by any witness you are going to give consideration to and that the outcome may be one side or another on any given item that has been discussed here. But as a for instance to explain to you what we have in mind when we say leasing these interconnecting facilities, two of these bills substantially require that a plan be submitted before any grant is made to a State, and I believe the other is more or less to demonstrate that something of that nature would be done although it is not spelled out in the legislation.

If a State agency submitted a plan, as we see it, it could conceivably say that, "We propose to get this certain amount of interconnecting facilities from a common carrier such as the telephone companies," and that, "The rental for these for 1 year, just to get us started"—as so many of these other witnesses say—"is so much money, and this is included in our project."

That would be one example of what we had in mind.

Mr. MOSS. The answer to my question was to my complete satisfaction. I was under no illusion as to what he was proposing. He answered it to my complete satisfaction, but I say it was inherent in his proposal, as he stated it, and I assume that the statement was his and not yours—

Mr. LANDRY. It was.

Mr. MOSS. I want to make it very clear that when a witness takes that chair there I expect that whatever he says is his answer.

Mr. LANDRY. I can assure you of that.

Mr. MOSS. He represented himself as the spokesman for the State of New York—

Mr. LANDRY. That is right.

Mr. MOSS. And I expect if there was any doubt in his mind, as to whether or not I have been satisfied, he and not you should have raised the question. I still maintain that if we cross this line, as he suggested, then a system which is not a broadcast system, but rather

a piped system, is something that goes far beyond what I, as an author of one bill, ever intended. And at this point I think it would be most difficult to sell such a proposal either to the committee or to the Congress. If we get to the need to lease interconnections in building a broadcast facility, then we have a different problem. That is not the problem to which he addressed his remarks. And it was my concern over the request to expand beyond anything we have envisioned in any of the bills before the committee that concerned me. On that basis, I feel that he answered my question most completely.

Mr. LANDRY. Thank you, sir.

Mr. MOULDER. May I ask Mr. Williamson does this complete all of the witnesses we have for this week?

Mr. WILLIAMSON (the clerk). Yes.

Mr. MOULDER. Without objection we will make a part of the record a letter dated March 17, 1961, of Mr. Henry F. Chadeayne, executive director of the St. Louis Educational Television Commission; a statement by Mr. Laurin W. Jones, chairman of the Senate Committee on Education of the State of Kansas; and a statement by Clifford G. Erickson, dean of television instruction of Chicago City Junior College.

(The documents referred to follow:)

KETC CHANNEL 9,
St. Louis, March 17, 1961.

Hon. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications, House Committee on Interstate
and Foreign Commerce, House Office Building, Washington, D.C.

DEAR MR. MOULDER: As executive director of the St. Louis Educational Television Commission which operates educational television station KETC in St. Louis, I am very interested in the legislation dealing with educational television on which your committee will be holding hearings next week.

I would like to go on record in urging favorable consideration by the committee of appropriate legislation that will enable the Federal Government most effectively to assist in the development of the important national asset represented by educational television.

You will hear from others of the development of educational television, of its increasing utilization and increasing importance, of the continuing need for its development, and of the part which the Federal Government can play in strengthening and extending educational television.

KETC has shared in the increasing utilization by schools and colleges and in the increasing acceptance of the importance of educational television by the community generally. At the same time we are well aware how much greater service we could render if additional capital funds were available to increase our power, to equip a second studio, and to provide other urgently needed equipment.

There is one very important consideration which I hope the committee will bear in mind in its deliberations. Television channels belong to the people of the entire United States—not to individual States. This is recognized by the fact that the allocation of television channels and the control of broadcasting is in the Federal Communications Commission, and not in the individual States. KETC-channel 9 is on the very eastern edge of Missouri. The channel belongs just as much to the more than 500,000 citizens of Illinois within range of our signal, as it does to the citizens of Missouri.

In some instances, the effective utilization of the television channels reserved for educational purposes within a State may be appropriately and effectively determined by a State agency. In other instances such as ours, it is expecting a great deal of an agency of the State of Missouri to carry out its responsibility with due concern for the stake which the citizens of Illinois have in KETC. To develop KETC adequately as a resource with proper concern for the citizens of Illinois as well as Missouri, would require unusual breadth of view by a Missouri agency, or an extraordinary degree of cooperation between agencies of two States.

On the other hand, the appropriate Federal agency is as concerned about Illinois as about Missouri.

In our own case, in-school programs being broadcast daily throughout the school year are used by Illinois schools within range of our signal, as well as Missouri schools. KETC has also been working very closely with Southern Illinois University in broadcasting college courses for credit. For the third consecutive year this institution has been teaching a course in sociology and a course in speech by television. It is probable that more extensive use will be made of KETC's facilities as Southern Illinois University develops its new campus at Edwardsville, just a few miles from St. Louis. This is an interesting example of the manner in which an educational television station located in one State is helping meet the educational needs of a State-supported institution of a neighboring State.

Many other educational television stations such as WTTW in Chicago, WGBH in Boston, WCET in Cincinnati, WKNO in Memphis and WHYI in Philadelphia, to mention a few, reach out across State lines. The citizens of Maryland and Virginia have as much at stake as the residents of Washington, D.C. in the channel reserved for the District of Columbia. Certainly the educational channel reserved for New York City is more important to the citizens of that great metropolitan area residing in New Jersey and Connecticut than it is to the citizens of Albany, Syracuse, and Buffalo.

This would seem to lead inescapably to the conclusion that the most effective use will be made of the funds that the pending legislation would make available for the capital needs of educational television if the administration is in the hands of the U.S. Commissioner of Education, as contemplated in certain of the bills before your committee, rather than in the hands of a State agency.

To summarize:

1. Television channels belong to the entire country—not to the individual States.
2. This is recognized by the fact that the Federal Communications Commission has control of broadcasting.
3. Many educational television stations already on the air and many channels reserved for educational television are located on or near the borders of States.
4. Broadcasts from such stations serve the educational needs of the citizens of more than one State.
5. In many such areas (e.g., East St. Louis, Ill.), no educational channel within the State is available.

For the foregoing reasons I urge that any legislation which may be recommended by your committee, provide for the administration of the act directly by the U.S. Commissioner of Education, rather than through State educational television agencies.

If you think that I may be able to furnish any additional information that will be helpful to the committee, I shall be happy to do so.

Sincerely yours,

HENRY F. CHADEAYNE,

Executive Director, St. Louis Educational Television Commission.

A STATEMENT BY LAURIN W. JONES

THE KANSAS EDUCATIONAL TELEVISION PLAN

Kansas is preparing to enter the field of educational television. This is an educational device which has been operative for some time in all of the States surrounding Kansas. While a number of successful experiments in television teaching have been conducted both at the elementary and secondary and college levels, Kansas does not have an educational television station in operation.

For nearly 8 years, a citizens committee has been advocating the establishment of a statewide network of educational television. During the last 2 or 3 years the Kansas Congress of Parents and Teachers has undertaken to disseminate information on the ways in which educational television could be used to improve the public school program, and the benefits which would flow from a strong program of educational television.

Legislation on educational television has been considered by the Kansas Legislature during the past two regular sessions, and 2 years ago a bill creating a State educational television authority received favorable consideration in

the house of representatives. The 1959 legislature appropriated funds for an educational and engineering feasibility survey to be made by the Kansas Legislative Council. It assigned responsibility for conducting the survey to the education committee, of which I am chairman.

The committee had several conferences with a group of Kansas citizens representing the various educational groups in the State interested in educational television. These included people from the public school system, the State institutions of higher education, the private colleges, the junior colleges, the State department of public instruction, the Kansas Congress of Parents and Teachers, the school board association, the Kansas Smaller High School Association and others. Conferences also were held with representatives of commercial television companies.

All of these individuals were also invited to attend conferences which the committee held with some of the outstanding authorities in the educational television field. Moreover, members of the committee made a special trip to attend the convention of the National Association of Educational Broadcasters, in Detroit, in December 1959, and obtained firsthand information on the operation of educational television at the local level.

Based on the information it had secured, the committee then consulted various persons with experience in the field to suggest a competent person to undertake such a feasibility survey for the committee. Without exception, the name of Dr. John C. Schwarzwalder, general manager of the Twin City Educational Television Corp., was suggested. Dr. Schwarzwalder has served as a consultant to various States and educational institutions and agencies. The committee then entered into a contractual arrangement with Dr. Schwarzwalder to conduct the survey. He was assisted by Mr. John D. Heffelfinger, of Kansas City, Mo., a radio and television consulting engineer in our area.

The survey report was presented to the committee in September, and in November it was presented to the legislative council. It has since been made available to the members of the 1961 Kansas Legislature.

The survey recommended a system of educational television including six high antennas maximum power transmitters, five on VHF channels (channel 11, Topeka; 8, Hutchinson; 9, Lincoln; 4, Grainfield; and 3, Garden City); and 1 on a UHF channel (16, Chanute) in southeast Kansas where no VHF channel is available. Production centers would be provided at locations where teaching resources tend to be concentrated. These units would be interconnected with a microwave relay system under which any production center could "feed" the entire State network, either live or tape, or separate regional programs could be telecast simultaneously by the different transmitters, and the network would be so arranged that additional UHF channels could be attached at various points.

The location of the transmitters has been worked out by the consulting engineer to give maximum coverage, and to comply with the space separation requirements of the Federal Communications Commission. The plan would provide a class A or class B signal to 92 percent of the Kansas population, and by the use of directional antennas a relatively small number of people residing in the intervening areas could receive an adequate signal.

The findings of the survey were that a statewide system, such as was recommended, would be entirely feasible and practical from an engineering, administrative, and educational programming standpoint. It was reported that parents, teachers, and school administrators had indicated that a statewide system of educational television is needed to improve, enrich, and extend the curriculum. The existence of large numbers of small schools in Kansas makes it extremely difficult for them to develop a comprehensive modern curriculum. It was found that there were approximately 15 subject areas which in some measure are being neglected or served inadequately throughout the State. Subject areas in which the greatest need exist are science (chemistry and physics), elementary foreign language, elementary science, social studies, modern foreign languages (secondary schools), English and English literature, mathematics, biology, music, art, adult education, driver education, and preschool education. General agreement was reported that in some measure all of these subjects can be taught effectively by educational television, and done more inexpensively because of the joint use of materials and facilities.

The education committee which was given responsibility for having the survey conducted, requested and obtained permission from the legislative council to continue its consideration of the survey report, and submit its report directly to the 1961 Kansas Legislature. This report was submitted to the legisla-

ture on February 13, 1961, and is printed in the journal of the senate for the 22d day, on pages 99-108. It recommends the establishment of an educational television system and the creation of the State educational television authority to supervise and administer the program. In this report, the conviction of the members of the committee was set forth that educational television is economically and educationally sound, and that Kansas students should have the benefit of this important educational tool. It was further pointed out that it is desirable that action be taken by the present legislature, in order that proper steps can be taken before the Federal Communications Commission to effect the transfer and allocation of the channels essential for a State network, as recommended in the survey report.

Following consideration of the legislative council committee's report, the Educational Committee of the Kansas Senate, introduced senate bill 372, which would carry out the recommendations of the council committee. In general, this bill is similar to one passed by the Kansas House of Representatives in the 1959 session, with certain minor revisions. Senate bill 372 is now pending on general orders for consideration in the senate committee as a whole during the next few days. The indications are that favorable consideration will be given, and that the bill will be approved by both the senate and the house of representatives. The prospects look very bright for the bill to become law during the next 30 days. If this occurs, Kansas will be in position to organize a program of educational television and begin, perhaps, in a small way, telecasting programs in the not too distant future.

It is not certain at this moment how much money will be available for the acquisition of broadcasting facilities. It is anticipated that additional funds can be made available at the 1960 budget session of the legislature, when the State authority has finalized its plans. Any funds which the Congress makes available in the form of aid for educational television purposes will, of course, enhance the efforts of Kansas in developing its program, and will tend to bring the actual production of educational television programs to a larger audience sooner than otherwise would be possible.

STATEMENT BY CLIFFORD G. ERICKSON, DEAN OF TELEVISION INSTRUCTION,
CHICAGO CITY JUNIOR COLLEGE, MARCH 23, 1961

This is a statement in support of Federal grants to the several States to aid them in initiating and expanding educational service through nonprofit broadcast television channels.

Since 1956 the Chicago Board of Education, through the Chicago City Junior College, has been utilizing broadcast television to bring a unique educational service to the 6 million residents of Chicagoland. In a real sense, the walls of the institution had been expanded to a circle with a radius of over 50 miles. This circle bounds the signal area of WTTW, channel 11, Chicago's nonprofit community owned educational channel.

In the spring of 1961, 2,517 adult students are registered for credit in nine standard college courses. A TV college information folder describing these nine courses is supplied to the committee as exhibit A. When the 2,517 part-time enrollments are combined, they become equal to 742 full-time enrollments. This television college requires no campus except the occasional use of classrooms in the Chicago City Junior College. If this group were to be taught conventionally, a campus costing several millions of dollars would be required.

Over 40 percent of Chicago's adult television students are interested in teaching as a new career. Among these are many homemakers who attend college only because instruction is brought into their living rooms by television. They hope to become practicing teachers after their children are grown and able to care for themselves. These mature students will help meet the desperate shortage of qualified teachers in the coming years.

By cooperation with the Chicago Teachers College, two of the current courses are open to practicing and prospective teachers. One of these, a course in human relations, is being taught at the graduate level with the express purpose of helping classroom teachers understand and cope with classroom problems.

New opportunities are also afforded to homebound, hospitalized and imprisoned students. These students number between 50 and 100 each term. This instruction is provided at a much lower cost than tutorial instruction and with greater effectiveness than correspondence instruction.

The quality of this higher educational experience via television can be certified as equal to or better than conventional instruction. Chicago's TV college was begun in 1956 under a grant of \$500,000 from the Fund for the Advancement of Education. In the 3 years, 1956 to 1959, intensive research was carried on in a large number of carefully controlled experiments. The achievement of television students has consistently been equal to or superior to conventionally taught students. These data are summarized on pages 7 through 9 in the printed report entitled "Chicago's TV College" supplied to the committee as exhibit B.

The TV college project has been carefully studied to determine unit costs of instruction. The Chicago Board of Education makes payment to WTTW for the actual costs of broadcasting. Currently these charges are \$18,000 per month. The unit cost of credit instruction via television is calculated by dividing the total of broadcasting charges and all other instructional costs by the number of equivalent full-time students served. In spring 1961 this unit cost is estimated to be less than classroom instructional cost by \$40 per full-time student per year. In other words, quality college television instruction cost, after 5 years of experience, has dropped to a level below classroom costs and thus additional students can be added at about one-third the cost of classroom instruction.

Equally important is the amount of additional educational service given free as a unique bonus of the broadcast television medium. At no additional cost, 5,000 not-for-credit enrollees are following one or more of the courses with some regularity. Audience surveys and estimates suggest a total unduplicated audience of 250,000 who watch at least one of the nine TV college courses on a reasonably regular basis.

Worthy of attention by this committee is the evaluation of the TV college project by a panel of distinguished educators representing four fields—accreditation of institutions of higher education, communications research, evaluation and testing, and administration of public higher education. The panel included the following:

Norman Burns, Secretary, Commission on Colleges and Universities, North Central Association of Colleges and Secondary Schools.

Henry Chauncey, president, Educational Testing Service.

Frederick L. Hovde, president, Purdue University.

Wilbur Schramm, director, Institute for Communication Research, Stanford University.

A few extracts of the panel's evaluation dated June 1960 are as follows:

"Courses at the junior college level can be taught effectively to a home audience by television. The results on this point were most impressive and convincing. Indeed, in the few cases where there were significant differences between the performance of home TV students and classroom face-to-face students, the differences were more often in favor of the TV students than the others.

"When junior college work is offered on television, it brings into the educational system a new group of students—an older group (median age in the 30's), most of them housewives, who are strongly motivated to continue their education but have been kept from doing so by home and family duties. These students like and are grateful for television courses. Once started on higher education by television, they are likely to go on to a junior or senior college degree. Many of them are planning to become teachers. Obviously this is an important group to bring back into education.

"The television courses are reaching a group of students most of whom would otherwise not take junior college work. It is serving a group of handicapped and otherwise restricted students. It is reaching a group of noncredit students, which averages several times the size of the group studying for credit. It is also reaching a group of casual viewers who are registered neither for credit nor without credit—an "eavesdropping" audience about which we know very little but which is estimated to range from 5,000 to 25,000 persons per program. In other words, it seems to us that offering junior college courses on television is a service to the city of Chicago far wider than the service to credit students.

"Evidence of the high motivation of the TV students and the welcome given the TV courses is the fact that about 65 percent of the television students finish their courses and take the final examinations. This completion rate is quite remarkable when compared with other forms of adult education for credit."

Federal grants to the States to aid them in establishing educational television broadcasting stations and networks can encourage low-cost extension of educational opportunities for adults as has been provided by Chicago's TV college since 1956. It is doubtful that any other investment in broadcasting and education can pay such high dividends for individual citizens and for the State.

Mr. MOULDER. I wish to announce that the committee will recess until some indefinite date which will be set following the Easter recess, at which time we will resume hearings again.

(Whereupon, at 4:40 p.m., the hearings were adjourned subject to the call of the Chair.)

EDUCATIONAL TELEVISION

WEDNESDAY, MAY 17, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS AND POWER OF THE
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 1334, New House Office Building, Hon. Morgan M. Maulder (chairman of the subcommittee) presiding.

Present: Representatives Harris (chairman of the committee), Maulder (presiding), Rogers, Flynt, Moss, Rostenkowski, Younger, Sibal, and Thomson.

Mr. MAULDER. The committee will be in order.

This morning the Subcommittee on Communications and Power is continuing its hearings on educational television.

Following the initial days of hearings, the chairman of our full committee, Mr. Harris, addressed letters to the Governors of all the 50 States in order to secure information as to whether the States are ready to join with the Federal Government in a cooperative program for the purpose of promoting the construction of educational facilities. At this point in the record there will be included a copy of the letter directed by Chairman Harris to the Governors.

(The letter referred to follows:)

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C., March 28, 1961.

Honorable Governor of _____:

MY DEAR GOVERNOR: The Committee on Interstate and Foreign Commerce through its Subcommittee on Communications and Power is holding hearings at the present time on bills providing for a program of Federal grants to assist the States and certain organizations within the States to establish or improve noncommercial educational television broadcasting.

The provisions of the several bills pending before the committee differ from each other in certain respects. Some provide for outright grants and others (following the pattern of the Hill-Burton hospital construction program) require the preparation of State plans and provide for Federal matching grants instead of outright Federal grants.

The successful operation of educational television facilities requires substantial outlays not only for the construction of the facilities but also depends on the continuing availability of sufficient funds for maintenance and programing. Several States already have established organizations which operate in this field. The plans of other States and their readiness to participate in a Federal-State program to stimulate the construction of educational television facilities are unknown to the committee.

In order to enable the committee to reach informed decisions on these bills, it will be most helpful to the committee to secure information in a general way whether and to what extent your State is prepared to participate in a cooperative Federal-State program to promote educational television operations; and

whether this is likely to be done in your State through a State agency established especially for such purpose, or through other existing State or local public agencies, or through private local nonprofit community educational television organizations.

I am, therefore, addressing this letter to you requesting your assistance in securing the above information for the committee, and I am enclosing for your information two of the key bills which the committee has under consideration.

Similar legislation has already passed the Senate, and your timely cooperation in furnishing the requested information will enable the committee to take early and informed action on this legislation.

With my expression of esteem, I am,

Sincerely yours,

OREN HARRIS,

Member of Congress, Chairman.

Mr. MOULDER. We have received to date replies from the Governors of 37 States. The response on the part of the Governors was overwhelmingly in favor of a cooperative Federal-State program in the field of educational television.

In view of the fact that the responses from the Governors form a vital part of the legislative history of any bill which this committee might report, I am including, without objection, the replies of the Governors in the hearing record.

(The letters referred to follow:)

STATE OF ALABAMA,
GOVERNOR'S OFFICE,
Montgomery, April 6, 1961.

HON. OREN HARRIS,
House of Representatives,
Washington, D.C.

DEAR REPRESENTATIVE HARRIS: I was pleased to receive your inquiry regarding Alabama's plans for developing educational television in our State. I am sure that you are familiar with the fact that we have had an educational television network in operation, now in its seventh year. This medium provides better than 75 percent television coverage to our population, but there is a strong demand for this service from those areas in Alabama not now receiving the ETV signal. It is our desire to extend the availability of ETV in our State to all our citizens. If funds for the purchase of television broadcasting equipment are provided by the Federal Government, we will be in a position to establish additional stations and facilities for a total ETV service. For such reasons, we have supported the proposed ETV legislation now pending in Congress. If financial provisions are made by the Federal Government to construct additional ETV broadcast facilities in Alabama, I am confident that our people will provide for their operation.

It is with pride that we note that our Alabama Congressman, Kenneth Roberts, has taken a prominent part in this matter and has submitted a bill in behalf of such legislation.

You will note from the enclosed copy of the 1953 Alabama ETV legislative enactment that we have from the first set up a State commission for the specific purpose of establishing ETV in our State. This law provides a natural channel, and is our preference of a way for handling such funds as the Federal Government may make available to us for the purpose.

You may depend on my support for the enactment of the ETV legislation now under your consideration.

Sincerely yours,

JOHN PATTERSON, *Governor.*

[Each Probate Judge, Sheriff, and the Clerk and Register of the Circuit Court is required by law to preserve this slip or pamphlet in a book kept in his office until the Act is published in permanent form.]

ALABAMA LAW

(Regular Session, 1953)

Act No. 81

S. 28—Phillips, Skidmore and High

AN ACT Relating to education: To create the Alabama Educational Television Commission for the purpose of making educational television available to and promoting its fullest use by inhabitants of Alabama, charging the Commission with control and supervision of educational television in the State and particularly with the control and supervision of the use of channels already reserved to Alabama for non-commercial, educational use by the Federal Communications Commission; authorizing the Commission to approve and establish a plan of educational television for the State and in accordance therewith to own and operate television stations for educational purposes or to contract for their operation, and prescribe rules and regulations governing such stations and the programs televised by them; and making an appropriation for effectuating the purposes of this Act.

Be it Enacted by the Legislature of Alabama:

Section 1. There is hereby created an agency to be known as the Alabama Educational Television Commission, hereinafter called the Commission.

Section 2. The Commission shall consist of five members, who shall be residents and qualified electors of the State of Alabama, no two of whom shall reside in the same congressional district. No member of the Commission shall hold any other office of profit or trust under the United States, the State of Alabama, or any political sub-division thereof. The first five members of the Commission shall be appointed by the Governor with the advice and consent of the Senate, within fifteen days after the passage and approval of this Act. One member shall be appointed for ten years, one for eight years, one for six years, one for four years, and one for two years. Their successors shall be appointed by the Governor with the advice and consent of the Senate for terms of ten years. Commissioners shall be eligible for reappointment. If a vacancy occurs at a time when the Senate is in session the Governor shall, with the advice and consent of the Senate, appoint another commissioner for the unexpired term. If such vacancy occurs when the Senate is not in session the Governor shall appoint a commissioner who shall take office immediately, but his appointment shall be subject to confirmation by the Senate at the next session of the Legislature. If the appointment of such commissioner is confirmed by the Senate he shall serve the remainder of the unexpired term. Each member of the Commission shall be entitled to receive \$25.00 for each day actually engaged in the performance of his duties, not to exceed \$1,200.00 in any one year, plus an allowance for expenses for official travel in the state not to exceed \$10.00 for each day he is entitled to compensation, and the actual cost of his transportation and no more. In the event a member uses a privately owned automobile for official travel, he shall receive six cents per mile for each mile actually traveled in attending meetings of the Commission and in the performance of his official duties.

Section 2½. (a) No member of the Commission shall have any financial interest in any facilities such as the Commission is authorized to deal with. (b) Members of the Commission may be removed from office upon impeachment on the grounds and in the manner prescribed in Section 173 of the Constitution of Alabama.

Section 3. Promptly after their appointment the Commissioners shall meet to organize. At such meeting they shall choose from their number a president, a secretary and such other officers as they deem necessary. Thereafter officers shall be elected annually. The Commission shall adopt rules regulating the conduct of its meetings and the transaction of the business of the Commission, and may appoint such agents and employees as it deems necessary, or may delegate to one or more of its members, officers, agents or employees such powers and duties as it deems proper.

Section 4. The Commission is organized for the purpose of making the benefits of educational television available to and promoting its use by inhabitants of Alabama, and to this end it is hereby empowered and directed to survey, study and appraise the need for an over-all plan for the use of television facilities available for non-commercial educational use in the State. The Commission is specifically charged with the duty of controlling and super-

vising the use of channels reserved by the Federal Communications Commission to Alabama for non-commercial, educational use. It may designate the location of stations to utilize such channels and make rules and regulations governing the operation of such stations and the programs televised over such channels. The Commission may own and operate television stations to utilize these channels, or it may contract with individuals, corporations, educational institutions, or other governmental agencies for the operation of such stations.

Section 5. The Commission is hereby authorized to execute all contracts and other instruments necessary and convenient to carry out the mandates of this Act. It may accept gifts or grants of money or property, real or personal, and voluntary and uncompensated services from any person, federal or other governmental agency, board of education, educational institution or commercial or industrial enterprise.

Section 6. The sum of \$500,000.00 is hereby appropriated out of any funds in the State Treasury not otherwise appropriated, and conditioned upon the condition of the Treasury and the approval of the Governor, which sum shall be used by the Commission in carrying out the provisions and purposes of this Act. Provided, however, the appropriation made in this section shall be a continuing appropriation and shall remain in force and effect until the full amount thereof has been expended by the Commission. Said appropriation shall not revert to the General Fund at the end of any fiscal year as provided by Section 104, Title 55, Code of Alabama, 1940.

Section 7. The provisions of this Act are severable. If any part or provision hereof is declared invalid or unconstitutional, such declaration shall not affect the remainder.

Section 8. All laws or parts of laws in conflict herewith are repealed.

Section 9. This Act shall take effect immediately upon its passage and approval by the Governor or upon its otherwise becoming law.

Approved June 15, 1953.

Time: 11:00 A.M.

I hereby certify that the foregoing copy of an Act of the Legislature of Alabama has been compared with the enrolled Act and it is a true and correct copy thereof.

Given under my hand this 16 day of June, 1953.

J. E. SPEIGHT, *Secretary of Senate.*

STATE OF ALASKA,
OFFICE OF THE GOVERNOR,
Juneau, April 6, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR MR. HARRIS: Thank you for your letter of March 28 asking for information regarding Alaska's plans for and interest in educational television.

The views of the commissioner of education and the State board of education are being sought in regard to this matter, and as soon as our thinking is crystallized it shall be passed along to you.

I appreciate your interest and the opportunity afforded by your letter to express to the committee Alaska's viewpoint on this important question.

Sincerely,

WILLIAM A. EGAN, *Governor.*

(NOTE.—An additional letter was later received from Governor Egan and appears on p. 436.)

OFFICE OF THE GOVERNOR,
Phoenix, Ariz., April 13, 1961.

HON. OREN HARRIS,
House of Representatives, Washington, D.C.

MY DEAR CONGRESSMAN: This will acknowledge your letter of March 28 concerning the hearings the Subcommittee on Communications and Power, under the Committee on Interstate and Foreign Commerce, is now holding on bills providing for a program of Federal grants to assist the States and certain organizations within the States to improve educational television broadcasting.

A representative from this office attended a meeting last week at Arizona State University with representatives from KUAT, the University of Arizona at Tucson station; KAET, the Arizona State University at Tempe station; the exten-

sion service departments of the two universities; our high schools; a commercial television station in Phoenix; and various educators. Attached is a brief summary of the conclusions and recommendations of this committee, which I believe you will find interesting and self-explanatory. I am also enclosing a copy of a letter from Dr. Richard A. Harvill, president of the University of Arizona, expressing his views.

You will note that statewide coverage of ETV seems to be very desirous. This will necessitate at least two new low-power UHF channels in order to develop effective multiple transmissions, as well as the installation of additional translators in several areas of the State that will allow the signals from Phoenix and Tucson stations to reach distant communities that are semi-isolated because of terrain conditions.

The majority of the citizens of this State oppose Federal intervention in matters, as long as private enterprise and our own State government can do the job. It may be possible through the cooperation of the two universities, private industry, our State board of education, and various secondary and elementary school districts, to establish a closer liaison with each other through the media of ETV. Suggestions have been made in this regard and are now being pursued. How effective such a program will be remains to be seen. At the present time, State funds for this purpose are not available and these are considerations that will have to go before the next regular session of our State legislature.

With regard to the several bills before your committee, in the nature of a co-operative Federal-State program, I feel that the best way for the Federal Government to engage in such an enterprise is to furnish information about what is going on in other States, provide lists of films and taped programs that might be used to augment ETV programs and, generally, furnish constructive information about the developments and progress being experienced by all States and communities involved in this exciting new media for education.

Sincerely,

PAUL FANNIN.

SUMMARY OF MEETING ON ETV NEEDS FOR ARIZONA

KAET STUDIOS,
ARIZONA STATE UNIVERSITY,
April 5, 1961.

This meeting was called on short notice, and fell during the spring vacation period. Attendance was small, but represented a good cross section of Arizona television and education interests and a fair geographical representation of the State. In attendance were—

- Frank Barreca, program manager, KUAT, University of Arizona.
- K. Allen Foucar, audiovisual director, Chandler public schools.
- Voman Frye, assistant superintendent, Scottsdale public schools.
- Boyd H. Gibbons, Jr., special assistant to the Governor for industrial development.
- Homer Lane, vice president and assistant general manager, KOOL-TV, Phoenix, Ariz.
- Miss Winona Montgomery, American Association of University Women
- Dr. Roy C. Rice, director of extension, Arizona State University.
- Harvey Stern, supervisor, Osborn School District, Phoenix, Ariz.
- Richard H. Bell, manager, KAET, Arizona State University.

Discussion centered around the need for more complete coverage of the State by the two existing ETV stations and the need for multiple transmission systems in the major metropolitan areas of Arizona.

Conclusions and recommendations of this committee were:

1. Television channels (UHF or VHF) for education should be available in Arizona in the following areas:
 - (a) Flagstaff.
 - (b) Safford.
 - (c) Yuma.

In the immediate future these transmission channels would be used to pick up programs originating from the two existing stations. In the future they might be used for local origination by schools as well.

2. At least two low-power UHF channels should be available to education in the Phoenix area and the Tucson area, so that KAET and KUAT would be able to move into multiple transmission as the need develops.

3. KUAT and KAET should be linked, so that they can exchange programs off the air.

4. Engineering studios should be undertaken and long-range planning organized to insure that Arizona will be prepared to make the most efficient use of television as a teaching medium in the future.

The committee endorsed unanimously educational television and urged that every step be taken to insure that spectrum space for ETV in Arizona be available as the need for it develops.

Respectfully submitted.

RICHARD H. BELL,
Director of Broadcasting, Arizona State University.

UNIVERSITY OF ARIZONA,
OFFICE OF THE PRESIDENT,
Tucson, Ariz., March 31, 1961.

HON. PAUL J. FANNIN,
*Governor of the State of Arizona,
Phoenix, Ariz.*

DEAR GOVERNOR FANNIN: The National Association of Educational Broadcasters has advised me that Representative Oren Harris, chairman of the House Interstate and Foreign Commerce Committee, indicated a desire that the Governor of each State submit to that committee views regarding the State's interest in and plans for improving educational television facilities should Federal support legislation be passed in the current session of the Congress. I am informed that there is a strong possibility that such legislation will be passed.

Teaching by television is becoming more and more established in various parts of the country. Through the educational television stations excellent instruction is being given, and educational endeavors of other kinds are being carried out very successfully. A bill before the Congress to provide \$1 million in each State to improve educational television facilities over the next 5 years, if passed, will result in much progress here in Arizona.

The University of Arizona television station, KUAT, has made a place for itself during the 2 years of its operation that far exceeds the expectation at the time the station was established. We have taught a number of courses by television with very satisfactory results. Since the station operates on the open-circuit basis, people throughout the community have enjoyed the benefits of these lectures in a variety of fields, including chemistry, anthropology, Spanish, government, and art. At the same time we have had videotape recordings that give to people within the range of KUAT insights into many areas of knowledge.

We received virtually all of the money for the establishment of the television station from outside sources, mainly the Ford Foundation. In the future as the instructional program by television expands, it will be necessary to provide a new and more powerful transmitter and additional studio facilities. In fact, we will need about one-half million dollars for this equipment and additional building facilities. We are moving out of the stage in which experimentation was conducted to determine the feasibility of instruction by television into the stage of established and normal acceptance of television as a means of teaching that for certain purposes is superior to conventional classroom instruction.

I hope this information will be helpful to you in connection with the inquiry that has come from Representative Harris.

Respectfully yours,

RICHARD A. HARVILL.

STATE OF ARKANSAS,
OFFICE OF THE GOVERNOR,
Little Rock, May 2, 1961.

CONGRESSMAN OREN HARRIS,
*House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN: I believe at the present time that you have before your committee a proposal calling for Federal assistance in the field of educational television.

I would have no objection if such assistance can be given without the exercise of any controls whatsoever by the Federal Government in this particular field. However, I would oppose any Federal assistance if it carries with it any restrictions or regulations tending to hamper the free exercise of the authority of the State or local communities in the field of educational television.

Most sincerely,

ORVAL E. FAUBUS, *Governor.*

SACRAMENTO, CALIF., *May 4, 1961.*

HON. OREN HARRIS,
Member of Congress, House Office Building,
Washington, D.C.:

I am confident that you are interested in California attitude pending education television bill.

California anxious to see educational television bill passed. Funds badly needed to permit added emphasis on experimental television and instructional television to supplement our severely taxed educational system. Legislature presently considering bills (S.B. 33 and S.B. 196) that would permit our State-supported educational television facilities. I have called a meeting of our educational television committee to give further attention to the pressing needs that the Federal aid would help us meet.

EDMUND G. BROWN, *Governor.*

DENVER, COLO., *May 12, 1961.*

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
U.S. Congress, Washington, D.C.:

We urge that your committee approve bills for Federal grants for construction of educational television facilities.

STEVE McNICHOLS, *Governor of Colorado.*

DENVER, COLO., *May 12, 1961.*

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
U.S. Congress, Washington, D.C.:

We urge that your committee approve Federal support bills for educational television.

BYRON W. HANSFORD,
Colorado Commissioner of Education.

(NOTE.—A letter was later received from Hon. John Dempsey, Governor of Connecticut, and appears on p. 437.)

STATE OF DELAWARE,
 EXECUTIVE DEPARTMENT,
Dover, April 3, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR MR. HARRIS: Thank you for your letter of March 28, 1961, regarding the various measures before the U.S. Congress that have a bearing on non-commercial educational television broadcasting.

At the present time, our general assembly is considering a joint resolution requesting the Federal Communications Commission to take such action as may be necessary to allocate channel 12 for use as an educational television station and to broadcast within the State of Delaware. It would seem that the success or failure of this resolution will give some clear indication of whether or not the State of Delaware will be prepared to allocate State funds for the purpose of educational television.

You might wish to contact Mr. Wilmer Shue, superintendent, Newark School District, Newark, Del. for information concerning the possibility of private local nonprofit community educational television organization.

Cordially yours,

ELBERT N. CARVEL, *Governor.*

THE DISTRICT OF COLUMBIA,
Washington, March 30, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR MR. HARRIS: Reference is made to your letter of March 28, 1961, requesting information as to the nature and extent of any contemplated participation by the District of Columbia in a cooperative Federal-State program to promote educational television operations.

The Commissioners on March 16, 1961, submitted a report on the pending House bills concerning educational television in which it was noted that neither the Board of Education nor the Commissioners have formulated any definite policy regarding the feasibility of utilizing educational television in the District of Columbia, and that a thorough study is being made of this subject by the District of Columbia school officials.

The contents of your March 28 letter have been transmitted to the superintendent of schools and to the director of the department of general administration, with the view to securing all the available information you request.

Upon receipt of such information, I will immediately forward to you a supplemental report on this subject.

With cordial regards, I am,
Sincerely yours,

WALTER N. TOBRINER,
President, Board of Commissioners, District of Columbia.

STATE OF GEORGIA,
EXECUTIVE DEPARTMENT,
Atlanta, May 29, 1961.

HON. OREN HARRIS,
*Member of Congress,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: In reply to your recent query about whether Georgia needs and would use funds for educational television, we would like to advise you that we certainly would.

Georgia has made a good start in educational television and we are very much interested in it. The State department of education is the agency that has developed this, in the main, and would continue to be the agency for any Federal funds available for extension of this program.

They have been on the air since last September sharing channel 8 with the University of Georgia. A second station is now being constructed in the Waycross area. They have received FCC clearance for a third in the Savannah area, and there is a good probability that a fourth station at Pine Mountain will be added.

We have had excellent response from the school officials, teachers, pupils, and parents who are already sharing these programs and are within the receiving area for the first station. There is much interest in the plans for other stations. We would like to develop this program because we feel that it has tremendous and dynamic possibilities for helping us to maintain a superior educational program in this State.

Georgia could make good use of any Federal funds made available by the Congress for educational television.

Sincerely yours,

ERNEST VANDIVER, *Governor.*

STATE OF HAWAII,
EXECUTIVE CHAMBERS,
Honolulu, April 13, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR SIR: This is in reply to your recent letter relative to bills before Congress which would provide Federal assistance to the States for the development and operation of television facilities for education and asking for specific information as to Hawaii's preparedness to participate in a cooperative Federal-State program to promote educational television.

Hawaii's educational leadership is keenly aware of the potentials of educational television and has taken a number of specific steps during the past 2 years designed to lead to the establishment of educational television at an early date. As evidence of our deep interest and concern in this field we cite the following developments.

1. Keen interest in exploring and utilizing the potential of educational television has been expressed by a number of our State legislators, the superintendent of public instruction and members of his staff, the administration and staff of the University of Hawaii and the east-west center, and by a number of key

citizens in the community. I am personally most interested in giving support to the development as soon as a feasible plan is developed.

2. The department of public instruction has arranged with the U.S. Office of Education for a study of the needs for and facilities required to implement a statewide educational television program. This study is scheduled to start within a few weeks.

3. Plans have been made to utilize closed circuit television in two new school plants to be constructed soon. Likewise, plans are being made for experimentation with closed circuit television facilities in elementary, intermediate, and high schools during the coming school year.

4. We are now producing educational television programs over commercial channels in the area of vocational guidance and plans for telecasting inservice teacher education programs over commercial station facilities next school year are well advanced.

5. Conduits are now being included in the specifications of all new public school buildings for the installation of coaxial cable for the use of closed and/or open circuit television as facilities become available.

6. We have just recently employed a highly competent professional in this field as State director of audiovisual education, who is providing effective leadership in preparing the way for the introduction and use of education television.

Thus, from the above, I believe it is fair to say that Hawaii is prepared to participate in a cooperative Federal-State program designed to promote educational television.

At this point, we envision educational television as a cooperative endeavor between our statewide public school system and the University of Hawaii. We do not see the need for the establishment of a State agency especially for this purpose and do not anticipate any great amount of interest on the part of local private nonprofit organizations.

Hawaii stands ready and willing to make the maximum use of any Federal assistance that may become available for developing educational television. Although a system of outright grants would be preferable, we can see the merits of a system patterned after the Hill-Burton program. Should congressional action provide for matching grants, it would be necessary, of course, to go to our State legislature for the necessary matching funds. However, I believe such funds would be forthcoming. The timing might be such, however, as to delay our participation until the next session of our legislature, which will convene in February 1962.

We deeply appreciate your interest and concern in this matter, and sincerely hope that the information we have given you will be of real assistance to you and your committee.

Sincerely yours,

WILLIAM F. QUINN,
Governor of Hawaii.

STATE OF IDAHO,
OFFICE OF THE GOVERNOR,
Boise, April 12, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR REPRESENTATIVE HARRIS: I have had some informal discussions concerning the pattern of Federal subvention for educational television. Idaho State College has been one of the pioneers in this field. Your letter of March 28 mentions the difficulties of obtaining maintenance and operation funds. Certainly, this has been a problem at the State college. Idaho is certainly prepared to consider participation in cooperative Federal-State programs in the field of educational television operation.

In Idaho we have one board which acts as the board of regents, the board of trustees for the college, and the board of education. It is this board which would be the logical agency to undertake such Federal-State cooperation.

With every good wish, I am,

Sincerely yours,

ROBERT E. SMYLYE, *Governor.*

OFFICE OF THE GOVERNOR,
Springfield May 12, 1961.

Congressman OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: This is in reply to your letter of March 28 inquiring about the interest of pending Federal legislation as it might affect the State of Illinois. I wish to express general approval of the educational television legislation now being considered by your committee although, obviously, I am making no judgment on the details of the various proposals before you.

Interest in and action about educational television has already been manifested in Illinois. The University of Illinois has had an ETV station on the air since 1955, Southern Illinois University is in the process of constructing one, and in Chicago the metropolitan area is being served by a community ETV station. Closed-circuit use of television for instructional purposes has been going on in some of our schools for some time—for example, Evanston Township High School. Station WTTV in Chicago, in cooperation with the Chicago Board of Education, has been presenting instruction for the Chicago teacher colleges.

I feel that educational television in Illinois would be further developed if Federal aid and encouragement were to be given. In the long run, television may be one of the important aids in meeting the heavy demands of society on our educational institutions at all levels. In Illinois we have six State-supported universities and many junior colleges, in addition to our elementary and secondary schools. I foresee the use of television by many of them in the years ahead.

I shall be happy to furnish you with additional information at any time it would be helpful.

Sincerely,

OTTO KERNER, *Governor.*

STATE OF INDIANA,
OFFICE OF THE GOVERNOR,
Indianapolis, May 18, 1961.

Hon. OREN HARRIS,
House Office Building, Washington, D.C.

DEAR MR. HARRIS: The State of Indiana has made considerable progress in the field of educational television both at the public school level and in the institutions of higher learning in education. In the elementary and high schools those which are financially able to bear the cost of receiving equipment are participating in the Midwest program originating from Purdue University and financed by the Ford Foundation. From our early experiments, we feel that much good will come from these programs to the public schools and for that reason we would favor Federal legislation that is before Congress at this time.

Indiana through its institutions of higher education is planning expanded programs in ETV. The four State schools have given the program much attention on both a closed circuit and broadcast basis. Ball State Teachers College, one of our four State colleges, has a physical plant ready for operation; however, because of the high cost of construction for facilities adequate for TV their entire capital budget needed to be used for construction and no money was available for TV equipment. The other schools are at different stages in development, and there is reason to believe that their programs would be stimulated if funds were to become available for equipment.

Several public school systems have programs already operating which cause our colleges to be aware of the need for training teaching personnel who have had experience with instruction by TV. The airborne TV project also should be a great stimulus to our State in ETV because the plane doing the broadcasting is located over central Indiana and many schools are equipped to receive their programming.

Sincerely,

MATTHEW E. WELSH, *Governor.*

STATE OF IOWA,
OFFICE OF THE GOVERNOR,
Des Moines, May 11, 1961.

Representative OREN HARRIS,
*House Interstate and Foreign Commerce Committee,
New House Office Building, Washington, D.C.*

DEAR REPRESENTATIVE HARRIS: I would like to take this opportunity to assure you that the State of Iowa is very much interested in the educational television aid measures that are currently under discussion in your committee. Iowa has been called a key State in the educational television network that will probably be created if your committee gives favorable action to the educational television bill.

The legislature of my State has passed a concurrent resolution that I believe is even added authority to my endorsement of the State of Iowa's determination to carry forth an educational television program. I am enclosing a copy of the concurrent resolution No. 15, passed by the House on April 25 and by the Senate on April 28.

I send you my personal regards.

Sincerely yours,

NORMAN A. ERBE, *Governor.*

HOUSE CONCURRENT RESOLUTION 15

Whereas the General Assembly of the State of Iowa recognizes the increasing need for additional resources and the need of sharing those resources so that educational benefits may accrue to all the people of the state of Iowa: Therefore be it

Resolved by the house of representatives, the senate concurring, That the continued use of educational television and radio broadcasting should be encouraged and, to the end that increased educational opportunities may be so made available, the use of such media should be expanded as rapidly and as fully as possible; and be it further

Resolved, that since it is desirable that educational opportunity at all levels be extended to all the people of Iowa, the General Assembly of the State of Iowa hereby declares its interest in and intent to undertake a study of the means by which additional educational television facilities may be employed to serve the educational needs of the State of Iowa; and be it further

Resolved, That the educational resources so richly prevalent in the entire Upper Midwest should be made available to the people and the schools of Iowa by means of the proposed Upper Midwest Six-State Educational Television Network; and be it further

Resolved, That the General Assembly of the State of Iowa pledge its support in the planning of an educational television network which will adequately serve the State of Iowa and its cooperation with the proposed Upper Midwest Six-State Educational Television Network.

THE STATE OF KANSAS,
DEPARTMENT OF ADMINISTRATION,
BUDGET DIVISION,
Topeka, April 5, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: Gov. John Anderson has requested that I assemble, for the use of your committee, material pertaining to the establishment of an educational television network for the State of Kansas. For the information of your committee, I am enclosing the following documents:

1. A survey and report concerned with the feasibility of an educational television network for the State of Kansas, prepared for the Committee on Education of the Legislative Council of the State of Kansas, September 15, 1960.

2. Journal of the Senate of the Kansas Legislature, 22d day, February 13, 1961, with particular reference to pages 99-108. This journal contains the report of the Legislative Council Committee on Education based on the September 15 report.

3. Senate bill No. 372 by the Committee on Education, which bill is presently under consideration in our legislature and which would create the Kansas Educational Television Authority.

4. Senate bill No. 373 by the Committee on Education, which bill is also under consideration in our legislature and which would appropriate funds for the initial organization of the Kansas Educational Television Authority.

The pattern established by Senate bill 372 would undoubtedly represent the approach that Kansas would take to an educational television system, and although neither senate bill No. 372 nor senate bill No. 373 have passed the Kansas Legislature, they are both under consideration at the present time; and while predicting the outcome of a bill in the legislative body is always hazardous, I would venture the guess that senate bill No. 372 establishing the authority will pass and that some appropriation will be made for educational work prior to the budget session of our legislature in 1962.

Should you have any additional questions concerning the matter of educational television, please feel free to call on us.

Sincerely yours,

JAMES W. BIBB, *Budget Director.*

SESSION OF 1961

[Printed for the House]

SENATE BILL No. 372

BY COMMITTEE ON EDUCATION

AN ACT Relating to educational television; providing for a statewide educational television system and for the acquisition, maintenance and operation of television facilities; creating an educational television authority and prescribing the powers, duties and authority thereof; and providing for the administration of the act.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. *Intent and purpose of act.* It is the intent of the legislature and the purpose of this act to make educational television services available to all citizens of Kansas on a coordinated state-wide basis. Said educational television services may be provided by and through the various state, local and private educational and cultural agencies, institutions, and organizations in the state of Kansas under the direction and supervision of the Kansas educational television authority.

Sec. 2. *Authority; creation; membership; terms; vacancies; compensation; bond.* There is hereby created the Kansas educational television authority, hereinafter referred to as "authority," which shall be a body corporate with powers to sue and be sued. Such authority shall consist of nine (9) members to be appointed by the governor, not more than two (2) of whom shall be from the same congressional district. Two members of said authority shall be appointed from the state at large to represent the public; and one member shall be appointed from a list of three (3) persons nominated by each of the following organizations, officers, or state agencies: The state board of regents, the state superintendent of public instruction, the Kansas association of school boards, the Kansas congress of parents and teachers, the Kansas council for church related colleges, the Kansas smaller high school association, and the Kansas public junior college association. Within fifteen (15) days after the act becomes effective, each of the aforementioned organizations, officers, or agencies shall submit a list of three (3) nominees for one of the positions to be filled by the governor, and the governor shall select one of said nominees as a member of such authority. The initial appointments of the members of the board shall be for terms as follows: Two for a term of one (1) year, two for terms of two (2) years, two for terms of three (3) years, and three for terms of four (4) years. As the terms of office expire, successors shall be appointed for terms of four (4) years and until their successors are appointed and qualify, in the same manner as the original appointees were selected. All vacancies in office shall be filled for the unexpired terms and until their successors are elected and qualify. No member of the authority shall have any financial interest in any of the facilities with which the authority may be authorized to deal. Members of the authority shall serve without compensation, but shall be reimbursed for actual and necessary expenses incurred in the performance of their duties, from moneys made available to the authority.

SEC. 3. *Same; office; organization; director; duties; employees.* The principal office of the authority shall be in Topeka, or at the location of the nearest educational television station. If such office is located in the city of Topeka, office space shall be assigned to the authority by the executive council. Within thirty (30) days after their appointment, the members shall meet at the call of the governor to organize. At such meeting they shall choose from their number a chairman, a secretary, and such other officers as may be deemed necessary. Thereafter, the officers shall be elected annually. The authority shall keep a complete record of all of its proceedings, and such record shall be open to all reasonable hours for public inspection. The authority shall appoint a full-time director with experience in the field of educational television broadcasting, who shall be the executive officer and whose duty it shall be to administer the policy of the authority and who shall be responsible for the actual operation of the educational television system. Said executive director shall receive such compensation as the authority shall determine. Said director, with the approval of the authority, may engage the services of such engineering, legal, or technical consultants as may be necessary. With the approval of the authority the director shall employ such other assistants and employees as may be necessary, who shall be within the classified service under the Kansas civil service act.

SEC. 4. *Same; survey and plan for noncommercial television.* For the purpose of making the benefits of educational television available to and promoting its use by the people of Kansas, the authority is hereby empowered and directed to survey, study, appraise the need, and develop an over-all plan of educational television. It shall be the duty of the authority to determine the proper minimum number and the location of transmitters necessary to provide adequate educational television coverage of the state of Kansas. Said authority shall make an annual report to the governor and to the legislature on or before January 15, together with such recommendation as the authority shall see fit to adopt.

SEC. 5. *Same; programs; advertising.* The programs telecast over the educational television network are to be for educational, informational and cultural purposes. Co-operation with commercial broadcasting companies and educational television networks or stations in other states is authorized through the exchange of programs or otherwise.

It shall be unlawful for the authority to permit any individual, company, corporation or organization to advertise or otherwise attempt to sell its products or services through the use of the facilities controlled by the authority; and it shall also be unlawful for said authority to permit any individual or organization to in any way sponsor the election of any political party or individual for any public office. Nothing in this act shall be construed in any manner which would exclude announcements and programs of nonprofit charitable and educational organizations which are for the public good. Information programs sponsored by legally authorized agencies of the state and federal governments for the public good are to be considered proper program material.

SEC. 6. *Same; operation of facilities; state-wide system.* The authority is hereby authorized and empowered to plan, construct, repair, and operate educational television facilities with channels assigned by the federal communications commission to the state of Kansas for educational television purposes. Said authority shall provide a state-wide educational television system including any arrangements for extension thereof and interchanges and rentals as may be necessary in establishing such state-wide facilities. The authority is specifically charged with the duty of controlling and supervising the use of the channels awarded to the authority by the federal communications commission for non-commercial educational use. It may designate the location of stations to utilize such channels and make rules and regulations governing the operations of such stations and the programs televised over such channels.

SEC. 7. *Same; establishment of transmitters; program facilities.* It shall be the duty and responsibility of the authority to make provision for a network of television transmitters to provide program service as soon as practicable to every part of the state. Program production facilities shall be provided at centers from which the most satisfactory programs can be obtained in numbers and quality, but opportunity shall be provided for the production of programs at any point throughout the state by means of a mobile production unit or by other methods.

SEC. 8. *Same; powers.* In addition to duties hereinbefore imposed, the authority is hereby authorized and empowered to: (1) Accept, assume, and control the television channels awarded by the federal communications commission to the authority for educational purposes, and to petition the federal communications commission for other channels needed to complete a state-wide educational television system.

(2) Own and operate television stations to utilize such channels.

(3) Lease the facilities of commercial television stations when it would be expedient and economical so to do.

(4) Enter into contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers and to execute such contracts and other instruments necessary and convenient to carry out the mandates of the act.

(5) Accept gifts or grants of property or money, real and personal, and the voluntary and uncompensated services from any person, organization, the federal government or other governmental agency, a board of education, educational institution or commercial or industrial enterprise.

(6) Erect towers, construct buildings, purchase and install equipment and operate the network system to carry out the purposes of this act.

(7) Adopt and promulgate such regulations as may be necessary to properly administer and enforce the provisions of the act, and for the regulation of its affairs and conduct of its business.

(8) Adopt an official seal.

(9) Maintain offices and stations in addition to the principal office, at such place or places within the state as it may designate.

(10) Construct, maintain and operate television facilities, including a television microwave network, and access connections.

(11) Pay the expenses of carrying out the provisions of this act, including the cost of the operation, and the maintenance and repair of such facilities from funds appropriated by the legislature or from grants, gifts or contributions.

(12) Conduct research and experimentation on improved methods of telecasting or improved use of television for educational purposes.

(13) Acquire in the name of the authority by purchase or otherwise, on such terms and conditions and in such manner as it may deem proper, such public or private land, rights of way, property rights, easements, and interests as it may deem necessary for carrying out the provision of this act.

(14) Do any and all things necessary to comply with the rules, regulations or requirements of the federal communications commission or any other federal agency administering any law enacted by the congress of the United States to aid and encourage education.

SEC. 9. *Effective date.* This act shall take effect and be in force from and after its publication in the official state paper.

 Session of 1961

SENATE BILL No. 373

By COMMITTEE ON EDUCATION

AN ACT making appropriations to the Kansas educational television authority for the operation, maintenance, support and functioning of activities of said authority for the fiscal years ending June 30, 1961, and June 30, 1962.

Be it enacted by the Legislature of the State of Kansas:

SECTION 1. There is hereby appropriated out of the state 2 general revenue fund for the fiscal years ending June 30, 1961, 3 and June 30, 1962, the sums as set forth in section 2 of this act 4 for the operation, maintenance, support and functioning of the 5 Kansas educational television authority.

SEC. 2. To the

KANSAS EDUCATIONAL TELEVISION AUTHORITY

	1961	1962
Salaries and wages; other operating expenditures . . .	\$9,000	\$91,000
<i>Provided</i> , Any unencumbered balance as of June 30, 1961; is hereby reappropriated for the fiscal year ending June 30, 1962.		

SEC. 3. The controller of the state department of administra- 2 tion is hereby authorized to draw his warrants on the state 3 treasurer upon the presentation of payrolls or vouchers duly 4 itemized and approved in the name of the chief executive officer 5 of the Kansas educational television authority.

SEC. 4. This act shall take effect and be in force from and 2 after its publication in the official state paper.

FEBRUARY 13, 1961

Journal of the Senate

TWENTY-SECOND DAY

SENATE CHAMBER, TOPEKA, KAN.,

February 13, 1961—1:30 p. m.

The Senate was called to order by Lieutenant Governor Harold H. Chase.

The roll was called, with thirty-nine senators present. Senator McDowell was excused.

Invocation by Chaplain Lawrence E. Schwarz.

O Thou who hast given us life and the light of love, accept the gratitude of our hearts for every good and perfect gift. May Thy spirit dwell within our hearts to sustain our mental peace and our emotional poise. So often we appear casual when there is turbulence within. Few of our decisions will shake the world, but all of our decisions will shape our lives. So lead us in all we do or say. In the name of Christ who calls us to follow Him we pray. Amen.

Senator Doty introduced former Senator Robert S. Lemon, Pittsburg, Kan.

Senator Ball introduced a former member of the House of Representatives, Emmett White, Effingham, Kan.

Senator Menhusen introduced former senator, Philip J. Doyle, Beloit, Kan.

Lieutenant Governor Chase welcomed these guests.

Lieutenant Governor Chase announced an invitation had been received from John M. Oakes, member of the House of Representatives, inviting the members of the Senate to join the House of Representatives for a musical program to be given by the Polychromes of Parsons Junior College, at 9:45 a. m., Tuesday, February 14.

PRESENTATION OF PETITIONS

The following petition was read and filed:

SP 16, by Senator Menhusen: Favoring the passage of legislation as recommended by the Kansas Citizens Safety Council relative to traffic safety and implementation of

the traffic court study made by the Kansas legislative council. Signed by Rev. Marshall Schirer and six others of Baptist Parish, Cawker City, Kan.

INTRODUCTION OF BILLS

The following bills were introduced and read the first time:

SB 174, by Senator Kuppinger: An act relating to water supply, providing for the establishment and operation of a wholesale public water supply district in Johnson county, and designating such county as an urban area; granting such district the power of condemnation, the power to issue revenue bonds, providing for the levying of certain taxes, and prescribing the powers, duties, and authority of said district.

SB 175, by Senator Kuppinger: An act concerning the elections and powers of election commissioners, city clerks, and governing bodies of certain cities; amending section 19-3422 of the General Statutes of 1949, and repealing said original section.

SB 176, by Senator Kuppinger: An act relating to elections; providing for the payment of the costs of certain elections, and authorizing tax levies to provide funds therefor in certain counties; amending section 19-3435 of the General Statutes of 1949 and section 25-109 of the General Statutes Supplement of 1959, and repealing said original sections.

SB 177, by Senator Strahan: An act relating to liens on real property in favor of subcontractors, mechanics, artisans, laborers, furnishers of materials and services and others, providing procedures for the perfecting of such liens and the enforcement thereof, defining certain rights and liabilities, and prescribing fees for filing statements, amending section 60-1403 of the General Statutes Supplement of 1959, and repealing said original section.

JOURNAL OF THE SENATE

SB 178, by Committee on Forestry, Fish and Game: An act relating to licenses for game breeding and controlled shooting areas and establishing date of expiration, amending section 32-314 of the General Statutes Supplement of 1959, and repealing said original section.

SB 179, by Committee on Forestry, Fish and Game: An act relating to fish, game and fur-bearing animals, prescribing the powers, duties, authority and jurisdiction of the state forestry, fish and game commission, amending section 32-164 of the General Statutes of 1949, and repealing said original section.

SB 180, by Senator Hodge: An act relating to and regulating activities on waters located within the territorial limits of this state including boating, water skiing, surf boating, regattas, motorboat races, boat races, marine parades, marine tournaments, marine exhibitions and boat liveryes; defining certain terms; requiring and providing for the numbering of boats, and prescribing a fee therefor; providing for the issuance of duplicate certificates of boat numbers; requiring certain equipment on certain vessels and boats and motorboats; authorizing local regulations of boats and boating and other related activities; amending section 82a-802, 82a-804, 82a-806, 82a-809, 82a-812, 82a-813, 82a-815 and 82a-819 of the General Statutes Supplement of 1959, and repealing said original sections.

SB 181, by Senators Hodge and Bowers: An act to provide for the humane slaughter of livestock as therein defined, prohibiting certain slaughtering practices by slaughterers, packers, and stockyard operators as therein defined, declaring certain acts unlawful, and providing penalties for violations.

SB 182, by Senator Hodge: An act relating to certain cites of the first class, providing for the filling of vacancies in the offices of mayor and commissioners and for the election of a president of the board of commissioners, amending section 13-1806 of the General Statutes of 1949, and repealing said original section.

SB 183, by Senator Farmer: An act relating to district courts in certain counties, providing for divisions of such courts and the judges therein, authorizing the issuance of no-fund warrants to pay the cost of establishing, maintaining, and operating additional divisions of certain district courts, amending section 20-601 of the General Statutes Supplement of 1959, and repealing said original section.

SB 184, by Senator Farmer: An act relating to fees and salaries of officers and employees of the probate courts of certain counties, amending section 28-608 of the General Statutes Supplement of 1959, and repealing said original section.

SB 185, by Senator Farmer: An act concerning the courts of common pleas, and certain rules of procedure in actions; providing for parole officer and for divisions of such courts, and establishing certain fees and salaries in certain counties; amending sections 20-2001, 20-2015, and 20-2018 of the General Statutes Supplement of 1959, and repealing said original sections.

SB 186, by Senators Warren, Joseph, Ferguson, Doty, Myers, McDowell, Howat, and Bauman: An act relating to certain public employees; to define words and phrases used in the act; to establish the Kansas public employees retirement system; to provide for its membership, rights, powers, duties, regulations, liabilities, administration and financing; to provide for the rights, powers, duties, liabilities of and certain benefits for members, their dependents and beneficiaries; to provide for certain annuities, death, disability and other benefits; to create a board of trustees, define its powers, duties, authority and jurisdiction; to create a Kansas public employees retirement fund and provide for its safekeeping, investment, creation of reserves therein, use and management; to declare certain acts unlawful and to provide for penalties for violation of the act.

SB 187, by Committee on Judiciary: An act relating to the mortgage registration tax, amending section 79-3102 of the Gen-

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eral Statutes of 1949, and repealing said original section.

SB 188, by Committee on Fees, Salaries and Mileage: An act relating to witness fees and mileage payable to public officers, witnesses, jurors, and other persons, amending section 28-125 of the General Statutes of 1949, and repealing said original section.

SB 189, by Senator Jones: An act relating to schools, providing for the rehabilitation of disabled and handicapped persons and their return to remunerative employment, authorizing the acceptance, and adoption by the state of Kansas of certain acts of congress relating to rehabilitation, permitting certain trust funds, prescribing certain powers and duties, amending sections 72-4308, 72-4309, 72-4311, 72-4313 and 72-4314 of the General Statutes Supplement of 1959, and sections 72-4310, 72-4315 and 72-4316 of the General Statutes of 1949, and repealing said original sections.

SECOND READING AND REFERENCE OF BILLS

The following bills were read the second time and referred to committees as indicated:

- Assessment and Taxation: **SB 166**.
- Federal and State Affairs: **SB 171**.
- Judiciary: **SB 168**.
- Public Welfare: **SB 167, 173**.
- Ways and Means: **SB 172**.
- Committee of the Whole: **SB 169, 170**.

MESSAGE FROM THE GOVERNOR

SB 28, 147 approved on February 10, 1961.

MESSAGE FROM THE HOUSE

Announcing passage of **HB 3, 4, 13, 16, 22, 37, 63, 69, 70, 121, 123, 128, 144, 158; SB 147**.

The above House bills were thereupon read the first time.

REPORTS OF STANDING COMMITTEES

Committee on Forestry, Fish and Game recommends **SB 62** be amended in section 1,

line 5, by placing a period after the word "chickens," and by striking out the words "on which an open season is in effect."; and that the bill be passed as amended.

Committee on Industrial Development and Aeronautics recommends **SB 40** be amended by inserting a new section immediately after the enacting clause which shall be numbered "1" and shall read as follows:

SECTION 1. Section 19-3801 of the General Statutes Supplement of 1959 is hereby amended to read as follows: Sec. 19-3801. For the purpose of encouraging development in this state, the boards of county commissioners of any county ~~having a population of not less than fifty-five thousand (55,000) and not more than one hundred thousand (100,000)~~ shall have the power, upon a proper petition being presented for that purpose, to incorporate, organize and enlarge industrial districts within their respective counties in the manner hereinafter provided: *Provided, however,* That no board of county commissioners shall incorporate and organize or enlarge an industrial district when such industrial district is located entirely or in part within three (3) miles of the nearest point on the city limits of any incorporated city located in the same county, unless the governing body of such city shall recommend by resolution that such petition be granted.

That original sections 1, 2 and 3 be renumbered, respectively, as sections 2, 3 and 4; that original section 3, now renumbered 4, be amended in line 32 by striking out the word "landowner" and inserting in lieu thereof the word "owner"; that original section 4 be renumbered as section 5; that original section 5 be renumbered as section 6; that original section 6 be renumbered as section 7.

That original section 7 be renumbered as section 8 and it be amended in line 13 by inserting after the word "purposes" and before the comma the following: "for the preceding year"; also, in line 19, by inserting after the word "purposes" and before the comma the following: "for the preceding year"; also, in line 20, by striking out the word "school" where it appears the second time in said line and is the last word

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in said line and inserting in lieu thereof the word "industrial"; also, in line 22, by inserting after the word "purposes" and before the comma the following: "for the preceding year"; also, in line 25, by striking out all of said line after the word "twelve" and by striking out line 26 down to and including the word "district"; also, in line 27, by inserting after the word "to" the following: "the general fund of"; also, in line 36, by striking out the words "received in taxes" and inserting in lieu thereof the words "of taxes levied"; also, in line 48, by striking out the words "derived by" and inserting in lieu thereof "levied for"; also, in line 51 by striking out all of said line after the word "and" and by striking out of line 52 the word "compute"; also, in line 54, by inserting a new sentence after the period after the word "treasurer" which new sentence shall read as follows: "For the purpose of the above computation the number of students enrolled in all schools of each such district shall be based upon the enrollment on September 15 of the year preceding that in which the levy is determined."; also, in line 58, by striking out the words "directors of such district" and inserting in lieu thereof the words "county clerk"; also, in line 64, by inserting after the word "the" the following: "bond and interest funds of the"; also, in line 77, by striking out the words "directors of said industrial district" and inserting in lieu thereof the words "county clerk"; also, in line 78, by striking out the word "of" and inserting in lieu thereof the following: "equal to the rate of levy made for the payment of principal and interest on such bonds in the district in which they have been issued or equal to the sum of the rates of levies for such purposes in the districts in which such bonds have been issued, whichever is the greater: *Provided, however,* That in no event shall the rate of such annual tax levy made by the county clerk on the property in such industrial district for such purposes exceed"; also, in line 79, by striking out the word "paid" and inserting in lieu thereof the word "distributed"; also, in line 82, by striking out all of said line

after the period after the word "provided" and by striking out line 83 down to and including the comma after the word "made"; also, in said line 83, by striking out the word "the" where it appears before the word "county" and inserting in lieu thereof the word "The"; also, in line 84, by striking out the word "pay" and inserting in lieu thereof the word "distribute"; also, in line 86, by inserting after the word "has" the word "such"; also, in line 88, by inserting after the word "have" the word "such"; also, in line 89, by striking out the word "paid" and inserting in lieu thereof the word "distributed"; also, in line 91, by inserting after the word "of" and before the word "bonds" the word "such"; also, in said line 91, by inserting after the word "issued" the words "and outstanding"; also, in said line 91, by striking out the syllable "Oc" and in line 92 by striking out the syllables "tober" and inserting in lieu thereof the word "July"; also, in line 93, by inserting after the word "of" and before the word "bonds" the word "such"; also, in said line 93, by inserting after the word "issued" the words "and outstanding"; also, in said line 93, by striking out the word "October" and inserting in lieu thereof the word "July"; also, in line 94, by inserting after the word "having" the word "such"; also, by striking out all of lines 95 to 103, inclusive.

By renumbering original sections 8, 9, 10 and 11, respectively, as sections 9, 10, 11 and 12.

That original section 10, now renumbered 11, be amended in line 1 thereof, by inserting after the word "Sections" the figures "19-3801,".

That the title of the bill be amended in line 1 by striking out all of said line after the word "districts," and by striking out all of line 2, and by striking out line 3 down to and including the word "thousand"; also, in line 7 of the title, by inserting after the word "sections" the figures "19-3801,"; and the bill be passed as amended.

Committee on Municipalities recommends SB 79, 118, 137, 142 be passed.

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REPORT ON ENROLLED BILLS

SB 147 reported correctly enrolled, properly signed and presented to the governor on February 13, 1961.

REPORT OF SELECT COMMITTEES

Senator Jones presented the following report on educational television. On motion of Senator Jones the report was ordered printed in the Journal of the Senate.

COMMITTEE REPORT ON
EDUCATIONAL TELEVISION

MR. PRESIDENT: The Legislative Council Committee on Education, having been authorized on November 15, 1960 (Journal, p. 107), to continue its consideration of Proposal No. 12, to carry out Item No. 35 of House bill 512 (Ch. 35) of the 1959 session, relating to a study of educational television, submits this final report to the legislature of 1961.

An educational and engineering feasibility survey has been completed, in accordance with the intent of the 1959 legislation. As a result of the survey findings, the director formulated a plan for a state-wide system of educational television. Copies of the survey report presented to the legislative council on November 15, have been made available to members of the legislature, school administrators, and individuals interested in the possible uses of educational television.

Survey Report Recommends State Network

In brief, the plan recommended in the survey report was designed to achieve maximum audience coverage consistent with reasonable capital expenditure, effective operation, and flexibility in programming. The proposed system provides for: (1) six high antennae maximum power transmitters, five on VHF channels (Channel 11, Topeka; 8, Hutchinson; 9, Lincoln; 4, Grainfield; and 3, Garden City); and one on a UHF channel (16, Chanute) in southeast Kansas where no VHF channel is available; (2) three major program production centers (Wichita, Lawrence, and Manhattan), and five minor program production centers (Emporia, Hays, Kansas City, Pittsburg, and Topeka) where teaching resources tend to be concentrated; (3) a microwave relay system interconnecting the eight program production centers with the six transmitters to provide maximum flexibility under which any production center could "feed" the entire state network, either live or tape, or

separate regional programs could be telecast simultaneously by the different transmitters; and (4) the network is so arranged that additional UHF channels could be attached if desired.

The location of the transmitters has been worked out with meticulous care by the consulting engineer to give maximum coverage and to comply with the space separation requirements of the Federal Communications Commission. The plan would provide a Class A or Class B signal to ninety-two percent of the Kansas population, and it was indicated that the relatively small number of people residing in the intervening areas can receive an adequate signal if they have a directional antenna, as many of them now have. However, because of the several television stations located in Kansas City, Missouri, some people in Wyandotte and Johnson counties may not be able to get a comparable signal from station 11 at Topeka without directional antennae. Classrooms and homes in southeast Kansas will need to be equipped with converters because of the necessity of using a UHF channel in that area. With these adaptations, good reception throughout the entire state would be assured.

Cost of the Network Construction

The cost of establishing a complete state-wide network, as detailed on pages 43-69 of the survey report, was estimated at \$6½ million, as follows:

Equipment:		
Transmitting	\$2,627,936.10	
Studio	1,262,198.00	
Microwave	1,062,449.00	
Testing	20,088.50	
		\$4,972,671.60
Housing and furnishings		2,286,000.00
Other expense:		
Engineering and legal fees	60,000.00	
Freight and Drayage	49,525.78	
Wiring	135,000.00	244,525.78
Grand total		\$7,503,197.38
Less discount of 10%		750,319.74
Net estimated total		6,752,877.64

Funds for the purchase of a mobile unit which could produce programs from any location in the state were not included in the cost estimate, on the grounds that such equipment probably could be rented for those special occasions when it would be needed. The estimate also excludes any allowance for the purchasing of television sets for school classrooms. It would normally be assumed that receiving equipment would be furnished by the local school district or the educational institution.

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The expenditure of \$6 million, when considered in the light of total present funds being spent for education, public and private, is not unreasonable. Educational expenditures in Kansas will approximate \$225 million for school operation, and three percent of this amount would be sufficient to construct an educational television network. If it cost as much as \$1 million a year to operate the system, this would amount to only four-tenths of one percent of present expenditures, or less than 50¢ per capita.

The total amount of capital costs might possibly be reduced below the estimate under certain circumstances, by the following means:

(1) Purchasing all the needed equipment in the immediate future in order to secure the lowest prices.

(2) Remodeling, for studio purposes, quarters in existing buildings on the campuses of the five state schools, if such quarters can be made available, instead of constructing all new studio buildings.

(3) Elimination of some of the sections of the microwave relay system, between units of the network, which would delete certain estimated cost items, but would not provide as satisfactory network operation, control or flexibility.

In considering the cost of the proposed system of educational television a number of facts should be kept in mind. First, the owners of commercial television stations and various foundations have contributed substantial amounts of money and equipment to educational television agencies in other states. It is possible that some of the needs of the Kansas network might be met in this way from special gifts. In 1953, the Ford Foundation offered to grant Kansas \$200,000 for educational television. Such grants are no longer being made. However, as long as funds remain, grants of \$52,000 for the purchase of video tape recorders for educational television stations may be obtained from the Educational Television and Radio Center of New York, from funds which have been provided by the Ford Foundation. Thus the possibility of securing \$300,000 worth of equipment is in view if proposed plans can be implemented rapidly.

Recent reports have indicated that Senator Andrew F. Schoepel is again the co-author of a bill introduced in Congress, known as the Schoepel-Magnuson bill, to distribute federal funds to the states for the purchase of equipment for educational television. A similar bill providing a million dollars for each of the states, passed the Senate in the last Congress. It is reported that the outlook is favorable for the appro-

priation to go through this year. Funds might be made available either by outright grant or on a matching basis. In either event, federal funds would tend to reduce the amount of state money needed to purchase equipment.

The survey report also refers to the possibility of the present WIBW-TV transmitter tower and equipment being donated to the state for educational television purposes, if permission is obtained to construct a new transmitter farther west of Topeka. The circumstances under which this might occur have not been discussed with the committee, but if the transaction should materialize it would constitute a gift of a valuable property which would reduce the overall cost of construction to the state.

Costs of Operation

Annual operational costs of the proposed state-wide system were estimated in the survey report as \$659,322.20, on the basis of telecasting 40 hours per week or 2,000 hours per year, of which 10 hours per week would be on video tape or film and 30 hours would be "live." This cost estimate was exclusive of any salaries or emoluments paid television teachers, as it was assumed that the teachers chosen from the teaching staffs and faculties of schools, colleges and universities for their competence in certain subjects would continue to be paid by the same educational agencies which employ them.

Many people interested in educational television believe that the estimates of operating costs should include an item for paying teachers. When a teacher is relieved of part of his regular assignment in order to teach on television, a substitute teacher usually must be employed to take his place in the classroom. Furthermore, experience has indicated that more time is required in preparation for teaching on television than for ordinary classroom teaching. Inasmuch as television immeasurably expands the teacher's outreach and the number of pupils benefited, the view has been expressed that the financial support of the teachers should not be drawn exclusively from that school district or educational institution to which the teacher would otherwise devote his full time and effort. Therefore, it probably would be advisable to include in operating funds some allowance for teaching costs.

Experience of Kansas Schools

Some use of educational television by Kansas institutions of higher education was indicated by the survey report, although a number of important exceptions exist.

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The Kansas Medical Center has done some remarkable work in developing new television techniques for medical use. Kansas State University has had closed-circuit television in its speech department and has used it in the veterinary school. Pittsburg has made successful use of closed-circuit television beginning in 1955. The University of Kansas operates one end of a microwave link with station WIBW at Topeka.

All of the five state schools and Wichita and Washburn Universities have produced some programs on commercial stations, and three of the schools have given credit for the "continental classroom" courses. The two state universities and Wichita University have produced film, film clips and educational courses; and credit courses of Southwestern College, Kansas University, and Wichita University have been telecast over commercial stations. The latter has done a great deal of programming on Wichita commercial stations. About 250 half-hour programs have been produced at Wichita, and during 1959-60, live courses in English, French, Ideas in Action, and Music were produced. A philosophy program on film also was telecast.

Three city school systems in Kansas have had some experience in the use of educational television. Kansas City and Topeka have used programs in Elementary Science and World History broadcast from the Kansas City, Missouri, school system. Wichita has been experimenting with television teaching for four years, and has demonstrated its values from the standpoint of teaching effectiveness and economics. A class of 450 students in American History, as well as classes in Government, Psychology and Driver Education has been taught by television in high school, and experiments in television teaching have been conducted in four of the Wichita elementary schools.

Feasibility and Practicability of Educational Television

The survey reported that a state-wide system of educational television is entirely feasible and practicable from an engineering, administrative, and educational programming standpoint. Parents, teachers, and school administrators consulted indicated that a state-wide system of educational television is needed to improve, enrich and extend the curriculum. The areas of greatest need for such a service are in the improvement of the quality of instruction and in providing instruction in courses not now available, such as in Science and Modern Languages. Teacher training, especially for

rural schools, was strongly emphasized. Other secondary benefits would accrue from the education of homebound children, extension of the education of out-of-school youth, evening courses for adults, and special informational programs. Competent teachers and sources of instruction materials are available to be utilized through this new medium.

The survey report points out that the existence of a large number of small schools makes it extremely difficult for them to develop a comprehensive modern curriculum. The consensus of school administrators was reported to indicate "that there are approximately 15 subject-areas which are now in some measure being neglected or served inadequately throughout the state." The subject-areas of greatest need are: Science (Chemistry and Physics), Elementary Foreign Language, Elementary Science, Social Studies, Modern Foreign Languages (secondary schools), English and English Literature, Mathematics, Biology, Music, Art, Adult Education, Driver Education, and Pre-School Education. General agreement was indicated that in some measure all of these subjects can be taught effectively by educational television, and done more inexpensively because of the joint use of materials and facilities. Even in the best city school systems, educational television would tend to improve instruction.

Use of Television in Higher Education

Educational television is being used more and more in the colleges and universities. Closed-circuit television is particularly well adapted for use on college campuses. Many institutions participating in network programs and off-campus courses also are using open-circuit television.

There are several educational jobs in which television now is being used at the college level. These include the following:

- (1) Credit courses for on-campus resident students (subject courses range from Accounting, Economics, History, and Literature to Anthropology, Biology, Air Science, Meteorology, and Electric and Magnetic Field Theory).
- (2) Credit courses for off-campus students.
- (3) Noncredit courses of all types.
- (4) Specialized professional training, such as in medical and dental schools.
- (5) University extension courses such as agriculture and home economics.
- (6) General adult education such as Parent Education, Economics, World Affairs, and the Arts.

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(7) Sponsorship of the nationally-syndicated course, "Continental Classroom."

Among its services, television is being used to help solve space problems in crowded college halls. Last fall when 1,800 students enrolled in a course in "Philosophies of Today" for which 350 had been anticipated, it was reported that U. C. L. A. decided to bring the professor to them via closed-circuit television. A hookup connecting eight campus halls and classrooms was made to present the lectures.

Advantages and Services

Among specific advantages of television for purposes of instruction which have been recognized and pointed out in various reports are the following:

(1) It multiplies the effectiveness of the good teacher by enabling him to reach a great many more pupils, some of whom would otherwise have only mediocre instruction.

(2) It has stimulated some superior students to continue their education in college who otherwise would have terminated their education after graduation from high school.

(3) It tends to equalize the educational opportunities of the children of an area regardless of the size or location of the school.

(4) It fills the gaps in our school system, such as, for "dropouts" after the eighth grade or during high school.

(5) It can be used to provide teacher training (in some school systems an hour's program on teaching methods has been telecast each afternoon after school).

(6) A much larger group of students can be enrolled in lecture courses taught by a single teacher on television.

Television itself is a piece of equipment and not a teacher. Television does not make a lesson good or bad. If properly used and co-ordinated with other school instructional aids it can make a special contribution to the educational program. Teaching by television tends to shift the emphasis from memorization to methods of self-education. It enables the student to work independently. Television can provide a much wider range of subjects and greater accessibility to learning subjects.

A television screen gives the teacher an effective means of directing and controlling the pupil's attention. It helps develop habits of sustained attention, careful observation and attentive listening. This is because the television teacher can look every single student straight in the eye simultaneously, something that is not possible even in the smallest classroom.

The camera can magnify small objects,

present close-ups of a demonstration, a map or an object of interest, and can give everyone a "front-row seat." Demonstration equipment can be made available to a studio and seen in a thousand classrooms which could never be taken to the classrooms individually. Each student can see more details of instructional materials. The visual impact at the moment of explanation sharpens the learning process. And with highly organized presentations more subject matter can be covered in less time.

Can Television Replace Teachers?

The committee found that television teaching does not replace the classroom teacher, except in certain junior college, college, or adult education courses. In elementary and secondary schools, television instruction usually is limited to 20 to 30 minutes at a time, and a pupil would not ordinarily have more than one or two television courses a semester. Television instruction usually is preceded by a preparatory period of five to ten minutes in which the classroom teacher orients the pupils to the lesson. The remaining time after the telecast is devoted to "follow-up" by the classroom teacher, questions and answers, practice, examinations, and routine classroom matters.

Experience indicates that preparation for teaching on television requires more imagination, creativity, and time for preparation than classroom teaching. Excellent classroom teachers can learn to become good teachers on television. However, they must have time to plan, organize materials, construct visuals, make suggestions for follow-up activities, and maintain contact with classroom teachers and pupils.

The classroom teacher is benefited by being able to watch another teacher's methods and procedures. She has an opportunity to study the reaction of the pupils to the television lesson, and to develop means, or make suggestions, for meeting special needs or problems. The result is sort of "team" approach to teaching. Experiments seem to indicate that some public school courses can be taught by television in relatively large groups. Under this arrangement some classroom teachers may be relieved for conferences with individual pupils, and for discussion periods in smaller section meetings.

Commercial Versus Educational Television

The question sometimes is raised as to whether educational television will compete with commercial television. The committee invited the managers of commercial TV sta-

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tions in Kansas to a meeting to discuss their views, and has conferred with some of the operators several times during the past four years. Several have expressed approval of a state-wide educational television system for Kansas. An opinion was expressed that the service could be provided at less cost through commercial channels in some areas. The commercial operators have been very helpful in the assistance which they have rendered to the committee, and their cooperation is deeply appreciated.

The general conclusion is that educational television would be competitive with commercial television to the extent that its telecasts become attractive to the general public, and to the extent that it results in the television audience being shared. The fact is that educational television appeals to a relatively small audience as compared with commercial programs. To the extent that it can relieve commercial stations of informational and public service types of programs, more time can be devoted to revenue producing programs on commercial stations.

The attitude of commercial operators over the country as a whole has been favorable to educational television, for the reason that as a group, they are in favor of a strong system of public education, and recognize that television is an important educational tool. This attitude has been demonstrated by the numerous gifts of money and equipment to educational television stations by the owners of commercial stations.

Commercial stations cannot be used regularly for educational television for two reasons:

(1) It would be too expensive to telecast a complete educational television program over commercial stations.

(2) Commercial stations cannot afford to allocate for educational purposes the top viewing morning and afternoon hours for in-school telecasts, or evening hours for college courses, when they can sell the time to advertisers.

Television broadcasting by commercial stations is a business, and the operators must make a profit. They are not in position to guarantee in advance for any long period of time several hours of prime viewing time daily for programs appealing only to a limited audience. In some areas, fringe viewing time such as before 8:00 in the morning, sometimes referred to as "sunrise semester," has been contracted by school systems over commercial stations, but continuous programming at regular school hours over commercial stations has generally not been feasible.

Use of Educational TV

The use of educational television is growing rapidly. Three more stations have gone on the air since the survey report was written, making a total of 53 educational television stations. Many hundreds of school systems and more than 200 colleges and universities in 29 of the states, including all of the states surrounding Kansas, are making regular use of educational television.

State-wide networks have been established in Alabama, Florida, Georgia, South Carolina, and Oklahoma, and others are in the planning state in Nebraska, Ohio, North Dakota, Iowa, Wisconsin, Tennessee, and Texas. Regional networks and programs are being developed in New England and are being considered in other sections. A recent survey indicated that 28.4 percent of urban school districts in this country make some use of television for instruction of pupils.

Experimentation with television teaching during the past eight years, and the steady expansion of its use seem to constitute conclusive evidence of the soundness of television from an educational standpoint. The tests of TV instruction show that there is "no significant difference," or that it is "equal to," and in some cases "better than" conventional classroom instruction.

Results might be illustrated by reference to a few specific cases.

High School Instruction in Nebraska

The University of Nebraska's station KUON-TV began telecasting high school courses in Algebra, General Mathematics, Plane Geometry, Spanish, Senior English, Physics and Art to students in 26 small Nebraska high schools soon after VHF Channel 10 was assigned and a license obtained in 1957. Direct in-school programs are broadcast from 9 a.m. to 2:30 p.m. At 5:15 p.m. KUON-TV signs on the air with an evening schedule of programs for children and offerings for adults in many fields.

Benefits of the Nebraska program for rural pupils were illustrated by a comment on a small town high school with an average graduating class of 14 students. Until this past year, no graduate of that high school had ever gone to college. In September, 1959, four graduates went to college as the result of mathematics courses they had taken by television during the two previous years. No such mathematics instruction ever had been available before to the pupils of that small high school.

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Hagerstown Experiment

A progress report on the third year of a five-year experiment by the Washington County (Maryland) closed-circuit television project, covering 16,500 pupils in 49 schools of the county, indicated achievement tests revealed that pupils who received instruction by television showed greater growth than those who received instruction in conventional classroom situations. It also was reported that television was most useful in situations where there was a shortage of instructional personnel or where qualified teachers were not available for particular subjects. Television enables personnel, equipment, and funds to be redeployed to serve more effective results.

In testifying before a U. S. Senate committee, the Superintendent of the Washington County schools stated that television work and classroom work had been combined to produce the result desired. "You might think offhand that that will require more teachers than before. But when you have a divided responsibility such as this, it is possible to change your class arrangement, pupil assignment, etc., so that we actually are using a few less teachers than we would be using if we did not have television."

Chicago Junior College

Evidence of the effectiveness of educational television at the junior college level is revealed in a recent report of a three-year experiment of the Chicago City Junior College in offering college courses for credit via open-circuit television. This experiment demonstrated that courses at the junior college level can be taught effectively to a home audience by television. A total of 27 different courses were telecast, including general education courses, basic skills courses, science, foreign language, humanities, social science, and specialized electives. It was found that such courses tend to attract a new group of students, some of whom would not otherwise have continued their education, and many of whom were in an older and more highly motivated age group. This group included many housewives who wanted to complete work for a degree, some of whom planned to become teachers.

Among the findings reported were the following: The telecourses for credit students attract, on the average, three times as many students who enroll for no credit as those who enroll for credit, and they also attract a viewing audience of 20 to 50 times the total enrollment. Classroom standards of instructions can be maintained, and tele-

course students can be awarded credit equal to that of classroom instruction. Accrediting associations, professional societies, schools and colleges recognize the validity and transferability of college credits earned by television instruction.

Three-credit-hour courses were offered successfully in three thirty-minute broadcasts per week, which ordinarily are offered in three fifty-minute periods of classroom instruction. Television instruction made possible educational service to handicapped persons, gifted high school seniors working for advanced college credit, and inmates of penal institutions. A printed telecourse guide was necessary to provide guidance for study between telecasts, and advanced printing and distribution of schedules of conferences and examinations were found desirable.

Supplementation of telecourses by face-to-face instruction depended upon the course of study. Foreign language telecourses were supported by eight (bi-weekly) two-hour session meetings for conversational drill. "Content" courses were supported by two one-hour conferences and two one-hour mid-term examinations. A conventional college would have required a professional staff of 25 and a building of moderate size to render equivalent services. The experiment showed that TV-at-home groups achieved as well as, or better than, conventional classroom groups.

The St. Louis College Program

An example of co-operative use of a community television station by four institutions of higher education is illustrated by the program of the St. Louis Educational Television Commission, which owns and operates educational television station KETC-TV. Six college courses for credit are presented over the station by St. Louis University, Washington University, Southern Illinois University, and Harris Teachers College. A student desiring to take courses for credit enrolls at either of these institutions. He receives the lectures by television. The institution in which he enrolls provides such additional classroom experience as it deems necessary to give credit for the course.

One of the most significant experiences cited before the Senate Committee was that of Washington University with freshmen mathematics. For several years Washington University has presented the lectures in freshmen mathematics only by television. No regularly scheduled classes have been held. Instead members of the mathematics department are available to give help on

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a more personalized basis to the student who needs assistance. The chancellor of Washington University was quoted as saying very frankly that they are using television because they can do a better job than can be done through conventional methods.

Washington Developments

Some adverse publicity for educational television occurred in 1959, when the Superintendent of the Washington, D. C., school system announced discontinuance of its experiment. This action has been attributed to the comparatively poor showing of the pupils in the Washington, D. C., school system contrasted with the showing of the pupils in neighboring districts. However, an expanded program is now being developed by the Greater Washington Educational Television Association, in which the Washington schools may again participate. The association comprises 30 school systems, colleges, and universities in Washington, D. C., and in nearby Virginia and Maryland. A few courses have been telecast over a commercial station in the early morning or late evening hours. Plans call for an enlarged program of in-school instruction which will be telecast over a new educational television station to go on the air next September.

The Economics of Educational Television

One of the questions asked the director of the survey was, "Can educational television save money?" The answer given in the report is "Yes." This does not mean that the operation of an educational television system could actually prevent further increases in the amount of money which will be spent for school purposes. There is little probability that educational television will hold total public school expenditures at present levels or prevent increases in the future, but there is a probability that educational television will limit the rate of increase so that the total expenditures in the future will be less than they would be if this educational tool were not employed.

Some of the economies of educational television, which have been cited, are from teaching several classes at the same time, or from the teaching of a much larger number of pupils in a class. Some consist of savings due to elimination of school facilities which otherwise would have to be constructed. These occur at the high school, junior college, and college or university levels, or where the public schools are organized on a county basis or a large community district basis. In some instances, television may eliminate the need of additional teachers in special elementary subjects such as in art,

music, or foreign language, which would result in savings in instructional costs at the local level. Also, in some areas of expanding elementary enrollment, there may be possibilities of making some savings in teaching costs by eliminating additional part-time instructors through the use of television.

Educational television is a tool for improving the quality and enriching the content of education at a relatively low cost. Its usefulness should be appraised primarily on its educational services. When school authorities are asked whether any money is being saved by use of television, many of them say that they are not using television primarily to save money, but rather to improve the quality of education. For example, the superintendent of the Oklahoma City public schools writes that television is being used to accomplish some purposes that could not be served otherwise. This is illustrated by the fact that French and Spanish are being taught in 82 elementary schools. Classroom teachers are not available to do this, and if they were, the school system could not afford to employ them. "By using two teachers on television, we are able to do a fairly creditable job." Apparently, many schools are experimenting with educational television to ascertain the ways in which it can best be used. In general, it would seem that school officials have been engrossed in this aspect of the new medium, and few scientific cost studies have been made.

Nevertheless, the survey points out that definite financial savings have been achieved in various specific instances. The Superintendent of the Dade County (Miami) Florida schools testified before the House of Representatives Committee on Interstate and Foreign Commerce on December 8, 1959, that the use of educational television would result in a savings of \$12,000,000 in capital construction through elimination of new buildings which would be needed except for educational television.

The President of the University of Houston is reported as estimating that if the University were to cease telecasting the required biology sequence, a building costing at least \$2 million would be required at once, and that additional faculty salaries would aggregate between \$30,000 to \$50,000 per year.

Savings of \$38,713 in 1957 and \$48,612 in 1958 were realized from instruction of four courses by television compared with costs of conventional instruction in classes of 35 to 40 pupils at Pennsylvania State University. The television courses were Psychology, Accounting, Sociology and Air

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Science, enrolling from 199 to 810 students per course. The 1958 operating costs of the closed-circuit television system were reported as \$33.24 per hour, or \$15,955.20, plus \$43,730 of personnel costs of instructors, graduate assistants and proctors, making a total cost of \$59,685.20. This contrasts with costs under conventional instruction of \$108,298.00, which left a net saving of \$48,612.80. The University Controller indicated that the break-even point fell at approximately 200 students. The difference in student credit-unit costs ranged from \$2.46 to \$4.05 in 1957.

The experiment of the Jefferson County (Kentucky) Board of Education also was referred to in the survey report. The experiment was carried on with large classes ranging from 90 to 430, and including as many as 2,500 students in the county, in which Science, History, English, Spanish and Social Studies were taught. Savings of \$600,741 for high school instruction, and \$297,646 for elementary school instruction are reported.

A course in elementary Spanish is being telecast to more than 25,000 pupils enrolled in 24 school districts, 25 parochial schools and 2 private schools by station KTCA-TV in Minnesota this year at a cost of 70 cents per pupil. These cases referred to would indicate that any courses which could be telecast for state-wide use, whether elementary, secondary or college courses, could be provided at a relatively low cost per pupil.

High school credit telecourses in Algebra, Physics, and Chemistry enrolling 352 students in 51 small Oklahoma high schools were provided at a cost of \$30 per student per course, compared to \$80 for conventional instruction. The director of the Oklahoma Educational Television Authority also reported that the cost of instruction for an in-service training course for elementary arithmetic teachers was produced for a sum of 96 cents per teacher enrolled. A college course in Government used in six different colleges simultaneously was provided for an instructional cost per student of \$5.25. It was estimated that the cost by conventional methods at the University of Oklahoma was about \$12 per student. These lessons were video tape recorded and re-broadcast in the evening as an adult education course.

It was estimated by the Oklahoma director, that if the Authority were to teach four basic courses for all of the tax-supported colleges and universities within the coverage area of the Oklahoma stations, enough money would be saved to pay for all

other present functions of educational television. The Oklahoma Authority now telecasts to the small private colleges certain courses which these colleges ordinarily do not offer, including Russian History, the Classics, and History of Science. These can be provided at a relatively low cost to several schools at one time.

Findings and Recommendations

It is the firm conviction of the committee that educational television is economically and educationally sound, and that Kansas' students should have the benefit of this important educational tool. Television offers one of the means by which the potential educational resources of Kansas can be marshaled to provide sufficient good teachers to adequately serve the expanding number of pupils enrolled in our schools and colleges in the next 25 years. We believe that it is vital that action be taken by this legislature. A bill should be enacted creating an administrative authority with power to employ an executive director, and to organize an educational television system, formulate a program, and activate its plans as rapidly as possible.

State Educational Authority

In accordance with the recommendations of the survey report, and because educational television can be utilized in both public and parochial schools, private colleges, municipal universities, and state institutions of higher education, and also by adults and out-of-school youth, the responsibility for the management of such a large undertaking should be placed in a body representative of education as a whole. This is in accord with the agreement reached in 1959 by the representatives of the various educational groups concerned, that it would be advisable to center responsibility and management in an independent commission or authority not connected with any of the existing agencies of the state.

Obviously, the new authority should consist of outstanding, public spirited persons. However, public officials and officeholders of federal, state, and local government should not be eligible for appointment, and the law should prohibit the use of the system to sponsor any party or candidate for public office.

It is our recommendation that the Kansas Educational Television Authority be composed of nine members, appointed for four-year overlapping terms, not more than two of whom should be from the same congressional district. We further recommend

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that the Governor appoint two members representing the public-at-large and one member from each of three persons nominated by each of the following: the state superintendent of public instruction, the state board of regents, the Kansas association of school boards, the Kansas congress of parents and teachers, the association of church related colleges, the Kansas smaller high schools association, and the Kansas public junior college association.

Immediate Action Imperative

If Kansas ever intends to establish a state-wide network, it is imperative that action be taken by this legislature. Such action would involve the establishment of a state educational television authority. It would be necessary for this authority to take immediate steps before the Federal Communications Commission to effect the transfer and allocation of the necessary channels. It would also be necessary, in order to show its good faith and intentions, for the legislature to appropriate funds to the authority to enable it to assemble a staff and begin the planning of the state network, the construction of transmitter stations, the formulation of operating procedures of the state system, and the development of an educational program.

The compelling reason it is essential for action to be taken by this legislature, which has not existed heretofore, is that the very existence of a state-wide network is imperiled by the possible loss of Channel 4, which would be located at Grainfield, Kan., under the plan proposed in the survey. If this channel were lost, it would not be possible to serve a large area in northwest Kansas, except by the use of UHF channels which would require special receiving equipment.

Early in December, the committee's attention was called to an Associated Press story, dated November 30, indicating that the Federal Communications Commission would consider a proposal of the Bi-States Company to assign television Channel 4 to Superior, Neb. A communication was sent to the chairman of the Commission on behalf of the committee requesting that consideration of the application of the Nebraska company be postponed until after the Kansas legislature had an opportunity to review the survey findings and reach a decision on an educational television system for the state of Kansas. Copies of the survey report previously had been sent to the secretary and members of the FCC, and references were made to the use of Channel 4, in the survey report.

Your committee then received a letter from the acting secretary of the FCC stating that in response to a petition filed by the Bi-States Company on September 26, the Commission had issued a Notice of Proposed Rule-Making inviting comments from interested parties on the subject of the proposed amendment of the television table of assignments. It was indicated that counter-proposals or any other comments or data in this proceeding could be filed on or before January 6, 1961, and that the Commission would give careful consideration to any material submitted before making a final determination. Subsequently, the committee was informed that a second application had been filed for Channel 4 from an educational group.

Shortly thereafter, on December 30, the committee drafted a statement in opposition to proposed amendment of section 3.606, Table of Assignments, television broadcast stations, indicating that it was aware that organizations in the State of Nebraska are anxious for Channel 4 to be reserved for education, and while it does not approve of the proposed location in Nebraska, it did concur with such agencies that the channel should be reserved for educational purposes. It was emphasized that Channel 4 at Grainfield, Kan., would constitute a vital link in the proposed educational television network, and a request was made that the application to assign Channel 4 to Superior, Neb., be denied until after the 1961 session of the Kansas legislature.

The committee was advised under date of January 16, that a petition requesting a 30-day extension of time filed by the Bi-States Company, licensee of Stations KHOL-TV, Kearney, Neb., and KHPL-TV, Hayes Center, Neb., had been granted by the Federal Communications Commission. The time for filing reply comments was extended to February 17, 1961. A notice of the petition also was received from the legal firm representing the Bi-States Company. This notice indicates that in addition to said company, the Nebraska Council for Educational Television, Inc., the KTIV Television Company, and Mia Enterprises, Inc., also appear to be interested in Channel 4.

Consequently, it seems quite clear that if no action is taken by this legislature to inaugurate a state-wide system of educational television at this time, and if the good intentions of the state are not demonstrated by the appropriation of funds to begin construction and operation, the Federal Communications Commission will allocate Channel 4 to one of the Nebraska applicants.

If the legislature is unwilling to establish

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a state-wide network of educational television stations or, if it decides that it is not in favor of such a system, then it would be our recommendation that the state relinquish any possible claim which might otherwise be extended to the channels already reserved for educational purposes in Kansas, and that the legislature appropriate funds to the University of Kansas for the construction of a transmitter for Channel 11, at Lawrence, and to Kansas State University for the construction of a transmitter for Channel 8 at Manhattan, in order that the people of the state of Kansas be not deprived entirely of the benefits of educational television.

Finally, it is recommended that this legislature make an appropriation of money to the new educational television authority for operation and for necessary construction, to enable the authority to begin broadcasting as soon as possible. The committee recognizes the force of the recommendation in the survey report that the entire network should be constructed as a whole instead of in separate sections over a period of years. However, in view of the amount of funds currently available, it appears unlikely that a request for \$6,900,000 would be approved at this time.

Furthermore, it seems somewhat doubtful whether the entire network could be constructed in one, or perhaps even in two fiscal years. Consequently, all of the money would not be needed at once. The possibility of the total cost being reduced by substantial donations of money or equipment from private firms, foundations, or the federal government should not be discounted.

Therefore, we recommend that a sum of \$1,000,000 be appropriated by this legislature to the authority. This amount would enable the authority to construct two or more transmitters, and move forward in setting up the organization and secure the technical equipment necessary to begin operation of an educational television program. Additional appropriations to complete the system could then be made by the legislature.

Respectfully submitted,
LAURIN W. JONES, *Chairman.*

ORIGINAL MOTIONS AND
RESOLUTIONS

Senators Warren and Joseph introduced the following Senate concurrent resolution, which was read:

Senate Concurrent Resolution No. 15—

A CONCURRENT RESOLUTION directing the Kansas legislative council to make a study of the problems concerning soil conservation in the state, and providing for a report and recommendations thereon to the 1961 regular session of the legislature, to the governor and to the soil conservation committee.

Be it resolved by the Senate, the House of Representatives concurring therein: The Kansas legislative council is hereby authorized and directed to study the problems relating to soil conservation in this state. This study shall include: (a) Financial and operational problems of the county soil conservation districts; (b) all phases of soil treatment; (c) determination as to what other states have accomplished in soil conservation practices; (d) long-term projection of future needs to help solve the problems; and (e) such recommendations and suggestions as it may deem proper to solve the problems presented. A report of the findings, together with the recommendations thereon shall be submitted to the 1961 regular session of the legislature and copies of such report shall be forwarded to the governor and to the state soil conservation committee; and

Be it further resolved: That the secretary of state be directed to transmit a copy of this resolution to the chairman and the secretary of the Kansas legislative council.

Senator Wunsch introduced the following Senate concurrent resolution, which was read:

Senate Concurrent Resolution No. 16—

A CONCURRENT RESOLUTION relating to final introduction and drafting of bills.

Be it resolved by the Senate of the State of Kansas, the House of Representatives concurring therein: That no bills, except those introduced by committees, shall be introduced either in the House of Representatives or the Senate after the hour of adjournment on Tuesday, February 21, 1961.

Be it further resolved: That no request to draft bills, except those made by committees, through their respective chairmen, shall be made to, or accepted by, the bill drafting department of the office of the revisor of statutes after 5:00 p. m. on Saturday, February 18, 1961.

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On motion of Senator Wunsch, in accordance with Senate Rule 57, the following appointments and nominations as made by the Governor were set as a special order of business for 2:00 p. m., February 21, 1961.

MR. PRESIDENT: I move that the following appointments and nominations as made by the governor of the state of Kansas, which appointments and nominations are subject to confirmation of the Senate be considered for confirmation or rejection by the Senate as a special order of business at 2:00 p. m., February 21, and that each of such appointments and nominations be considered separately at that time in the order listed below and in the following manner: The presiding officer shall state the name of the appointee or nominee, the position to which he has been appointed or for which nominated and, then shall announce, "The question now arises on the confirmation of such appointee or nominee," and then ask: "Is there any discussion?"; and when the discussion shall have been concluded, the clerk shall call the roll and those senators desiring to vote for confirmation of such appointee or nominee shall answer "aye" and those desiring to vote against confirmation shall answer "no."

Governor's appointments made subsequent to adjournment of 1960 budget session legislature under statutes requiring submission to Senate for confirmation: (Board or commission, name and address of appointee, term expires)—

Civil Service Board—James W. Lowry, Atchison, 6-1-64.

Forestry, Fish and Game Commission—Frank Horton, Wellington, 12-31-62; O. L. Deardorff, Jr., Cimarron, 12-31-64; John Umberger, Belleville, 12-31-64.

Corporation Commission—J. Robert Wilson, Meade, 3-20-61; Alvin F. Grauerholz, Coffeyville, 3-20-64.

Grain Advisory Commission—C. J. Steckel, Russell, 7-1-63; Henry Lueck, Neta-waka, 7-1-63.

State Board of Health—W. E. Fraese, Hutchinson, 5-1-63; Dr. A. A. Herman, Hays, 5-1-63; Dr. A. A. Fink, Topeka, 5-1-63; Dr. Richard Nelson, Lawrence, 5-1-63.

Industrial Development Commission—F. P. Gehring, Atchison, 3-31-64; Frank M. Kessler, Wichita, 3-31-64; George Breiner, Norton, 3-31-64; Robert P. Hagen, Lawrence, 3-31-62.

State Board of Regents—W. F. Donen-barger, Concordia, 12-31-64; Frank Groves, Arkansas City, 12-31-64.

Social Welfare—Charles H. Ostmeyer, Stockton, 4-1-64.

Advisory Commission for Norton Sanitarium—Dr. F. X. Lenski, Jr., Iola, 6-30-63; Dr. Andre Baude, Topeka, 6-30-64.

Veterans Commission—Vernon Kalivoda, Belleville, 7-1-64.

Water Resources Board—Arno Windscheffel, Smith Center, 6-15-64.

Board of Healing Arts—Dr. Dean L. Wise, Wichita, 7-1-63; Dr. Robert H. Moore, Lansing, 7-1-64; Dr. Richard Gibson, Winfield, 7-1-64; Dr. Francis J. Nash, Kansas City, 7-1-64.

Probation and Parole Board—Harry O. Lytle, Junction City, 7-1-64; John M. Claffin, Kansas City, 7-1-61.

On motion of Senator Wunsch, the Senate adjourned until 1:30 p. m., Tuesday, February 14, 1961.

IDA B. HAHN, *Journal Clerk*.
RALPH E. ZARKER,
Secretary of the Senate.



OFFICE OF THE GOVERNOR,
Frankfort, Ky., May 15, 1961.

HON. OREN HARRIS,
House Office Building,
Washington, D.C.

DEAR CONGRESSMAN HARRIS: I regret that your first letter did not reach me. We in Kentucky are interested in the use of educational television in our schools. Establishment by the 1960 general assembly of an advisory committee on educational television is one evidence of our concern with this educational medium.

Perhaps no State needs educational television more. As pointed out in a study of the subject produced by the Kentucky Legislative Research Commission, many of Kentucky's students are deprived of high quality educational experiences. Kentucky needs action to move ahead in the educational field. We have recently greatly increased the funds available for education in Kentucky. Almost 70 percent of the revenues from the sales tax enacted in 1960 is expended for education. As pointed out by the dean of the University of Kentucky College of Education recently, however, money is not enough. I feel that educational television may be a significant force in raising the quality of elementary and secondary education in Kentucky.

Availability of Federal funds for construction of physical facilities for educational television is more likely to stimulate initiation of strong action in Kentucky than any other possible development. A general plan is ready if money should become available. The plan sets forth the outlines of one possible statewide ETV network. The plan includes establishment of a separate State educational television agency; however, determination of basic administrative structure is the task of the general assembly.

Many of Kentucky's legislative leadership have expressed their endorsement of educational television. Appropriation of sufficient funds to construct and maintain a statewide network, while not assured, seems probable in the event of available Federal funds to act as a catalyst to action.

Finally, we feel that should Federal funds become available, no greater detail of Federal Government regulation should accompany it than is presently included in the statutes and Federal regulations concerning educational TV stations. Strict accountability for honesty and legality of expenditure of funds are, however, both proper and wise.

Speaker Harry King Lowman of the Kentucky House of Representatives, co-chairman of the Legislative Advisory Committee on Educational Television, joins me in this recommendation to your distinguished subcommittee.

Sincerely,

BERT COOMBS.

STATE OF MAINE,
OFFICE OF THE GOVERNOR,
Augusta, March 31, 1961.

HON. OREN HARRIS,
Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN: This will acknowledge your letter relative to the information your committee is seeking as to what is being done by the various States to promote educational television.

The Maine Legislature is at present in session and only yesterday a public hearing was held on a proposal for educational television. We, of course, do not know what action will be taken, but the legislature is giving every consideration to this matter.

I am enclosing for your information copies of our State proposed legislation. Kindest regards.

Sincerely yours,

JOHN H. REED, Governor.

HOUSE OF REPRESENTATIVES,
January 18, 1961.

H. P. 224

Referred to Committee on Appropriations and Financial Affairs. Sent up for concurrence and ordered printed.

HARVEY R. PEASE, *Clerk.*

Presented by Mr. Schulten of Woolwich.

STATE OF MAINE

IN THE YEAR OF OUR LORD NINETEEN HUNDRED SIXTY-ONE

AN ACT Providing for Construction of an Educational Television Network for the State of Maine.

Be it enacted by the People of the State of Maine, as follows:

SEC. 1. State-wide educational television network, construction of. The University of Maine is authorized to construct and equip transmission and microwave interconnection facilities in Augusta which, interconnected with the educational television facilities of Bates, Bowdoin and Colby Colleges, will provide a state-wide educational television network.

SEC. 2. Appropriation. There is appropriated from the Unappropriated Surplus of the General Fund the sum of \$1,039,028 to the University of Maine to carry out the purposes of this act. Such appropriation shall not lapse, but shall remain a continuing carrying account until the purposes of this act shall have been accomplished.

STATEMENT OF FACTS

1. A survey conducted by the University of Maine in 1960 through a grant of \$20,500 from the Ford Foundation determined that a state-wide educational television network for Maine is both feasible and desirable.

2. By linking Channel 12, Orono, with Channel 7, Calais, and Channel 10, Presque Isle, and interconnecting these stations with Channel 10, Augusta, now under license to Bates College, an educational television network can be established to provide coverage to 98% of Maine's population and schools.

3. A statewide educational television network is the most feasible and economical method of upgrading Maine schools and education at all levels through supplementary, enriched programs directed to the school rooms of the State. This activity will be further enhanced by affiliation with the eastern educational (television) network.

4. The construction costs of Channel 10, Augusta, with its interconnections with Channel 11, University of New Hampshire, and with the Eastern Educational Network are being provided by Bates, Bowdoin and Colby Colleges. Construction costs for the network north of Augusta, through state appropriation, are:

Transmitters:

Orono.....	\$363, 410. 00
Calais.....	264, 133. 95
Presque Isle.....	254, 133. 95
Total.....	\$881, 677. 90

Interconnections:

Augusta-Orono (2 way).....	\$64, 150. 00
Orono-Presque Isle.....	64, 500. 00
Orono-Calais.....	2, 000. 00

Total..... \$130, 650. 00

Translators 2 (UHF)..... 26, 700. 00

Total capital costs..... 1, 039, 027. 90

5. Costs of Channel 12, Orono, studio and equipment are contained in the University of Maine's appropriation request for an engineering building. Operations costs in amount of \$100,000 for the biennium are included in the University of Maine's appropriation request for operations. An additional amount for operations is being requested by the State Department of Education.

6. The cooperating support of the national educational radio and television center in providing television receivers and antennae for local public schools, as well as video tape recorders for Channels 10 and 12 is anticipated.

7. The establishment of an educational television network, designed to upgrade education at all levels in Maine, has the support of many of the State's educational, industrial, and civic leaders.

ONE-HUNDREDTH LEGISLATURE

Legislative Document No. 874

S. P. 273

IN SENATE,
January 26, 1961.

Referred to Committee on Appropriations and Financial Affairs. Sent down for concurrence and ordered printed.

CHESTER T. WINSLOW, *Secretary*.

Presented by Senator Sampson of Somerset.

STATE OF MAINE

IN THE YEAR OF OUR LORD NINETEEN HUNDRED SIXTY-ONE

Resolve, Appropriating Money for Production and Supervision on In-School Educational Television Programs.

Department of Education; appropriation. Resolved: That there is appropriated the sum of \$37,000 from the Unappropriated Surplus of the General Fund to the Department of Education for the fiscal year ending June 30, 1962, and \$42,000 for the fiscal year ending June 30, 1963 to provide funds to produce or contract for educational television programs and to employ a supervisor, secretarial help and necessary travel expenses to work with representatives of television stations both within and without the State in producing programs, arranging with stations within the State for telecasting, and to assist the teachers of the State in the use of these programs.

STATEMENT OF FACTS

Bates College plans to have an educational television station in operation by September 1, 1961 and plans have been prepared for an educational television station at the University of Maine in 1962. Time for telecasting in-school programs will be available on these stations and on commercial stations. To take advantage of this medium of communication we must have programs suitable for in-school telecasting. If these programs are to enrich and expand the curriculum in Maine, it is essential that we have on the staff a qualified supervisor who will supervise the production of these programs or arrange suitable contracts for programs and who will assist the teachers of the State in their proper use.

ONE-HUNDREDTH LEGISLATURE

Legislative Document No. 1141

HOUSE OF REPRESENTATIVES,
February 1, 1961.

H. P. 826

Referred to Committee on Legal Affairs. Sent up for concurrence and ordered printed.

HARVEY R. PEASE, *Clerk*.

Presented by Mr. Pike of Lubec.

STATE OF MAINE

IN THE YEAR OF OUR LORD NINETEEN HUNDRED SIXTY-ONE

AN ACT Relating to Holding of Property by Nonprofit Corporations Operating Educational Television or Radio Stations.

Be it enacted by the People of the State of Maine, as follows :

R. S., c. 54, § 5, amended. The first paragraph of section 5 of chapter 54 of the Revised Statutes, as amended by chapter 280 of the public laws of 1955, is further amended to read as follows :

"Every corporation organized under the provisions of the preceding sections 1 to 4 may take and hold by purchase, gift, devise or bequest, personal or real estate, in all not exceeding in value \$500,000 or in any one town 10 percent of that town's state valuation, whichever is lower, owned at any one time, and may use and dispose thereof only for the purposes for which the corporation was organized. ~~Provided, however, that any~~ Any corporation organized under the provisions of this chapter for the purpose of establishing and maintaining a hospital, a free public library or a school or academy accredited by the Department of Education and conducted on a nonprofit basis, or a laboratory exclusively engaged in research for the benefit of mankind, or an educational television or radio station operated on a nonprofit basis, or a private vocational school conducted on a nonprofit basis may receive and hold real and personal estate to any amount, which may from time to time be given, granted, bequeathed or devised to it and accepted by the corporation for the uses and purposes of said hospital, free public library, school or academy or, laboratory, or educational television or radio station provided always that both the principal and income thereof shall be appropriated according to the terms of the donation, devise or bequest."

EXECUTIVE DEPARTMENT,
Annapolis, Md., May 5, 1961.

HON. OREN HARRIS,
Member of Congress, U.S. House of Representatives, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: Upon receipt of your recent letter asking my views concerning Federal grants to assist the States to establish or improve non-commercial television broadcasting, I immediately contacted educational authorities in this State.

I am happy to report to you that Maryland's professional educators are vitally concerned with this medium as a potential valuable tool in improving educational opportunities.

I think that Federal assistance in this field would prove very helpful and will permit us in Maryland to get on with the pilot program already initiated. In Washington County, school authorities have been employing television at both the elementary and secondary levels, while at the University of Maryland closed-circuit television has been used for over a year.

I personally believe that the possibilities for teaching through television need to be explored as a possible solution to the ever-mounting cost of educating an increasing population.

I want to take this opportunity to thank you for permitting me to express my views on this important matter.

With kindest personal regards, I am,

Sincerely yours,

J. MILLARD TAWES, Governor.

THE COMMONWEALTH OF MASSACHUSETTS,
EXECUTIVE DEPARTMENT,
Boston, April 26, 1961.

HON. OREN HARRIS,
Chairman, House Interstate and Foreign Commerce Committee,
House Office Building, Washington, D.C.

DEAR REPRESENTATIVE HARRIS: I am very pleased to respond to your inquiry concerning my feelings about proposed legislation which would provide Federal aid for educational television facilities in the various States.

As you know, the Commonwealth of Massachusetts is fortunate to have had for the past 6 years an excellent educational television station, WGBH-TV, channel 2, Boston. There is no question in my mind that the activities of WGBH have markedly increased educational opportunities available to both adults and youth in our State and, furthermore, have done much to raise the general level of television broadcasting in Greater Boston.

In every area it has touched, whether it be art, drama, music, science, news analysis, television journalism, or straight teaching, WGBH-TV has made major contributions to the enlightenment and understanding of a very significant number of our citizens.

WGBH has made its way entirely without public funds, and I consider it an excellent example of how local initiative can fulfill an urgent public need. The station is supported in part by the members of the Lowell Institute Co-operative Broadcasting Council, which is made up of the major educational and cultural institutions in this area, and in larger part by contributions from individuals, foundations, corporations, PTA's, trade unions, student groups, clubs and other organizations. I myself regularly contribute to keep WGBH on the air, and have appeared on the channel urging other citizens to do the same.

It is a matter of personal concern to me that the truly remarkable television programming of WGBH be made available to the entire Commonwealth instead of being confined chiefly to the area within 50 miles of Boston. Construction money, such as the pending legislation would make available, would have at least two beneficial results in Massachusetts:

1. It would help strengthen the already vigorous and expanding station in Boston, and
2. It would extend the unquestioned benefits of this station's broadcasts to areas not now covered in the central and western parts of the State.

I am, therefore, happy to record myself in favor of legislation that would provide Federal aid for educational television facilities in this and other States.

Sincerely,

JOHN A. VOLPE, *Governor.*

STATE OF MICHIGAN,
OFFICE OF THE GOVERNOR,
Lansing, May 10, 1961.

Hon. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: Michigan educators, who have been involved in educational television for the last decade, heartily endorse the concepts underlying the proposed Federal educational television legislation. As Governor of this State, I concur with the opinions of these forward-looking educators representing public and private colleges, universities, and school systems in Michigan.

Last year, in anticipation of Federal educational television support, the superintendent of public instruction, Dr. Lynn M. Bartlett, and his working committee on educational television composed of educators and representatives of labor, industry, and civic groups, sought and received foundation funds to conduct a comprehensive study of educational television uses in Michigan.

This statewide study, which began in September of 1960, will develop a plan to centralize and coordinate further educational television development and to strengthen the many present organizations involved in educational television. The high level cooperative pattern of development which has led Michigan to its position of leadership in educational uses of television was a cooperative system which involved State, regional, and local levels of education. This pattern will continue under the leadership of the superintendent of public instruction.

As you know, Michigan has been a pioneer in educational television and we welcome Federal funds to help accelerate our use of this educational tool and assist educators in the other 49 States to develop meaningful programs of their own. As all 50 States move forward and share experiences under this new program, education in America will develop more rapidly and with better quality than in any country in the world.

With sincere best wishes.

Sincerely yours,

JOHN B. SWAINSON, *Governor.*

STATE OF MINNESOTA,
EXECUTIVE OFFICE,
St. Paul, April 12, 1961.

HON. OREN HARRIS,
House Office Building, Washington, D.C.

DEAR REPRESENTATIVE HARRIS: We regret this belated reply to your letter of March 28 in reference to the participation of our State in a cooperative Federal-State program to promote educational television operations.

A resolution has been passed by the Minnesota Legislature calling for a study of a statewide educational television system and interest in such a system on behalf of all Minnesota. Attention also is given the value of interconnecting with other upper Midwest States to facilitate sharing of educational resources through the use of educational television.

It is my plan to appoint a statewide educational television authority to engage such studies as may be further necessary and to conduct such planning as is necessary toward establishment of a system of statewide educational television coverage.

Our plans center on the results of the recent upper Midwest six-State educational television network study which call for several educational televisions in Minnesota which, along with certain peripheral coverage provided by surrounding States, would make it possible to provide educational television service to the entire State of Minnesota.

We trust this information will be helpful.

Cordially yours,

ELMER L. ANDERSEN, Governor.

JACKSON, MISS., May 4, 1961.

HON. OREN HARRIS,
Chairman, House Interstate and Foreign Commerce Committee, House of Representatives, Washington, D.C.:

Mississippi is intensely interested in educational TV. Current plans are to use channel 2 assigned to Mississippi State University on statewide basis. Statewide committee currently using plans from SBEB and JCET for initiating program. Matter will probably receive legislation action January 1962.

ROSS R. BARNETT, Governor.

EXECUTIVE OFFICE,
STATE OF MISSOURI,
Jefferson City, April 18, 1961.

HON. OREN HARRIS,
Member of Congress,
House Office Building,
Washington, D.C.

DEAR CONGRESSMAN HARRIS: Thank you for your letter of March 28. I certainly agree that your committee should secure information as to how the States propose to participate in a cooperative Federal-State program to promote educational television operations.

Missouri, through its universities, school systems, and other agencies, already is actively engaged in the field of educational television. St. Louis, for example, boasts one of the pioneer nonprofit, educational television stations in the Nation, KETC. This venture is a joint project of St. Louis University, Washington University, the St. Louis public and parochial schools, and the city of St. Louis. KETC has a plant valued at \$600,000 and an annual operating budget of \$360,000. This station has kinescope and video tape recording equipment and has produced numerous educational programs that are being used by other educational stations throughout the Nation. One hundred and seventy-five thousand pupils in the St. Louis area receive "in school" lessons via this station. KETC also carries formal credit courses in conjunction with area colleges and universities and with the University of Missouri.

The University of Missouri, in addition to its commercial station, KOMU-TV, has a \$250,000 closed-circuit—video tape installation that is used exclusively for instructional television. In the 2 years since this closed-circuit operation began programming, the university has presented 25 regular university courses to 3,000 students over these facilities. By means of a microwave relay that is being installed to link the closed-circuit operation with the university's "on the air" station, KOMU-TV, the university soon will be presenting formal course

work simultaneously to the closed-circuit classrooms and to the mid-Missouri "live" television area of more than 500,000. The budget for the nonprofit closed-circuit installation will be \$82,000 for the 1961-62 school year. By means of video tape recording equipment in the closed-circuit operation, 11 of the courses presented by the university's outstanding professors are being placed on tape. These television tapes will be available for use throughout the State.

Within the last 3 weeks, the Kansas City, Mo., School District has established a new nonprofit educational station, KCSD-TV, on channel 19. This is a \$350,000 installation with a proposed 1961-62 budget of \$250,000. In addition to the metropolitan viewing audience, this educational nonprofit station is presenting special "in school" class work for 30,000 pupils in the public schools.

Thus, Missouri, through these various schools, institutions, and municipal groups, already has an investment of approximately \$1,210,000 in nonprofit educational television operations, with annual budgets totaling an estimated \$692,000. In addition, the university has an investment of \$750,000 in its commercial station, KOMU-TV, a station that despite the fact it makes a small profit, uses its earnings to pay the costs of professional student training and to present formal course work and cultural and public affairs programming for the people of mid-Missouri.

I believe the proposed Federal grants would be most helpful to Missouri's existing nonprofit educational television operations. The money would make it possible for these installations to expand their services throughout their coverage areas and throughout the State. In addition, the money could be used to provide or expand video tape production centers and microwave interconnections between the stations and other educational closed-circuit centers throughout the State. The video tapes produced in the various centers would provide great flexibility in the utilization of the teaching of the State's outstanding professors. Copies of the tapes could be exchanged among the various educational institutions in Missouri. Thus, by means of video tape, it is conceivable that a single great professor could be teaching for five or six institutions at the same time. This could be especially important to us in Missouri as we develop a sorely needed junior college system in five areas of the State that urgently require 2-year colleges.

As for the agency or agencies to administer this program, initially I believe I would prefer to work through existing Missouri agencies that already are experienced with educational television. I would, however, prefer to see the legislation written in such a manner that each Governor would be permitted a degree of flexibility in administering the Federal grant received by his State. I believe that initially a careful study should be made of each State's educational television needs, and that only after this preliminary analysis is completed, should arrangements be made to formalize the administration of the project.

Sincerely yours,

JOHN M. DALTON, *Governor.*

STATE OF MONTANA,
OFFICE OF THE GOVERNOR,
Helena, April 18, 1961.

HON. OREN HARRIS,
Representative from Arkansas, Chairman, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: With reference to your letter of March 28, I requested our State superintendent of public instruction to furnish information requested.

The information is as follows: The basic mechanism for the administration of a Federal grant program has been established in the State in the Montana Educational Television Committee appointed by the State superintendent of public instruction over a year ago. The State superintendent is an elected official who has responsibilities in elementary, secondary, and higher education. The office of the State superintendent of public instruction is immediately responsible for elementary and secondary education; and, as a member of an 11-member board of regents, the State superintendent has responsibilities in higher education. The Montana Educational Television Committee has representation from three levels of education.

At the present time, the committee's study, designed to provide a basic pattern for the development of ETV in Montana, as financing permits, is nearing

completion. This study was made possible through a Ford Foundation grant. However, the financing problem is paramount and should Federal grants for ETV be made available only on a matching basis it is doubtful that Montana would be able to derive any benefit. This would be true even if matching were permitted by local school districts or nonprofit community organizations, since Montana's sparse population and topography preclude investment of the magnitude required for ETV.

I am interested in the use of TV in the field of education so long as control thereof remains with the local authorities. I would be very much opposed to any Federal-aid program which would enable the Federal Government to dictate what subjects would be taught by such a method.

Very truly yours,

DONALD G. NUTTER, *Governor.*

HELENA, MONT., *May 15, 1961.*

Representative OREN HARRIS,
*Chairman, House Interstate and Foreign Commerce Committee,
House Office Building, Washington, D.C.*

Have been advised that you might be interested in background information as to the status of educational television in Montana. The following is submitted for your information. At present time, an official committee of the office of State superintendent of public instruction is engaged in a study designed to provide basic pattern for development of ETV in Montana, as financing permits. This study was made possible through Ford Foundation grant. However, financing problem is paramount and should Federal grants for ETV be made available only on matching basis it is doubtful that Montana would be able to derive any benefit. This would be true even if matching were permitted by local school districts or nonprofit community organizations, since Montana's sparse population and topography preclude investment of the magnitude required for ETV.

HARRIET MILLER,
Montana State Superintendent of Public Instruction.

STATE OF NEBRASKA,
EXECUTIVE OFFICE,
Lincoln, April 19, 1961.

HON. OREN HARRIS,
*Member of Congress, House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN HARRIS: I am pleased to respond to your recent inquiry concerning the State of Nebraska's efforts relative to educational television. We are appreciative of the opportunity to place before you and your committee our views on the subject of educational television, particularly in view of possible Federal assistance through impending legislation.

We in Nebraska are proud of accomplishments to date in the employment of television for educational purposes. Our University of Nebraska through the broadcast facilities of its station KUON-TV has since 1954 pioneered in this area. A measure of national recognition has been achieved for both instructional and out-of-school program efforts. There has been considerable activity on the part of other Nebraska educational institutions in presenting programs over the facilities of our commercial stations.

I am informed that considerable interest is developing throughout our State in utilizing television for instructional purposes. Twelve school systems within the broadcast area of our educational station have joined with our department of education and the university to form a nonprofit corporation, the Nebraska Council for Educational Television, Inc.

The schools proportionately assess themselves for the purpose of providing instructional programs to their classrooms. Because of the success of this undertaking, we understand both program and participating schools will be substantially increased this coming year. Representatives of a number of school systems throughout the State have indicated desire to participate, but cannot do so until facilities are made available.

On January 6 of this year the Nebraska Council for Educational Television, Inc., on behalf of all educational interests in our State, petitioned the Federal Communications Commission to reserve five additional channels for future educational purposes. Supporting data were forwarded by virtually the entire

educational community. This is viewed as the first of a series of steps necessary to see provided an adequate educational television service for our State.

In view of the potential of television for education in Nebraska and the increasing need to provide program service for both the classrooms and homes of Nebraska, I am establishing a statewide committee on educational television to serve in advisory capacity to this office. This committee will address itself to the task of surveying the current educational television program, assessing future needs, and providing leadership in developing expanded facilities and programs most beneficial to our State.

There is need for a thorough legal, fiscal, technical, program and administrative survey in Nebraska in order to provide intelligent development of education television within our State. This, too, would be conducted under the direction of the above-mentioned committee.

Additionally, we expect to investigate possible interconnection with neighboring States for the purpose of sharing educational resources. Several studies have already been completed which demonstrate the feasibility of linking together six Midwestern States.

If funds were available to increase KUON-TV to maximum power and more strategically relocate it to serve Metropolitan Omaha as well, this one move would bring education television to 50 percent of the Nebraska population. The complete network as described to the Federal Communications Commission would bring this service to 90 percent of the people of Nebraska.

There is considerable educational television activity here in Nebraska. The need for increased facilities and program exists. We have the interest, the personnel and the experience. Certain State funds already are directed to the operation of KUON-TV. Participating school systems in the Nebraska council have demonstrated willingness and ability to assume their fair share of such instructional costs. Although the demands for appropriations are continually increasing, it is my hope that the Nebraska Legislature would look favorably upon an enlarged educational television program for our State.

Through an advisory committee, the Nebraska Council for Education Television, Inc., and the University of Nebraska, intelligent leadership is assured. I am pleased to support the instant legislation and look forward to its favorable passage.

Again, my appreciation for the opportunity to present this summary of educational television accomplishments and needs for the State of Nebraska. With every good wish in your deliberations, I am

Sincerely yours,

FRANK B. MORRISON, *Governor of Nebraska.*

THE STATE OF NEVADA,
EXECUTIVE CHAMBER,
Carson City, April 6, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: In response to your letter of March 28 requesting information whether Nevada is prepared to participate in a cooperative Federal-State program to promote educational television operations, I have contacted the State department of education, the president of the University of Nevada in Reno, and the Washoe County Superintendent of Schools.

The State superintendent of public instruction advises that: No program has been formulated in his department because (1) television facilities in Nevada have not been developed to date to warrant a statewide educational television broadcasting program, and (2) funds for such program would have to be specifically appropriated by the Nevada Legislature. The next session of the legislature will convene in January 1963. At the present time, the only television reception in Carson City is from channel 8.

The president of the University of Nevada, Dr. Charles J. Armstrong, states that the university is now planning a closed-circuit television program. He is also in communication with the California State Department of Education in Sacramento and the University of California at Berkeley to see what cooperative plan can be adopted with them for educational television programs. Dr. Armstrong also mentions an ultra high frequency channel No. 21 in Reno that may be available for educational television broadcasting.

Mr. Proctor R. Hug, Washoe County school superintendent in Reno, informs me that no steps have been taken to formulate a television program for education in his district and no survey of the possibilities for such a program made because of the probable cost and lack of funds.

I have not contacted Dr. R. Guild Gray, Clark County school superintendent, in Las Vegas, about this matter but am of the opinion that he probably would be the first of the county school superintendents to initiate a television broadcasting program. Las Vegas is well served with television channels.

Apparently, education television operations in Nevada will be operated, initially, at least, through the University of Nevada or a county school district.

May I suggest that copies of H.R. 965 and H.R. 132 and any other congressional bills designed to expedite utilization of television transmission facilities in our schools and colleges be sent to the following:

Dr. Charles J. Armstrong, president, University of Nevada, Reno, Nev.

Mr. Byron F. Stetler, State superintendent of public instruction, Carson City, Nev.

Mr. Proctor R. Hug, superintendent, Washoe County School District, Reno, Nev.

Dr. R. Guild Gray, superintendent, Clark County School District, Las Vegas, Nev.

I do hope that Nevada may be able to utilize this fine media of instruction in our schools and the university within a reasonably short period of time.

Best personal regards.

Cordially,

GRANT SAWYER, *Governor.*

STATE OF NEW HAMPSHIRE
Concord, April 18, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: Thank you for your recent letter to Governor Powell with the enclosed two bills regarding television transmission facilities in public schools and colleges. In the State of New Hampshire, channel 11 at Durham is an educational station, under the direction of the University of New Hampshire.

We will be happy to keep you informed of the plans of this State to participate in such a Federal-aid program.

With best wishes,

Sincerely yours,

ROBERT W. RHODES,
Administrative Assistant.

STATE OF NEW JERSEY,
OFFICE OF THE GOVERNOR,
Trenton, April 12, 1961.

OREN HARRIS,
Member of Congress, House of Representatives, Chairman, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: Your letter of March 28 concerning H.R. 132 and H.R. 965 is of extreme interest to me because the availability of educational television to the citizens of New Jersey is of vital importance.

My present belief is that the interests of this State will be best served by vesting supervisory authority over educational television in the Commissioner of Education. I assure you that the State of New Jersey is most eager to participate in a cooperative Federal-State program in this field. I have recently appointed a 20-member committee to investigate generally the future of commercial television in this State and to ascertain the possibilities of furthering educational television. Legislation encouraging such progress via Federal-State cooperation is worthy of endorsement.

Sincerely yours,

ROBERT B. MEYNER, *Governor.*

STATE OF NEW MEXICO,
EXECUTIVE OFFICE,
Santa Fe, April 24, 1961.

HON. OREN HARRIS,
House of Representatives, Chairman, Committee on Interstate and Foreign Commerce, House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: In response to your inquiry relative to bills providing Federal grants to the various States for improvement of noncommercial educational television broadcasting, please be assured that New Mexico is prepared to participate in a Federal-State program to stimulate construction of additional educational television facilities.

During the past year the Commission on Statewide Television for Educational Purposes has conducted surveys to determine engineering feasibility, costs, programming and use of various proposals relative to extension of educational television coverage to all parts of the State. I am enclosing a copy of a report prepared by the State Department of Education which outlines the State's present position relative to television for educational purposes and proposals for future development. It is anticipated that the Commission on State Television for Educational Purposes would serve as the State agency for formalizing State plans relative to participation in the Federal program.

Insofar as pending legislation is concerned, the requirement contained in the Roberts bill for matching funds at State or local level might be desirable from the standpoint of effecting a proper developmental program. The factor of local equity in establishment of television facilities should help to insure a sound program of development and use. Certainly the Roberts bill or its equivalent would be well suited to New Mexico's present needs.

Warm personal regards.

Sincerely,

EDWIN L. MECHEM.

STATE DEPARTMENT OF EDUCATION, SANTA FE, N. MEX.

TELEVISION FOR EDUCATIONAL PURPOSES

Use of television for educational purposes has increased sharply in New Mexico during the past year, placing the State among the leaders in development and use of this new medium of education. More than 10,000 children in public schools within a 110-mile radius of Albuquerque are now receiving a portion of their classroom instruction via television. An estimated 6,000 pre-school-age children are regular participants in daily television kindergarten classes. Hundreds of college students are receiving virtually all of their course material in humanities and accounting from televised classes. Several hundred teachers are participating in credit courses at the graduate level by means of television. Despite these rather startling figures, the potential value of television to the public schools, the colleges and universities and the general public remains well above present levels of achievement.

STEP COMMISSION

During the summer of 1960 a Commission on Statewide Television for Educational Purposes (STEP) was appointed jointly by President Tom Popejoy of the University of New Mexico, Superintendent Charles Spain of the Albuquerque Public Schools, and State Superintendent of Public Instruction Tom Wiley. The STEP Commission is composed of:

Mr. Tom Popejoy, president, University of New Mexico, Albuquerque, N. Mex.

Mr. Tom Wiley, superintendent of public instruction, Santa Fe, N. Mex.

Mr. Harold Lavender, superintendent, Raton Public Schools, Raton, N. Mex.

Mr. Charles Williams, president, Gallup School Board, Gallup, N. Mex.

Mr. Haskell Smith, superintendent, Cobre Consolidated Schools, Bayard, N. Mex.

Mr. William O'Donnell, New Mexico State University, University Park, N. Mex.

Mrs. Frances Lee, San Mateo, N. Mex.

Mr. Tom Hansen, superintendent, Carlsbad Public Schools, Carlsbad, N. Mex.

Mr. Garfield Guterrez, superintendent, Rio Arriba County Schools, Tierra Amarilla, N. Mex.

Dr. Charles Spain, superintendent, Albuquerque public schools, Albuquerque, N. Mex.

Mr. Dillon Platero, chairman, Navajo Education Committee, Window Rock, Ariz.

Mr. Claude Hemen, KNME-TV; Dr. Wayne Bundy, KNME-TV, 1801 Roma, N.E., Albuquerque, N. Mex.

Mr. H. C. Pannell, superintendent, Lovington public schools, Lovington, N. Mex.

Mr. Joe Lawler, coordinator, educational television, State department of education, Santa Fe, N. Mex.

Mr. Joe Herrera, assistant director, Indian education, State department of education, Santa Fe, N. Mex.

Dr. Donald Moyer, president, Eastern New Mexico University, Portales, N. Mex.

The primary purpose of the STEP Commission has been to develop a master plan for the systematic extension of educational television facilities to the full State. With the approval of the commission an engineering survey was conducted to determine feasibility of various suggestions for extending educational television opportunities to every community.

Because of the 11,000-foot altitude of its transmitter, KNME-TV in Albuquerque—sole educational television station in the State—is able to include a radius of 60 miles in its primary coverage, and extends 110 miles in its secondary coverage area. Thus the signal can be effectively utilized in the schools of 42 of New Mexico's 93 administrative units, extending from Truth or Consequences in the south to Taos in the north; with existing translator equipment in Gallup and Farmington to the west, and to Santa Rosa and Las Vegas in the east.

The engineering survey determined that two additional transmitters, plus a limited number of translators, would provide blanket coverage of the State by an educational television network. The commission currently is considering a proposal for establishment of a second ETV channel at Las Cruces, to be operated by New Mexico State University in cooperation with the State; and a third channel in Portales are under sponsorship of Eastern New Mexico University and the State. Two-way translator facilities would link all three stations, thereby providing access of the entire State to the facilities and specialists at each location. Additional translators would be required to bring suitable signals to remote areas of the State at only nominal cost. In many cases, such as at Gallup and Farmington, cost of installing and maintaining translators is borne by local subscription.

PROGRAMING FOR CLASSROOM INSTRUCTION

While KNME-TV, Albuquerque, is jointly owned and operated by the University of New Mexico and the Albuquerque public schools, the State department of education has served in a consultative capacity for development of instructional programs and formulation of specific topical material covered by such programs. During the current school year, channel 5 carries general science telecourses directed at the sixth- and ninth-grade levels. The telecourses were designed to meet a specific instructional need in the schools, and provide an opportunity for demonstrations and experiments which otherwise could not generally be presented effectively in the classrooms. The course outlines were developed by the participating science teachers themselves and inclass use of television has been at a maximum. Some 20 school systems outside of Albuquerque now are participating in the telecourses and the total number of students taking inclass television instruction is in excess of 10,000.

The State department of education, KNME-TV, the University of New Mexico, and the Albuquerque public schools established a unique joint purchasing venture which enabled schools to purchase some 200 television sets, listing at \$229.95, for \$146 apiece. In many cases it was possible for local schools to use funds from the National Defense Education Act to purchase sets for the science classes.

Also offered for public school instructional purposes are two programs in Spanish for the elementary grades. The programs were established in response to frequent requests from parents for inclusion of Spanish in the elementary school curriculum. The expense of providing such classroom instruction would have been tremendous, but availability of the course on television during the evening hours has relieved virtually all of the pressure to include Spanish in the

local curriculum. Course materials are mailed to several thousand viewers each year in response to specific requests.

Now this year has been a daily half-hour kindergarten class, which is designed as a 3-year research project to determine the effectiveness of formal television instruction in developing school readiness skills among 5-year-olds. Surveys have shown that more than 6,000 children in the 5-year-old age group are regular viewers of the class. Course material has been carefully selected by a committee which includes representation from the State department of education, the University of New Mexico, and the public schools.

At the college level, the University of New Mexico suddenly discovered that its prospective enrollments in elementary accounting would require the full-time services of four to five members of the instructional staff. Consequently, a television presentation was devised and during the first semester all classwork in elementary accounting was conducted by television, with students attending class only for midterm and final examinations. The presentation required the work of only one instructor, half time. The class presentations are taped and rebroadcast at two other intervals to permit full participation of the students at convenient times. Two of three weekly classes in humanities also are televised for similar reasons; the third class provides the discussion interplay which is felt essential to such a course.

Successful negotiations were concluded with the National Broadcasting Co. for airing by KOB-TV of the "Continental Classroom" courses in mathematics and repeat broadcasts by KNME-TV; commercial stations in Amarillo, El Paso, Lubbock, and Tucson also were encouraged to air the program, and several hundred teachers throughout the State enrolled for credit at various State institutions for the courses.

TELEVISION AS AN INFORMATIONAL MEDIUM

In addition to classroom use, educational television can and does play an important part in adult education, particularly in a State such as New Mexico where the sparsity of population and great distances place a limitation on the number and quality of "live" cultural expenditures in the fields of music, drama, and the fine arts. Programs dealing with the arts, sciences, health, conservation, sociology, government, homemaking, and other similar subjects are a part of the regular offerings over KNME-TV. Information and discussion of topical problems affecting the State are subjects of regular programs. On frequent occasions programs of general interest to the State are offered to and utilized by commercial television stations through the medium of video tape. Membership in the National Educational Television Center makes available top quality network programs for rebroadcast by KNME-TV.

POTENTIAL FUTURE DEVELOPMENT

Already contemplated for presentation next year is a telecourse in music for the elementary grades, in addition to the above-enumerated teleclasses. In a year of grave fiscal problems it is anticipated that classroom viewing of telecast music presentations can effect significant savings in the cost of providing music education in elementary schools, as well as offer facilities beyond those immediately available in many schools.

Use of television as a medium of instruction at the junior college level also is being investigated. Experiences summarized in the final report of Chicago's TV college experiment indicate that television might serve as a strong factor in the development of junior college opportunities to all parts of the State.

SCHOOL SYSTEMS WITHIN VIEWING RANGE OF KNME-TV, ALBUQUERQUE

Alamogordo	Estancia	Mountainair
Albuquerque	Farmington	Pecos
Aztec	Gallup	Penasco
Belen	Grants	Rio Arriba County
Bernalillo	Hondo Valley	Ruidoso
Bloomfield	Jemez Springs	Santa Fe City
Capitan	La Joya	Santa Fe County
Carrizozo	East Las Vegas	Santa Rosa
Central	West Las Vegas	Socorro
Corona	Los Alamos	Taos City
Cuba	Los Lunas	Taos County
El Rito	Magdalena	Truth or Consequences
Encino	Mora	Vaughn
Espanola	Moriarty	

STATE OF NEW YORK,
EXECUTIVE CHAMBER,
Albany, April 13, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: This is in reply to your letter of March 28 requesting information regarding New York State's activities in the field of educational television.

In my annual message to the legislature this year, I stressed the importance of educational television as a significant tool in the teaching process and urged legislative support as a program to improve and expand instruction through that means. I am indeed pleased to be able to report substantial progress in this increasingly important aspect of education.

After an extensive period of pioneering experiment and research, New York State is now assuming added new responsibilities in the area of educational television. Over a million dollars in New York State funds have been appropriated for educational television for the fiscal year that began April 1, 1961.

Our program presently includes:

1. Pilot experimental television projects at a cost of approximately \$600,000. The major pilot projects underway are: (a) The regents educational television project in New York City, an open broadcast experiment conducted over channel 11, under contract with WPIX, with day programs designed for use in elementary and secondary schools and made available to over 740,000 students last year; (b) the Cortland School District pilot project, a closed-circuit experiment in which the schools of that city and certain outlying rural schools are connected by coaxial cable and talk-back features; and (c) two smaller projects being carried out by the State university.

2. Legislation, enacted at my request this year, providing a system of State grants to local school systems for the installation and operation of educational television through open broadcast or closed-circuit facilities. An appropriation of \$200,000 has been provided in fiscal years 1961-62 for local school system educational television projects approved by the Commissioner of Education. Under this plan, the State will pay 50 percent of the cost of acquisition and installation of equipment and will pay a decreasing proportion of operating expenses over a 5-year period. A copy of this legislation is enclosed for your information.

3. New grants for noncommercial educational television councils, chartered by the regents, for the expansion of open broadcast UHF and VHF television. Our 1961-62 appropriations provide an additional \$200,000 to aid these councils under provisions of the State education law (sec. 213).

4. Newly allocated planning funds for the development of a statewide system of educational television, primarily at the college level. In my recent special message to the legislature on higher education, I recommended that the Board of Regents, in cooperation with public and private institutions of higher education, develop such a plan, and \$50,000 was appropriated for this purpose.

New York is now accelerating its pioneering efforts in regard to educational television. Under law, the board of regents, as the head of the State educa-

tion department, is the State agency charged with overall responsibility for educational television. I am enclosing, for your information, a copy of the regents plan for improving and extending educational opportunity through television which was submitted in December 1960.

I hope the foregoing information regarding New York State's carefully planned action program will be helpful to you in your deliberations.

With all good wishes.

Sincerely,

NELSON A. ROCKEFELLER.

REGENTS PLAN—EXTENDING EDUCATIONAL OPPORTUNITY BY TELEVISION

The University of the State of New York, the State Education Department, Division of Educational Communications, Albany

IMPROVING AND EXTENDING EDUCATIONAL OPPORTUNITY THROUGH TELEVISION

FOREWORD

At the December meeting of the regents of the University of the State of New York a legislative program was adopted which included educational proposals for 1961. Outstanding among these proposals was a plan for the improvement and extension of educational opportunities in New York State through television. This phase of the legislative program of the regents is being included in a statement entitled, "Investments in the Future."

The following summary of recommendations for the use of educational television will be a part of the total program. It is printed separately so that those individuals and groups of individuals in the State of New York who have a special interest in television may have an opportunity of evaluating the merits of the plan and of lending their support for its consideration by the 1961 legislature. Although New York State was a pioneer in recognizing the importance of television in meeting the educational challenge, it has moved forward slowly in order to guarantee the wisest possible use of State funds for the encouragement and application of television to education.

The regents program is designed to bring the greatest possible return to the citizens of the State for each education dollar and, at the same time, to enhance the opportunities for higher quality of education. Television lends a new dimension to education and serves as a potent coordinating force in bringing together all elements of the educational team.

HUGH M. FLICK, *Associate Commissioner.*

IV. IMPROVING AND EXTENDING EDUCATIONAL OPPORTUNITY THROUGH TELEVISION

Background

Since 1950, the regents have urged the development of educational television. They believed then and are even more convinced now that television offers an unusually effective means of extending and improving educational opportunity for the people of the State. It is unfortunate that progress has been so slow in making use of this medium for educational purposes.

In 1952, the regents requested and received from the Federal Communications Commission construction permits for 10 UHF stations, strategically located throughout the State. These stations, when fully activated, were to serve as a nucleus of a statewide noncommercial network, making it possible to bring the best cultural events and educational programs available anywhere to the classrooms and homes of the State. These stations are still assigned to the State and represent a valuable unused potential for educational good.

In the meantime the regents have sponsored certain experimental projects in the use of television for education. With funds appropriated by the legislature, they established the regents educational television project in New York City, an open broadcast experiment conducted over channel 11, under contract with WPIX. Programs broadcast are designed to be used in the elementary and secondary schools. During 1959-60, over 740,000 students in the metropolitan area participated in these programs.

At Cortland, the regents established a closed-circuit system, in which the schools of the city and certain outlying schools in the rural area are connected by coaxial cable. This gives these schools greater flexibility in using teaching

talent and enables all of the children involved to receive the best instruction available. A special feature of this project is a talkback system. Similar projects, successfully being used in the education and training of teachers, were also initiated by the regents in two of the State University Colleges of Education.

All these projects have been subject to constant evaluation and, as predicted, they demonstrate that, for certain subjects, learning via television can be as effective or even better than that taking place under conventional classroom conditions. Furthermore, they show that television makes it possible for our schools and colleges to utilize their resources much more efficiently and economically and to bring to their students a quality of instruction not otherwise available.

As a result of these projects and through the efforts of the Division of Educational Communications of the State education department, several other locally financed projects have been started and are in varying stages of development. The regents are convinced, however, that only through a systematic plan of State support can this medium reach the level of use in education which it deserves to attain.

The regents, therefore, propose that the State proceed immediately to stimulate the further development and use of educational television in the State by (1) providing financial assistance to school districts for this purpose; (2) contracting to assist State-approved local voluntary educational television councils; and (3) activating a statewide system of educational television for expanding opportunity for college-level education.

Aid to school districts for inschool television

It is recommended that an appropriation of \$1 million be made to the education department to be used for encouraging and assisting school districts or combination of districts (e.g., board of cooperative services) to install and operate low-powered or closed-circuit television for the improvement of classroom instruction. Grants would be made to the school districts upon approval of plans submitted to and approved by the department. For the first year of operation of the plan, it is proposed that the State grant be a percentage of the actual cost of installing the educational television project and of its operation for that year. The amount would be equal to the percentage of its foundation program which the district receives under the regular State-aid program, but in no case less than 50 percent of the cost of the project. It is further proposed that this special State assistance be continued annually on a decreasing percentage basis until, at the end of 5 years, the annual operating expenses of the television project be fully absorbed by the district or districts.

Pending the implementation of this proposal, the regents have included in the department's budget request funds for the continuance through 1961-62 of the State-financed experimental projects in New York and at Cortland.

Assistance to local education television councils

Legislation enacted in 1952 authorized the creation of local education councils be chartered by the regents. Four such councils have been chartered. These councils are voluntarily organized and consist of representatives from local educational and civic organizations. They present educational and cultural programs over commercial television stations in their area. They may also acquire and operate their own stations. At the present time only the Western New York Council has its own station.

Programs produced and televised by these councils have added significantly to the educational and cultural life of their respective communities. Supported by constituent members of the councils, by gifts from business and civic groups, and with the cooperation of commercial stations, these councils have been an important means of supplying the schools and colleges with the opportunity to experiment in educational television. Their efforts are limited, however, by lack of adequate financial support.

For several years the regents have sought funds from the legislature for use in assisting these stations. We again urge that funds for this purpose be appropriated to the education department for use in contracting with local education councils for the production and broadcasting of educational and cultural programs of value and interest to the education needs of the State. The amount allocated under contract to each council should be based on a plan approved by the department, but should not exceed one-third of the operating budget of the council or \$100,000, whichever is smaller.

Television for use in expanding opportunity for college-level education

The Heald Committee on Higher Education recommended the development of a statewide program of television courses at college level. They suggested that the State formulate a plan looking toward establishing "a statewide network linking all of the units of the State university, and the private colleges and universities, too, if they desire."

The regents will taken steps in the immediate future, in consultation with representatives of the State university, the College of the City of New York, and the private colleges, to develop such a plan. The fact that the regents now hold FCC permits for the construction of several noncommercial stations in the State offers a special advantage in this regard.

In summary, the regents recommend amendments to the education law and appropriations to permit the development of educational television as follows:

(a) Grants to school districts—\$1 million.

(b) Continuance of the regents educational television projects in New York and at Cortland, pending the implementation of (a) above—\$577,700 (included in the department's 1961-62 budget request.

(c) Assistance to local noncommercial educational television councils—\$500,000 (\$200,000 for this purpose has been included in the department's 1961-62 budget request).

(d) Authorization for boards of cooperative services to provide educational television services.

(e) Creation of the State education department of a center for the production and distribution of educational television materials, including a revolving fund for the purchase and distribution of outstanding kinescopes and video tapes produced elsewhere—\$50,000.

(f) Development of television courses at the college level and of a plan for a statewide television network for higher education—\$50,000.

The Division of Educational Communications in its capacity of disseminating information within its functional area, to the schools of the State, is alerting all school administrators to the section entitled "Aid to School Districts for In-school Television."

The Division of Educational Communications suggests that prior to an acceptance or rejection of the program by the legislature, the superintendents study this proposal and, if interested, present it to their respective boards of education so that formative plans will be ready for submission to this department if the legislature enacts the bill into law.

For further information and application forms please communicate with Dr. James E. Allen, Jr., Commissioner of Education, New York State Education Department, Albany 1.

STATE OF NEW YORK

Print. 2715, 3702, 4509. Intro. 2573

IN SENATE

Introduced by Mr. Brydges—read twice and ordered printed, and when printed to be committed to the Committee on Finance—committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee—committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

[EXPLANATION—Matter in *italics* is new; matter in brackets [] is old law to be omitted.]

AN ACT To amend the education law, in relation to educational television

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section two hundred thirteen of the education law, as amended by chapter eight hundred forty-eight of the laws of nineteen hundred fifty-eight, is hereby amended to read as follows:

§ 213. Extension of educational facilities. 1. The regents may extend to the people at large increased educational opportunities and facilities, stimulate interest therein, recommend methods, designate suitable teachers and lecturers, conduct examinations and grant credentials, and otherwise organize, aid and conduct such work. And the regents, and with their approval the commissioner of education, may buy, sell, exchange and receive by will, or other gift, or on deposit, books, pictures, statuary or other sculptured work, lantern slides, ap-

paratus, maps, globes, films, sound films, kinescopes, photographic recordings and any article or collections pertaining to or useful in and to any of the departments, divisions, schools, institutions, associations or other agencies, or work, under their supervision, or control, or encouragement, and may lend or deposit any such articles in their custody or control, when or where in their judgement compensating educational usefulness will result therefrom; and may also, from time to time, enter into contracts desirable for carrying into effect the foregoing provisions.

2. In carrying out the provisions of subdivision one of this section, the regents may: a. Contract with institutions in the university, *school districts, boards of cooperative educational services* or other non-profit educational agencies for the acquisition from such institutions, *school districts, boards* or agencies of sound films, kinescopes, *audio recordings and video recordings*, scripts, research reports or related educational television materials, for the use of the department, or for the production of educational television programs:

b. Lease, to school districts, *boards of cooperative educational services* or television corporations created pursuant to section two hundred thirty-six of this chapter, educational television facilities, including transmitters, micro-wave relay facilities, production centers, closed-circuit systems and any equipment necessary [therefore] therefor, constructed or acquired, and owned by the state, leased by the state, or contract with such districts, *boards of cooperative educational services* or corporations for the operation of such facilities:

(c) Lease and operate a television station in the city of New York.

3. For the purpose of carrying out the provisions of subdivision two of this section, the regents may make rules or authorize the commissioner to make regulations providing standards for research and experimentation, operation and programming of educational television by the state and the school districts, *boards of cooperative educational services*, institutions, corporations and agencies, respectively.

§ 2. Section two hundred thirteen of the education law is hereby amended by adding thereto two new subdivisions, to be subdivisions four and five respectively, to read as follows:

4. In carrying out the provisions of subdivisions one and two of this section and in order to encourage and stimulate the further development and use of educational television in the State of New York and for the purposes of providing educational services and facilities for pupils in the public schools of the State of New York, the board of regents is hereby authorized to make additional apportionments to school districts or boards of cooperative educational services in accordance with the provisions of this subdivision to encourage and assist such districts or boards to install and operate a broadcast or closed-circuit television system, or television receiving equipment for the improvement of classroom instruction.

(a) Any school district or board of cooperative educational services planning to establish such a program shall submit to the commissioner of education on or before the first day of May of the school year preceding the school year during which the program is to be conducted an application, together with such information as the commissioner of education shall require, including at least a complete statement of purposes of the program, the detailed procedures of operation, a detailed estimate of the cost of such program and a complete description of the installation and equipment to be installed and the detailed procedures of evaluations to be used in determining the improvement of classroom instruction.

(b) The commissioner of education shall establish procedures for evaluations of such programs. One such program for each school district or board of cooperative educational services may be approved by the commissioner of education, and any program so approved by the commissioner of education shall be placed on a list in accordance with the educational merit and value of the program, and the date of receipt of the application, where several programs are evaluated as having equal merit and value.

(c) Apportionment shall then be made in accordance with the formula contained in paragraph d of this subdivision, in the order of such programs on the list established in accordance with paragraph b of this subdivision within the amount of the appropriation therefor.

(d) Any district or board which proposes to install and operate a broadcast or closed-circuit television system or television receiving equipment for the improvement of classroom instruction, in accordance with a program approved as provided in this subdivision and to the extent that funds are available pur-

suant to this subdivision, shall be entitled to an apportionment during the five-year period following the approval of the program as follows:

Fifty per cent of the approved cost relative to the acquisition and installation of the equipment, and during the first year fifty per cent of the approved operational expenses in connection with the approved operation of the program; during the second year forty per cent of the approved operational expenses in connection with the approved operation of the program; during the third year thirty per cent of the approved operational expenses in connection with the approved operation of the program; during the fourth year twenty per cent of the approved operational expenses in connection with the approved operation of the program; and during the fifth year ten per cent of the approved operational expenses in connection with the approved operation of the program.

5. A school district or a board of cooperative educational services is hereby authorized and empowered to do and perform any and all acts necessary or convenient to enable it to carry out the provisions of this section.

§3. Paragraph h of subdivision four of section nineteen hundred fifty-eight of such law, such section having been amended by chapter five hundred eighty-three of the laws of nineteen hundred fifty-five, is hereby amended to read as follows:

h. Arrange cooperative educational services with and if necessary make contracts covering same with other public agencies for shared services and to produce educational television materials and programs and to own or lease television facilities and to enter into appropriate contracts concerning the same.

§4. Subdivision five of section nineteen hundred fifty-eight of such law, as amended by chapter seven hundred seventeen of the laws of nineteen hundred fifty-eight, is hereby amended to read as follows:

5. Upon application by a board of cooperative educational services, there shall be apportioned and paid from state funds to each board of cooperative educational services an amount which shall be the sum of the amounts determined for each component school district by deducting from the cost of services an amount which shall be the proportion of such cost that three mills bears to the tax rate of the local district computed upon the actual valuation of taxable property expressed in mills to the nearest tenth as determined by the commissioner of education, provided, however, that where services are provided to a school district which is included within a central high school district or to a central high school district, the deduction from the cost of services shall be an amount which shall be the proportion of such cost that one and one-half mills bears to the tax rates, expressed in mills to the nearest tenth, of such districts as determined by the commissioner of education. The tax rate for the central high school district shall be the amount of tax raised by the common and union free school districts included within the central high school district for the support of the central high school district divided by the actual valuation of the central high school district. The tax rate for each common or union free school district shall be the amount of tax raised for the support of such common or union free school district, exclusive of the amount raised for the central high school district, divided by the actual valuation of such common or union free school district. The cost of services herein referred to shall be the amount allocated to each component school district by the board of cooperative educational services to defray expenses of such board, except that that part of the salary paid any teacher, supervisor or other employee of the board of cooperative educational services which is in excess of six thousand dollars shall not be an approved expense for purposes of this computation and except also that administrative and clerical expenses shall not exceed ten per cent of the total expenses for purposes of this computation. The "tax rate" as herein referred to shall not include a special tax levied for debt service in an existing district of a central school district or a consolidated district. Nothing in this act shall prevent school districts or boards of cooperative educational services with the approval of the commissioner of education from providing cooperative educational services for which no application for state aid is to be made. In the event that the component districts become part of an intermediate unit, the state aid herein authorized shall thereupon be paid to the intermediate unit and credited against any apportionment to which such intermediate unit may be otherwise entitled during the first year of operation. Any expenses incurred by a board of cooperative educational services in connection with the production of educational television materials and programs, or the acquisition by purchase, lease or other-

wise of television facilities or operational expenses in connection therewith shall not be utilized in connection with computing the apportionment to such board of cooperative educational services.

§ 5. This act shall take effect April first, nineteen hundred sixty-one.

STATE OF NORTH CAROLINA,
GOVERNOR'S OFFICE,
Raleigh, April 17, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR MR. HARRIS: Governor Sanford has turned over to me your letter of March 28, 1961, concerning the bills providing for a program of Federal grants to assist the States and certain organizations within the States to establish or improve noncommercial educational television broadcasting.

I am delighted to report to you the following information on the subject.

The educational television station in North Carolina is owned and operated by the University of North Carolina. It broadcasts educational and informational programs over channel 4 and for an average time of 8 hours a day, 7 days a week. The university station works cooperatively with the State department of public instruction in broadcasting programs used to assist instruction in the public schools of the State. These inschool programs now reach more than 25,000 students in the public schools.

The State of North Carolina is prepared to cooperate through its university television facilities with the Federal Government in using funds that may be appropriated for the support of educational television programs. These funds would assist the university in enlarging the range of its television coverage and in improving the quality of its programs.

If you need any more specific information, I will be glad to furnish it to you.

Sincerely,

J. WILLIAM COPELAND.

STATE OF NORTH DAKOTA,
OFFICE OF THE GOVERNOR,
Bismarck, May 18, 1961.

HON. OREN HARRIS,
House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: I wish to make the following statement in support of educational television:

"The North Dakota Legislative Assembly has passed, and I have signed senate bill 179, indicating the State's official interest in ETV, and the establishment of such network, and to provide for such educational television services. The bill includes the following statement: 'The superintendent of public instruction may contract, for a period of not to exceed 2 years, with provisions for its renewal for like periods, with a nonprofit corporation for the purpose of providing the people of the State with educational television services in the fields of elementary, secondary, and higher education, adult education, and other fields tending to promote cultural development.' The sum of \$46,356 was appropriated as the North Dakota share in a proposed six-State network.

"I plan to appoint a State ETV committee or agency, to engage such studies as may be necessary and to conduct planning toward a statewide system of ETV coverage.

"North Dakota's plans center on the results of the upper Midwest six-State educational television network study (Wisconsin, Minnesota, Nebraska, Iowa, North Dakota, and South Dakota) completed last year, which calls for several ETV stations to be established in North Dakota and which, along with peripheral coverage provided by surrounding States, will make it possible to provide ETV services to the entire State of North Dakota."

Sincerely yours,

WILLIAM L. GUY, Governor.

THE STATE OF OHIO,
OFFICE OF THE GOVERNOR,
Statehouse, Columbus, April 10, 1961.

HON. OREN HARRIS,
*Member of Congress,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN: Pursuant to your letter of March 28, I have asked some members of our State television commission to make some comment.

Theodore M. Gray is a Republican member, and Oliver Ocasek, a Democratic member, of the Ohio Senate. They have both been active in this particular area. Dr. Holt, also a member of the commission, is superintendent of public instruction.

I hope that these views will be helpful to your deliberation.

Sincerely,

MICHAEL V. DISALLE, *Governor.*

OHIO SENATE,
Columbus, April 4, 1961.

HON. MICHAEL V. DISALLE,
*Governor, State of Ohio,
State Capitol Building, Columbus, Ohio:*

Thank you, Governor, for your kind invitation to comment on the inquiry you received from Oren Harris, chairman of the congressional Committee on Interstate and Foreign Commerce.

It is my opinion that Federal appropriations will prove, in the long run, a disservice to the development of educational television in the United States.

As you know, Governor, I have spent a great deal of time and effort on the promotion of educational television in Ohio, and am keenly aware of the advantages in the use of this medium. I am just as keenly aware that local boards of education will utilize television only when it can provide an enrichment in their curriculum at a cost that is less than otherwise would have to be spent for comparable service.

Those in the educational television industry who seek Federal aid as a means of expediting the use of educational television may well wake up some day to find they are building a house on a foundation of sand.

If you desire further comments, I will be most happy to discuss the issue with you, at your convenience.

Respectfully yours,

THEODORE M. GRAY.

STATE OF OHIO,
DEPARTMENT OF EDUCATION,
Columbus, April 5, 1961.

HON. MICHAEL V. DISALLE,
*Governor of Ohio,
Statehouse, Columbus, Ohio.*

DEAR GOVERNOR DISALLE: Due to the planning by the Ohio Interim Television Commission, created by the 103d general assembly, and the legislation pending before the present legislature for the creation of a permanent educational television commission, with bipartisan support, I believe it would be appropriate to advise Congressman Oren Harris that Ohio is ready to participate in a Federal-State program to stimulate the construction of educational television facilities. A Federal appropriation for this purpose would hasten the day when we could have an educational television network in this State.

Sincerely yours,

Superintendent of Public Instruction.

OHIO SENATE,
Columbus, April 5, 1961.

HON. MICHAEL V. DISALLE,
*Governor of Ohio,
Statehouse, Columbus, Ohio.*

DEAR GOVERNOR: In reply to your letter of March 31, I thank you for the copy of the letter that Congressman Oren Harris sent to you. As you know, we had the first hearing on Senate bill 393 this week. I am most anxious for the

passage of this measure which establishes a permanent educational television network commission in Ohio.

One of the questions asked me is whether the budget provides for an appropriation for the operation of the commission for the next biennium. It was my thinking that there was an item of \$60,000 included in this original budget.

Senator Gray, the coauthor, and I do not agree on the matter of Federal funds. I strongly feel that the bill passed by the U.S. Senate, giving \$1 million to each State if they are actively engaged in the business of educational television, is a most desirable proposal. I am even willing to go to Washington and testify on behalf of this bill, which is to be heard by Congressman Harris' committee. I think that several of us, especially Dr. Richard Hall from the Ohio State University, would be helpful in appearing before the committee and presenting the needs of Ohio. Since the Republicans are committed to no funds for new programs, I cannot see how this commission can function adequately without Federal aid.

Please feel free to obligate me relative to this matter as I do not find my coauthor taking an aggressive position on this bill. Thank you for your letter.

Sincerely,

OLIVER OCASEK, *State Senator.*

STATE OF OKLAHOMA,
EXECUTIVE CHAMBERS,
Oklahoma City, April 24, 1961.

HON. OREN HARRIS,
House Office Building,
Washington, D.C.

DEAR CONGRESSMAN HARRIS: The State of Oklahoma has been a pioneer in the field of educational television. In 1951, the Oklahoma State Legislature was the first and only legislative body to petition the Federal Communications Commission to reserve television channels for educational purposes.

In 1953, the Oklahoma State Legislature again manifested its interest in educational television by creating a statutory corporation, the Oklahoma Educational Television Authority. The authority is charged with the responsibility "to plan, construct, repair, maintain, and operate educational television facilities with channels assigned by the Federal Communications Commission to the State of Oklahoma for educational purposes."

The same act which set up the Oklahoma Educational Television Authority also provided that the authority could "accept from any Federal agency grants for or in aid of the construction and operation of any project."

Both of the VHF channels reserved for educational TV in the State of Oklahoma have been activated. KETA-TV channel 13, Oklahoma City has been on the air since April 13, 1956; KOED-TV, channel 11, Tulsa since January 1, 1959.

To date, nearly \$750,000 in State funds have been allocated for constructional purposes for educational television in Oklahoma; from private sources, some \$750,000 in cash and facilities have been given to the authority for educational television construction.

We respectfully urge that every consideration be given to legislation pending in the Congress which would give national impetus to educational television.

Sincerely,

J. HOWARD EDMONDSON,
Governor.

OFFICE OF THE GOVERNOR, STATE CAPITOL,
Salem., April 20, 1961.

HON. OREN HARRIS,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN HARRIS: In response to your letter regarding educational television, I have asked Dean J. W. Sherburne, General Extension Division, 1633 Southwest Park Avenue, Portland, Oregon., to promptly comply by providing the information you desire. I am sure you will hear from him shortly.

With every good wish.

Sincerely,

MARK O. HATFIELD, *Governor.*

OREGON STATE SYSTEM OF HIGHER EDUCATION,
 GENERAL EXTENSION DIVISION,
 Portland, Oreg. April 21, 1961.

HON. OREN HARRIS,
 Chairman, Committee on Interstate and Foreign Commerce,
 House of Representatives, House Office Building,
 Washington, D.C.

DEAR CHAIRMAN HARRIS: Governor Hatfield requested me to reply to your letter of inquiry as to the extent to which Oregon is prepared to participate in a cooperative Federal-State program to promote educational television operation.

Educational television in Oregon is administered by the State board of higher education through its general extension division. Two VHF educational stations, KOAC-TV, Corvallis and KOAP-TV, Portland, are linked by microwave to form the Oregon Educational Network. Programs for the network originate in Eugene, Corvallis, Salem, and Portland. Approximately 70 percent of the population of the State lies within the service area of the two stations.

When Federal funds become available, steps will be taken to extend the benefits of educational television to the more sparsely populated areas of central, southern, and eastern Oregon. To achieve such coverage, power of the existing stations would be increased and the use of translators and boosters would be investigated. It is likely that one or more additional VHF stations would be constructed.

The interest of Oregon's public and private schools in the use of both broadcast and closed-circuit television is increasing. It is possible that several of the larger districts will require VHF stations to serve increasing demands within the school service area.

The State board of higher education, licensee of the ETV stations in Oregon, is the agency responsible for the development of plans for the utilization of ETV funds in the State. The chancellor of the State system will convene a meeting of responsible representatives of education at all levels to devise a plan for the coordinated utilization of funds for the development of educational television in Oregon.

I am enclosing a current schedule of television programming in Oregon for your information. If there is any other way I can be of assistance to your committee as it examines this important legislation, please call upon me.

Sincerely,

JAMES W. SHERBURNE, *Dean.*

HARRISBURG, PA., April 21, 1961.

HON. OREN HARRIS,
 Chairman, House Interstate and Foreign Commerce Committee, House of Representatives, Washington, D.C.:

Responding again to Harold Hill telegram of March 28 for the Governor of the Commonwealth of Pennsylvania we are pleased to emphasize our support for Federal aid to educational TV. For further emphasis I refer you to my testimony before Senator Magnuson committee hearings on March 14. Following is brief text of plans for educational TV announced by Governor Lawrence. The department of public instruction is studying plans for a vast Statewide TV network which can bring instructional programs into every school of the Commonwealth by using the electronic facilities of the existing Pennsylvania educational television stations, the 14 State colleges, and our major universities and colleges. It is within the realm of possibility to convert the entire State into an educational television network. Legislative proposals being submitted to State general assembly for appropriations to cover costs of operation. In addition to existing educational television stations in Philadelphia and Pittsburgh, plans are being studied to establish educational television programming centers in Erie, Pa., State university, Scranton-Wilkes-Barre, and Harrisburg, which, along with the 14 State colleges, will provide unlimited educational opportunities for every child in every classroom in the Commonwealth of Pennsylvania.

CHARLES H. BOEHM,
 Superintendent of Public Instruction.

COMMONWEALTH OF PENNSYLVANIA,
DEPARTMENT OF PUBLIC INSTRUCTION,
STATE TEACHERS COLLEGE,
Clarion, Pa., May 8, 1961.

HON. MORGAN M. MOULDER,
*House of Representatives,
New House Office Building,
Washington, D.C.*

DEAR SIR: This letter is in support of H.R. 132, or similar legislation. From the practical point of view of one who is charged with the responsibility of educating teachers for the Nation's youth, education television is a must.

The following benefits would accrue to our program through the installation of television:

1. Our students could view demonstration lessons being taught by master teachers in the grade level for which they are preparing. At present we must crowd 30 to 40 students into a room for this experience, which creates an extremely artificial, forced situation.

2. Through the medium of television college courses in academic disciplines can be taught by the best professor on the staff, thus insuring our students of superior instruction.

3. Our students in the smaller college can receive the benefits of instruction from the top professors in the Commonwealth. At present, our students are receiving a course in anthropology taught by Dr. Mook, of Penn State over standard broadcast facilities. The funds made available by H.R. 132 would provide for a statewide microwave relay network in which students in all of the State colleges could receive instruction which no single college could afford by itself.

Estimates of cost for installation of educational television on our campus are \$48,000. We cannot take this sum of money out of our current operating budget. We can, however, stretch the budget enough to provide for operating costs of the program.

The program described above, if put into operation, would pay for itself in value received at the completion of the first year's operation. The money thus saved in the budget could be applied by the individual colleges to provide facilities for the surge of students expected in the next 10 years.

Sincerely,

R. W. SMALL,
Head, Division of Education.

COMMONWEALTH OF PUERTO RICO,
OFFICE OF THE GOVERNOR,
La Fortaleza, San Juan, April 24, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce, House of Representatives, Congress of the United States, Washington, D.C.

DEAR REPRESENTATIVE HARRIS: Thank you for your letter of March 28, 1961. The Commonwealth of Puerto Rico is prepared to participate immediately in a cooperative Federal-State program to promote effective use of educational television.

Our government owns and operates, through its department of education, two educational television stations: Channel 6 WIPR-TV, located in the east central part of Puerto Rico and covering about two-thirds of the Commonwealth, and channel 3, WIPM-TV, located at the extreme southwestern corner of Puerto Rico, and covering the remaining one-third of the island. The two stations are connected by two-way microwave links. When operated as a network, they cover all Puerto Rico.

The buildings and equipment for both stations represent an investment of approximately \$1,255,000. Annual operating costs are \$850,000.

Attached are descriptions of some educational television projects we have planned but have not been able to implement because of economic limitations.

Sincerely yours,

LUIS MUÑOZ MARÍN, *Governor.*

DEPARTMENT OF EDUCATION, COMMONWEALTH OF PUERTO RICO

PLANS FOR THE USE OF EDUCATIONAL TELEVISION IN THE PUERTO RICAN SCHOOL SYSTEM

The Department of Education of the Commonwealth of Puerto Rico has an established program of educational television, with two government-owned channels which reach virtually 100 percent of the island. Although some effort has been made to teach directly through television, so far the programs telecasted have been largely of a general character.

In order to improve and increase our direct teaching programs, a coordinator of educational television and radio programs has been appointed who, along with other personnel of our department, has visited several States in order to become acquainted with the work done by their school systems in the field of educational television.

Last summer a seminar on educational television was held by the department with the cooperation of the University of Puerto Rico. Twenty schoolteachers and supervisors attended. A similar seminar is planned for next summer. These seminars attempt to train personnel for the operation of the projected programs, some of which are outlined below:

1. *Secondary school of the air*

Elementary school enrollment in Puerto Rico has reached a peak in the last 3 years. Projections show it will remain at a relatively high level during this and the next decade. More than 90 percent of the children of elementary school age (6 to 12 years) are now in school. On this basis, secondary school enrollment should continue to increase steadily until 1975. This growing enrollment at the secondary school level constitutes a challenge to our educational facilities, which will require the building of additional secondary schoolrooms and the training of more schoolteachers. Unfortunately, the required funds may not be available.

The Commonwealth commission on human resources has estimated that in order to meet its economic and social goals by 1975, Puerto Rico must in the next 14 years graduate 100,000 junior high school students and 60,000 senior high school students, in addition to graduates from our regular secondary schools. A statement by the director of the adult education program indicates that were the necessary funds available it would still not be possible to achieve these goals by relying on conventional teaching procedures. Thus, a determined effort must be made to bring secondary school education to many young people who are now not in school and who may not be reached by adult education programs later.

In an effort to surmount the limitations of conventional schooling, the department of education is planning to organize a secondary school of the air, using television as the principal means of instruction.

2. *Pilot project to determine the advisability of using television to increase the daily school hours and to enrich the curriculum of first- and second-grade children attending schools organized on a double enrollment basis*

Our school system still has more than 50 percent of its elementary school children on a double enrollment plan. This implies that each group of children attends school for only 3 hours a day, with the same teacher and the same room used for two separate groups daily. The situation is most acute in the primary grades (first to third).

Our department of education is considering the use of such community resources as assembly rooms, city halls, private homes, etc., in an experimental effort to meet this problem. Groups of pupils will assemble under the guidance of carefully selected and trained student teachers and lay citizens to watch television programs in art, music, drama, storytelling, physical education, health, etc. Following the program, group discussions and other related activities will be conducted by the group leader.

3. *Enrichment of different phases of the science and social studies curriculum*

Science and social studies were included, as two separate subjects, in the elementary school program last year. Since 1941 the teaching of science and social studies had been combined in a core program called community problems. It is apparent that elementary teachers need help in the teaching of several areas of science and social studies. We, therefore, intend to produce and televise, in cooperation with science and social studies supervisors, a series

of lessons covering those aspects of each of these programs in which the teachers are least prepared. Telecasted science lessons, to be received in the classroom on an experimental basis, have been authorized as the first step in this program.

Eventually, we hope to enrich, through the use of television, other phases of the school curriculum.

4. Enrichment of the curriculum for gifted children

The orientation program of the department of education, in cooperation with the office of evaluation, is seeking to identify pupils of generally high ability and of outstanding ability. The inter-American general ability and Spanish reading tests are used. Estimates are that on the basis of these tests 2 to 3 percent of our total school enrollment will prove to be gifted or talented students, capable of doing much more than our present curriculum demands of them. We plan to strengthen the secondary school curriculum in the areas of science, mathematics, and foreign languages, offering these students advanced courses and experiences that will be more of a challenge to their intelligence and personal abilities. The department is investigating the possibility of using TV for such advanced work.

5. Television in the teaching of English to primary grade pupils (first and second grades)

This project will be developed on an experimental basis. The following alternatives will be compared:

(a) Teaching of English to first- and second-grade pupils by classroom teachers without outside help.

(b) Teaching of English to first- and second-grade pupils by classroom teachers, supplemented by the use of television.

(c) The teaching of English to first- and second-grade pupils through television alone.

There is a shortage of well-prepared teachers of English, especially in the elementary grades. As the habits formed by children in their early years are long lasting and difficult to break, we are looking for some means that may help pupils to acquire in their early years good habits of intonation and pronunciation, as well as a mastery of structure in English.

6. Television as a means of teaching a new physical science course requiring active participation of the students

Conventional lecture courses in science have already been tried successfully by means of television. Courses in which the methods and procedures of acquiring scientific knowledge are emphasized and, therefore, requiring the active participation of students through questioning, discussion, and problem solving, have not yet been tried in this way. Some people consider television unsuited to this type of instruction, but this assumption may be challenged. It would be the main purpose of this investigation to test the theory that general education courses in physical science, with emphasis on active participation by the students, can be taught adequately by television.

7. Two pilot television courses directed to local study groups of teachers in service

There is an acute shortage of fully prepared teachers for the public schools of Puerto Rico. Furthermore, many teachers in service do not have the desired academic preparation and experience to guarantee a high quality of classroom teaching. As the public school enrollment increases, the problem of teacher shortage will probably become more acute. It has been proposed that educational television be used to supplement present teacher training program, accelerating the output of prepared teachers and raising the level of training of teachers in service.

In order to gain the necessary experience for establishing a project of inservice teacher education on a regular basis, a pilot program will be developed.

STATE OF RHODE ISLAND & PROVIDENCE PLANTATIONS,
EXECUTIVE CHAMBER,
Providence, May 15, 1961.

Representative OREN HARRIS,
Chairman, House Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR REPRESENTATIVE HARRIS: This is to acknowledge your letter regarding the status of television in Rhode Island.

Since 1954, the Rhode Island State Board of Education has had pending with the FCC an application for a construction permit to build and operate a station on a UHF channel. This application has been amended over the years and the State board of education has indicated its intention of requesting action on this application once appropriate programing can be worked out and when funds are available for the construction and operation of an educational television station.

As evidence of its intention to support the establishment of a television station, the Rhode Island Legislature in 1955 appropriated \$150,000 for such a purpose. Were Federal funds to become available either by way of outright grants or as matching grants, it is quite likely that action would be taken in Rhode Island to put an educational television station on the air.

The Rhode Island advisory committee on educational television was formed in March 1961. This committee will study the problems relative to the establishment of a television station in Rhode Island and make its recommendations to the Governor. Were a VHF channel allocated to Rhode Island, a greater service could be provided than is possible on a UHF outlet because in Rhode Island approximately 90 percent of all home television receivers are not equipped to receive the channel presently allocated to Rhode Island. The programing tentatively planned for the UHF facility obviously must be of a more limited nature at least in its initial states of development.

There is no indication at the present time that an agency will be formed especially for the purpose of establishing a station in this State.

Yours sincerely,

JOHN A. NOTTE, Jr., Governor.

SOUTH DAKOTA,
OFFICE OF THE GOVERNOR,
Pierre, April 1, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR CONGRESSMAN HARRIS: Thank you for your letter of March 28, relative to legislation providing for a program of Federal grants to assist the States to establish or improve noncommercial educational television broadcasting. I appreciate the opportunity to acquaint myself with this matter as originating in the copy you thoughtfully enclosed, of H.R. 965.

We are very interested in this proposed legislation, here in South Dakota. Our State University at Vermillion has been carrying on such a program on a limited scale for a number of years, first through radio and now through closed circuit TV. In order that you may be better informed of the facilities which will be available in South Dakota, I am forwarding the material you sent us, on to I. D. Weeks, president of the University of South Dakota, and asking him to set forth the information which may be desirable.

Sincerely yours,

ARCHIE GUBBRUD, Governor.

STATE UNIVERSITY OF SOUTH DAKOTA,
Vermillion, May 4, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR MR. HARRIS: The Honorable Archie Gubbrud, Governor of South Dakota, has asked me to contact you by letter and set forth any information pertaining to plans for educational television at the State University of South Dakota and in the State in general.

Since KUSD-TV, channel 2, at the university is the only existing ETV station in the State at the present time, Governor Gubbrud feels that first attention should perhaps be given this station in order to bring it to its optimum effective

operation. Application for Federal funds would be made through the Governor's Committee for ETV which is to be established by executive order sometime in the near future. This committee would become the official agency in South Dakota to receive grants from the Federal Government.

The executive secretary of the Board of Regents in South Dakota is a member of this committee and has asked that the president of the State university and the director of KUSD Radio-TV-Film immediately make plans for a statewide ETV network that could be developed in several phases. Phase I, as mentioned above, would be to improve the existing university station for maximum operation. Phase II will more than likely develop an interconnecting link with South Dakota State College at Brookings which has channel 8 at its disposal for ETV purposes. Phase III, in all probability, would include another innerconnection with Northern State Teachers College in Aberdeen which has channel 2 at its disposal for development. Phase IV may include a microwave link with the western part of the State—the Black Hills area—where a comparatively large population segment exists. As soon as these preliminary plans and proposals are set forth and approved by the Governor's Committee, South Dakota will then employ such consultation as may be necessary for making a complete study and analysis of such a proposed progressive State network.

The 1961 session of the State legislature, through the house of representatives, adopted Resolution No. 11 (introduced by the education committee) which declares that the legislature shall investigate a means of securing educational advantages and opportunity for the people, and that necessity exists for a comprehensive study of the potential value and uses of educational television for the general edification of the citizens of South Dakota.

Aside from this proposed statewide development program, South Dakota is also investigating the value, uses and aspects of the proposed Upper Midwest Six-State Television Network as it relates to this State. If Federal funds become available, it would seem that either or both networks should receive careful consideration. Undoubtedly, the plan which provides maximum benefit for the people at minimum operating cost will be instituted.

It is obvious that the State of South Dakota has an interest in the development of ETV and that the facilities at the State university will be used as a springboard for future statewide development and/or would serve as a connecting link for the Upper Midwest Six-State Network.

Respectfully,

I. D. WEEKS, *President.*

TENNESSEE EXECUTIVE OFFICE,
Nashville, April 4, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: I am most appreciative of your recent communication regarding the hearings being held by your committee on a program to assist States in establishing and improving educational television broadcasting.

Tennessee has a limited program in this field and it is the policy of this administration to encourage this medium of providing educational opportunities.

Our present program in this area is administered by the State department of education through Commissioner Joe Morgan and I am asking that he be in contact with your committee with regard to any specific information which might prove beneficial to you in your study.

Sincerely yours,

BUFORD ELLINGTON.

TENNESSEE STATE DEPARTMENT OF EDUCATION,
Nashville, April 5, 1961.

HON. OREN HARRIS,
*Chairman, Interstate and Foreign Commerce Committee,
House Office Building, Washington, D.C.*

DEAR CHAIRMAN HARRIS: The Tennessee Department of Education and the Tennessee Educational Television Commission regard the Magnuson bill already passed by the U.S. Senate and its companion bill or bills in the House of Representatives as vitally important to the development of educational television in the State of Tennessee.

We submit the following as evidence of our concern and as an indication of the use this State might make of Federal aid in the area of educational television.

1. In the State legislature just completed the following recommendations of the Tennessee Educational Television Commission to the general assembly were accepted and implemented into law:

"(a) That the extent to which the State should participate in educational television be limited, at this state of the matter, to continuing research and experiments in education by television.

"(b) That the means of doing so be the continuation of making grants of matching funds to existing stations in Tennessee authorized to engage in educational television by the FCC and capable of transmitting programs over their respective stations and that the number of stations so engaged be increased by this commission making available such information and data as it may have and cooperating with all interested persons.

"(c) That the estimated cost of continuing experiments in television be the same as for the last 2 years by including in the general appropriation bill \$50,000 per year for the biennium.

"(d) That the contingent appropriation of \$50,000 per year made by the miscellaneous appropriations bill of the 1959 legislature be increased to \$100,000 per year, anticipating that one or more of the three originating stations may come on the air prior to the 1963 legislature. With these funds available, a maximum of two new stations would then be able to enjoy the same financial support as has the pioneer station."

2. As early as 1955, the Tennessee Educational Television Commission was created by chapter 254 of the public acts of 1955, passed March 10, 1955, and made effective when approved by the Governor on March 21, 1955. So that all may have equal informational background on this commission, the following report and recommendations of this commission to the Tennessee General Assembly were submitted:

"The commission as constituted is composed of Gov. Buford Ellington as chairman; Mr. Joe Morgan, commissioner of education, vice chairman; and Mr. Julian B. Bondurant, Memphis, Tenn., who was appointed by former Gov. Frank G. Clement as the third member of the commission and continues to serve in that capacity.

"During the past 2 years the commission has not had the services of a secretary. This function has been performed by the State commissioner of education.

"The duties of the commission are defined by the act creating it, which are:

"1. Cause to be conducted research and experiments in education by television.

"2. To intercede in any proceeding concerning the retention, allocation, or reassignment of educational television channels when, in its opinion, such intervention is deemed desirable.

"3. File an annual report of its activities with the department of education.

"4. Recommend to the general assembly: (a) The extent, if any, to which the State should participate in educational television; (b) the means of doing so; (c) the estimated cost of same based upon its research and experiments."

3. One educational television station is already operating in Tennessee, WKNO-TV, channel 10, in Memphis. This is a community station supported in great part by the public schools of the city and county and in part by a grant of \$50,000 on a matching basis from State funds.

4. In 1953, the State of Tennessee commissioned A. D. Ring & Associates, consulting radio engineers, to prepare an engineering survey, looking toward a State educational television network for Tennessee. This report is on file in our office and is a part of the educational television commission's plans for full State coverage. There are eight educational television stations planned for this State network, one of which, WKNO-TV in Memphis, is already on the air.

5. The school boards of Nashville and Davidson County are in the process of activating channel 2 in Nashville as an educational television station with a target date of September 1961. This station would be a part of the projected State network if it is able to go to full power and maximum coverage. Assistance from Federal funds would make possible a full power station immediately.

6. In Knoxville four school systems and Dr. Kenneth Wright of the University of Tennessee Extension Service are working together in presenting over 7 hours of educational television programming a week on commercial stations in that city. They are ready to activate a channel as soon as some economic assistance is available, either on channel 20, assigned to Knoxville, or on channel 2, assigned to

Sneedville, 50 miles from Knoxville. These two channels are also part of the projected State network for Tennessee.

As one member of the State educational television commission, I believe that I am correct in saying that the development of the State educational television network in Tennessee will depend on just the kind of economic assistance which the bills under consideration would provide. Cities such as Memphis, Nashville, Knoxville, and Chattanooga might be able to develop their own broadcasting facilities with capital funds from local sources, but to complete the State network, four stations must be built in localities where the community is so small that such funds would not be available.

Finally, with the pattern already established by our State legislature, and with local operating funds available in the larger communities where the stations are either in operation or planned, operation of these stations is assured if they can be built.

Sincerely yours,

JOE MORGAN, *Commissioner.*

EXECUTIVE DEPARTMENT,
Austin, Tex., April 14, 1961.

HON. OREN HARRIS,
*House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN HARRIS: I have your letter of inquiry concerning my opinion of the manner in which educational television facilities will be constructed and maintained.

At the present time this matter is being provided for by private funds through institutions of higher learning, and it appears that this will be a successful operation in our State.

Kindest personal regards.

Sincerely yours,

PRICE DANIEL, *Governor.*

EXECUTIVE DEPARTMENT,
Austin, Tex., May 11, 1961.

HON. OREN HARRIS,
*House of Representatives,
House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN HARRIS: I would like to supplement the information given you in my letter of April 14 concerning the development of educational television in Texas.

The Texas Education Agency is authorized to plan and coordinate the development of educational television services in the State. Its accustomed method of operation is to undertake such development by the formation of advisory commissions and committees, by conducting studies, and by formulating leadership-type proposals which are accepted by local authorities and statewide organizations. Just this week it is launching a large statewide demonstration project in the use of new educational media in which educational television plays a prominent role.

Financing, erecting, and operating educational television stations is a local responsibility in this State. A ruling of our attorney general makes it clear that local school districts and junior college districts have legal power to use tax funds for the purchase of educational television services. A new educational television station is soon to go on the air in the San Antonio-Austin area with a large share of its operating funds coming from such support.

In brief, the State of Texas has adequate machinery to formulate a statewide plan for educational television and to allocate any funds which become available for the construction, equipment, and operation of nonprofit educational broadcasting. Interest in such development appears to be high. When a sufficient number of stations can be activated, they can with the leadership of the Texas Education Agency be joined in a statewide network.

Kindest personal regards.

Sincerely yours,

PRICE DANIEL, *Governor.*

STATE OF VERMONT,
EXECUTIVE CHAMBER, STATE HOUSE,
Montpelier, April 3, 1961.

HON. OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce, House Office
Building, Washington, D.C.*

DEAR CHAIRMAN HARRIS: Yours of March 28 received requesting certain information concerning Vermont's provisions for educational television.

Vermont has a State commission established by joint resolution of the legislature on educational television. They have been working diligently in the field and are now providing through a commercial station, WCAX-TV, Burlington, Vt., a limited program used in various schools in Vermont.

This exposure has given much impetus to the very valuable part which educational television can and does play. Presently, the commission has applied for and received a grant for studying the possibilities of an educational TV station in Vermont.

Upon the completion of this survey, we would be in a position to state with definiteness the probabilities of a separate educational TV station in Vermont.

It would be my sincere hope that your committee would list Vermont on the side of the States who may well require Federal-State cooperation for an educational TV channel.

Very truly yours,

F. RAY KEYSER, Jr., *Governor.*

STATE OF WASHINGTON,
EXECUTIVE DEPARTMENT,
Olympia, April 3, 1961.

Representative OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce, House Office
Building, Washington, D.C.*

DEAR MR. HARRIS: This is to advise you that Washington State does not have a State agency in existence which could participate in a cooperative Federal-State program to promote educational television operations. However, should Congress approve a Federal program I will appoint a group composed of representatives from all levels of education and from the television industry to formulate and develop a State plan. This approach to the problem should give this State a superior program and probably would lead to the establishment of an executive State agency.

In conclusion may I say that, in my opinion, a cooperative Federal-State program is highly desirable.

Sincerely yours,

ALBERT D. ROSELLINI, *Governor.*

STATE OF WASHINGTON,
EXECUTIVE DEPARTMENT,
Olympia, May 12, 1961.

Representative OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR MR. HARRIS: I would like to supplement my previous response of April 3 to your inquiry about the interest and plans of the State of Washington in participating in a Federal-State program to stimulate construction of educational television facilities.

There is already considerable activity in educational television in the State of Washington concentrated largely in the metropolitan area of western Washington, with two stations presently on the air at the University of Washington in Seattle and at the Clover Park public schools. A television production center is located at Washington State University at Pullman, but large areas of the State are presently without this important educational resource.

Each of the present facilities derives the major part of its operating funds from tax-supported agencies, with public school districts, State universities, and public libraries providing more than \$400,000 annually to this educational activity.

I feel the pattern which has been established in our State is one that can be readily extended throughout the rest of the State as needed, should Federal funds to assist additional construction become available.

I commend this legislation to your committee and assure you of my readiness to establish such administrative procedures at the State level as might be necessary to develop the required matching funds for capital construction which will enable us to participate with the Federal Government and to insure the continued operation of the facilities made possible by those funds.

Sincerely yours,

ALBERT D. ROSELLINI, *Governor.*

OFFICE OF THE GOVERNOR,
Madison, Wis., April 11, 1961.

CONGRESSMAN OREN HARRIS,
*Chairman, Committee on Interstate and Foreign Commerce,
House Office Building, Washington, D.C.*

DEAR CONGRESSMAN HARRIS: In answer to your letter of March 28, I wish to register approval of legislation to provide Federal funds to assist in the development of educational television at the State level.

The State of Wisconsin has had more than 40 years of experience in educational radio broadcasting and 7 years in educational television. The radio network operated by the State Radio Council has been well received and has strong support in Wisconsin. Experimental television transmission is conducted in Madison by the University of Wisconsin through Station WHA-TV. Milwaukee has a major educational television station operated by the Vocational and Adult Education Board.

The Coordinating Committee for Higher Education has named a joint staff committee to study educational television proposals in Congress and related questions of future developments in Wisconsin. A bill which I sponsored, setting up an education commission to review all aspects of State support for education, is presently before the legislature; it includes a specific provision authorizing the commission or a subcommittee to study the need for additional educational television. The commission would have authority to accept Federal or private moneys to assist in this study.

You requested that I comment on several matters relating to various proposals before the Congress. My feeling is that educational television in Wisconsin should be further developed by either the university or radio council—that a new agency not be created for this purpose. I also feel that the States should be required to present an acceptable plan for the development of educational television as a requirement for receiving Federal aids. The States also should show a willingness to expend State funds for this purpose.

I will be glad to furnish any other information to assist your committee in evaluating proposals before it.

Sincerely yours,

GAYLORD A. NELSON, *Governor.*

WYOMING, EXECUTIVE DEPARTMENT,
Cheyenne, May 15, 1961.

HON. OREN HARRIS,
*Chairman, House Interstate and Foreign Commerce Committee,
Washington, D.C.*

DEAR REPRESENTATIVE HARRIS: In accordance with your request that I report to you Wyoming's plans for activating educational television should legislation be forthcoming, hereto, are set forth our progress and planning to date.

Wyoming now has an active statewide committee representing public schools, university, State department of education and practitioners in filming and television. This committee has already initiated some statewide programs in educational TV but are limited to commercial channels because Wyoming has no educational station and has not been able to make use of the channel reserved for educational TV.

This committee is moving in a manner designed to acquire and install transmission apparatus necessary for television broadcasting at studios which will be available at the University of Wyoming at Laramie.

Presently, funds for establishment and operation of such facilities are not available.

Once facilities are established the local schools, already surveyed by the State department of education, would participate financially.

The regular educational program could be enriched.

(a) There are 195 one-room schools scattered throughout the 100,000 square miles of our State on ranches or at isolated locations where little or no contact is possible with the county or State administration.

(b) Towns are from 30 to 150 miles apart, many so small that school programs are limited because of the personnel available. A regular educational TV station could use talent to furnish all children instruction in some subjects.

(c) Adult education programs could be scheduled without reference to distances which now limit participation.

The need is emphasized by these observations:

(a) Livestock, a stable industry, could use the channel for recent information and weather warnings.

(b) Learning could be enhanced by regular channeled programs under the University Agriculture Extension Service.

(c) Mining is still somewhat dependent upon exploration. Here the TV could be used for information and forums.

(d) Oil prospecting is continuous. Regular forums could be established.

(e) State and local government officials could readily get information to the public without the bias which sometimes accompanies pertinent releases through private agencies.

(f) Education in Civil Defense for self-protection in time of natural disaster, military or national emergency could reach all the State's citizenry.

Operation and responsibility for such educational programs would of necessity be the State Education Department's, not necessarily to comply with section 2, clause (b) (2) of H.R. 965, but because Wyoming Constitution and Statutes place the responsibility for education under the State Superintendent of Public Instruction and the State Board of Education.

If and when H.R. 965 becomes law, Wyoming will establish a statewide commission representative of industry, agriculture and education with responsibility for programing and scheduling and encouraging widespread use of the facilities.

It is our hope that H.R. 965 will be enacted into law. Wyoming is presently moving in a manner designed to make use of such legislation immediately. Already, a statewide school committee on educational media is active in using such commercial TV as is available.

The results of the present survey on educational needs are being studied. Preliminary investigation projects a cost of not less than one-half million dollars nor more than \$1 million for putting a statewide educational TV program through both closed circuit and educational channels.

Wyoming's Council for Educational Media enthusiastically urges the enactment of H.R. 965.

Very truly yours,

JACK R. GAGE, *Governor.*

Mr. MOULDER. There will also be included in the record, without objection, a report submitted by the Joint Council on Educational Broadcasting which was prepared at the request of this subcommittee, together with a letter of transmittal dated May 5, 1961. This report briefly describes the progress in the development of educational television in each of the 50 States, the District of Columbia, and the Commonwealth of Puerto Rico. While the report is rather bulky the information contained in it will be important background information for persons concerned with educational television and for the Department of Health, Education, and Welfare for the administration of any legislation on educational television which this Congress might enact.

(The report referred to follows:)

JOINT COUNCIL ON EDUCATIONAL BROADCASTING,
Washington, D.C., May 5, 1961.

HON. OREN HARRIS,
*Chairman, House Committee on Interstate and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR CHAIRMAN HARRIS: In response to your request, the Joint Council on Educational Broadcasting is transmitting to you and to the members of Subcommittee on Communications and Power of the House Committee on Interstate and Foreign Commerce a report which briefly describes the progress in the

development of educational television in each of the separate States, the District of Columbia, and the Commonwealth of Puerto Rico.

As you have indicated, your committee is particularly interested in what provisions the States have made, or will make, for the utilization of Federal financial assistance for the construction and improvement of educational television facilities should funds for this purpose be appropriated by the Federal Government. In short, what assurance is there that the States will make effective use of the proposed financial assistance?

The readiness of the States to make good use of the proposed funds is, we feel, firmly linked to demonstrated efforts to bring the benefits of noncommercial, educational television into the mainstream of America's educational and cultural life. Thus, our report considers what has already been accomplished as well as plans which await fulfillment.

Our survey reveals that at least 24 States have established State educational television commissions or committees for the purpose of coordinating and giving direction to ETV development efforts. In 24 States, legislatures have appropriated funds to construct and/or operate ETV facilities, to make surveys, and conduct research. Our survey shows that the legislatures in 33 States have, through their legislative actions, actively encouraged the initiation or expansion of the effective use of television in education.

We believe that such legislative action is a very significant indication of the States interest in this new field, a genuine expression of the citizens' desire to utilize the channels reserved for education. This is, however, but one aspect of a much larger expression of interest in the progress of ETV within the States. In order to suggest the broad range of interest in the educational television movement which the proposed legislation would serve to support, we have included in our report a brief description of both the planning for and operation of educational television facilities on the part of colleges and universities, school systems, and community groups.

In preparing this report we have sought to avoid speaking for these organizations and institutions, preferring instead to record the most important facts concerning their planning and operational activities. We feel that the record of accomplishment and readiness to make substantial advances through the use of Federal assistance speaks for itself—and most articulately. We have earnestly endeavored to make the report complete. We acknowledge, however, that what we are presenting is an overview and summary of a substantial national educational undertaking in which millions of citizens have participated, directly and indirectly. In our desire to present this material briefly and concisely, we have limited the description of many plans and present operations which are destined to play a major role in this Nation's educational system.

While it lies somewhat outside the scope of our survey and report, there is one matter which we believe merits special attention. It is our understanding that the proposed legislation is designed to stimulate the development of educational television, and to encourage the most effective utilization of the television channels that have been reserved for education. In this connection, it is important to note that 34 of the 56 noncommercial stations now on the air were able to commence operation through assistance in construction costs provided by one source, the fund for adult education, which set aside \$12 million for this purpose. It is likewise significant that none of the organizations which were thus assisted in their initial construction phase has vacated an activated channel nor failed to find operating funds. Indeed, virtually all of the established stations have expanded their services and greatly improved their facilities. We respectfully submit that this is a useful lesson in the short history of educational television for it illustrates that a program of broad financial support for construction assistance will meet enthusiastic response, culminating in cultural and educational benefits to millions.

We wish to gratefully acknowledge the assistance of the National Association of Educational Broadcasters and the National Educational Television and Radio Center in the preparation of this report.

Respectfully submitted.

DAVID C. STEWART,
Secretary, Joint Council on Educational Broadcasting.

A SUMMARY OF EDUCATIONAL TELEVISION IN THE SEPARATE STATES, THE DISTRICT OF COLUMBIA, AND THE COMMONWEALTH OF PUERTO RICO

Prepared by the Joint Council on Educational Broadcasting, Washington 6, D.C.,
May 2, 1961

ALABAMA

Summary

As the detailed report indicates, the Alabama State Legislature was an early and active supporter of educational TV. It created an educational television commission in 1953 and since that time has appropriated nearly \$3 million for construction and operation of the State's ETV network, which includes ETV stations in Birmingham, Andalusia, and Munford. These stations are interconnected by microwave facilities, owned and operated by the ETV commission.

An application for an FCC permit has been filed for an ETV station in Montgomery, and plans are being made to bring Mobile into the ETV network coverage area. Our detailed report reflects the wide content range spanned by the nearly 70 hours of programming each week on the network. The enthusiasm for ETV in Alabama has increased each year, for the programs are responsive to the needs of schools, colleges, and community groups.

Representatives of the Alabama ETV system have, on a number of occasions, testified before House and Senate Commerce Committees, strongly supporting the proposed ETV legislation.

Legislature

1953: The legislature appointed a five-member Alabama Educational Television Commission and appropriated \$500,000 for the construction of ETV stations.

Later the State building commission granted an additional \$272,000 for station construction.

1955: The legislature included in appropriations to its educational institutions items for ETV as follows: \$85,000 to Alabama Polytechnic Institute (now Auburn University) for studios, \$80,000 to the University of Alabama for ETV operation, \$250,000 for operation of the ETV network.

1957: \$427,039.98 budget for ETV network operation for the biennium.

1959, second session: \$254,026 for 1959-60 and \$254,856 for 1960-61, to Alabama ETV Commission; \$110,277 for 1959-60, and \$110,598 for 1960-61, to Auburn University for ETV.

Altogether these direct grants plus other indirect support for educational television in Alabama have totaled nearly \$3 million.

Alabama Educational Television Commission

Through its ETV commission, the State of Alabama owns and operates three educational television stations interconnected by a microwave network. Programs from any one of three studios are simultaneously broadcast over all three stations. The network headquarters is also operated by the commission to handle network policies, traffic, publicity, and so on.

The three studios are at Auburn University, Auburn, at the University of Alabama, Tuscaloosa, and in Birmingham. The sites of the transmitters were chosen to provide the greatest possible coverage of the State, and it is estimated that 80 percent of Alabama's population is within the service area of one or the other of these three transmitters. Service to northwest Alabama has recently been provided by an arrangement with a community antenna system serving that area.

Other sections of the State have expressed a strong desire to be included in the ETV coverage, notably Mobile, and plans are being made to bring this area into the network. The Alabama ETV Commission requested eight additional UHF channels for the State and these were allocated and reserved, making a total of 12 UHF reservations available for stations in other parts of the State and for additional ETV programming in areas now receiving the VHF service.

The ETV Commission has applied for a construction permit for a station in Montgomery on reserved channel 26 (see Community Groups for local action in support of this undertaking).

Stations in other locations are planned for the future, as funds permit.

The call letters of the stations now in operation, dates of activation, channels, and the location of the transmitters are as follows:

ETV station WAIQ: August 8, 1956, channel 2, Andalusia, Ala. (Mervillis Mill Road, Dozier, Ala.).

ETV station WBIQ: April 28, 1955, channel 10, Red Mountain, Birmingham.

ETV station WCIQ: January 7, 1955, channel 7, Mount Cheaha, near Munford, Ala.

The three stations carry the same programming and are on the air 67½ hours per week. A program schedule in the fall of 1960 showed these programs in addition to some NET programs not listed here:

Basic Electronics	Backstage (local dramas)
Stones and Bones (Alabama Archeology)	Wildlife, Woods and Water
Astronomy	Home Management
Refresher courses for teachers in:	Family Challenge
Science	Families in Focus
Mathematics	Civics (for high schools)
Music	Slide Rule
Educational methods	Statistics
Farm Facts	Precollege algebra
Today's Home	Chemistry (college credit)
Mythology	Civics (college credit)
Time to Grow Gardens	

Instructional series are sometimes broadcast more than one time.

Universities

The University of Alabama has one closed-circuit TV system used as a laboratory for courses in television techniques; television production and directing; educational television production; and problems in educational television.

On a separate closed-circuit TV system, several subjects have been taught on an experimental basis: trigonometry, accounting, mathematics and English. This closed circuit system is used primarily, however, to produce and record programs for broadcast over the Alabama ETV network.

An analysis of TV teaching of science and mathematics made in the spring of 1960 showed the following telecourses produced by the university for broadcast:

Summer refresher courses in algebra; geometry; special uses of math: For high school students entering college in the fall; half hour two (or three) times a week for 2 months, 1958 and 1959.

Inservice refresher course for chemistry teachers: Half hour twice a week after school, fall 1958.

Chemistry for high school credit (inschool reception): Half hour three times a week for 1958-59 and 1959-60.

Auburn University also has fully equipped TV studios, as mentioned under legislature and the Alabama ETV Commission.

Auburn has produced (as indicated by the analysis of TV teaching of science and mathematics made in the spring of 1960) the following courses for broadcast over the Alabama ETV network:

Slide Rule, high school/college prep course: Half hour twice a week, summers, 1958-59.

Physics for high school credit (inschool reception): Half hour three times a week for 1958-59 and 1959-60.

General math for junior and senior high schools: Half hour three times a week, spring 1959.

Trigonometry for high school credit: Half hour three times a week for 1958-59.

Science for junior high schools: Half hour once a week 1958-59, three times a week 1959-60.

Science refresher course for junior high school teachers: Half hour once a week after school, 1958-59.

Solid geometry, high school refresher/college prep course: Half hour twice a week, summer 1959.

Science teacher training, inservice course for science teachers: Half hour twice a week after school, 1959-60.

Noncredit enrichment programs in science for lower elementary, for upper elementary, and for advanced junior high school students, and for adults: Half hour programs, 1 to 3 times a week, 1958-59 and 1959-60.

Public schools

The State Department of Education and the public schools of the Birmingham area use the studios of the Birmingham Area Educational Television Association (see WAIQ, above, and community groups, below) to produce inschool programming for the Alabama ETV network.

As shown in the list made up in early 1960, these groups recently produced the following series in science and mathematics:

Biology for high school credit: Half hour 4 times a week in school, 1958-59 and 1959-60.

Adult series, "Science Theatre": Half hour once a week, afternoons, summer 1958.

Adult refresher course, "Mind Your Math": Half hour twice a week, evenings, summer 1959.

Community groups

As early as October 1952, a meeting was held in Birmingham to discuss ways and means of activating channel 10, reserved for that city. The meeting was attended by representatives from five school systems, two colleges, and the mayor's office. The Birmingham Area Educational Television Association was formed and in addition to the above included business and labor groups, women's clubs, and individual citizens. The association filed an application for a construction permit.

Birmingham educators and others also participated in study and planning for a State ETV network, and when the legislature created the Alabama ETV Commission, the association withdrew its own application in favor of the ETV Commission and agreed to participate in the programming of the station to be constructed.

For a few of the recent programs produced in the association's studios, see public schools, above.

Citizens and civic agencies of Montgomery have raised funds and purchased a tower and transmitter which have been offered to the Alabama ETV Commission for a station in Montgomery. The ETV Commission has accepted the tower and transmitter and on February 9, 1961, applied for a construction permit for an ETV station on channel 26, Montgomery.

ALASKA

Summary

Alaska is confronted with problems of long distances between populated areas and rugged terrain and there is recognition of the advantages of ETV, particularly courses at the college level. Such courses have been broadcast on commercial stations in Anchorage, Fairbanks, Juneau, Ketchikan and Nome.

The University of Alaska contemplates the development of an ETV production center to serve the State. Educational needs in sparsely settled areas are particularly acute, and the development of educational television facilities in such areas has often proven to be the only effective means of serving the population.

Four valuable VHF channels have been reserved for education in Alaska.

Universities

The University of Alaska in Fairbanks has offered college credit for "Sunrise Semester," produced by New York University and televised from commercial stations in Anchorage, Fairbanks, Juneau, Ketchikan and Nome.

A faculty committee of the university has submitted to the president an extensive proposal concerning the development of a materials of instruction center which would include the production of educational programs for TV broadcast.

Anchorage Community College, Anchorage, offered credit for the continental classroom physics course, broadcast on a local commercial TV station.

Because of the great distances between cities and the relative sparseness of population in Alaska, the State is faced with unique difficulties in providing ETV service for its citizens.

Yet because of the isolation of many persons during the winter months, educational TV programs would be particularly welcome in this State.

ARIZONA

Summary

As the detailed report indicates, leading educational institutions in Arizona have long recognized the value of educational television.

Determined efforts have resulted in the activation of two ETV stations in the State. The existing ETV facilities in the State could be improved immeasurably, and educational TV programs could be brought to a much greater portion of the population through the provision of Federal financial assistance. Certainly the State has demonstrated its desire for educational programing as well as its financial ability to operate the facilities that have been developed.

Arizona State University has supported the proposed ETV legislation.

Universities

The University of Arizona, Tucson, installed in 1955 a closed circuit TV system for teaching the techniques of TV, radio, drama, and speech; for rehearsals of programs being prepared for broadcast on commercial TV; for training teachers of elementary and high school science, mathematics, and art.

For several years the university presented programs on commercial TV stations. In 1957, Herring Hall was remodeled for studios for TV, radio and film.

ETV station KUAT, Tucson, channel 6, began broadcasting on March 8, 1959, licensed to the board of regents of the university.

KUAT is currently on the air 27 hours a week with local and NET programs for home and school, and four college credit courses: Survey of art, elementary Spanish, general chemistry, National and State Constitutions, elementary psychology.

The Arizona State University, Tempe (near Phoenix), has presented many programs on commercial station KTYL-TV in Mesa. It also offered credit for continental classroom physics and chemistry, broadcast on the local NBC outlet. In 1959 the university presented two telecourses of its own for college credit: Elementary Spanish and elementary engineering analysis. Off-campus viewers could enroll for credit through the extension division.

In 1960 the board of regents voted to use \$50,000 offered by the Arizona University Foundation to activate channel 8; another \$50,000 was donated by private philanthropy. Transmitter and tower were donated by a commercial TV station.

ETV station KAET-TV, Phoenix, channel 8, began broadcasting on January 30, 1961, with the university as the licensee. The new station is affiliated with the National Educational Television and Radio Center and will carry NET programs, as well as programs produced in its own studios.

Public Schools

The public schools of Tucson joined the University of Arizona in 1952 in requesting that a channel be reserved for education in Tucson.

Phoenix public schools are seeking means of financing the production of programs for broadcasting to classrooms on the facilities of ETV station KAET-TV.

ARKANSAS

Summary

The results of all phases of our inquiry into the expression of interest in ETV in Arkansas indicate a climate receptive to the wise use of Federal funds for construction of facilities which will bring high quality, noncommercial educational programing to the citizens of the State.

The State legislature, the universities, public schools, as well as community groups have taken positive steps to assist in the establishment of a statewide ETV system.

Television channels have been reserved for education in Fayetteville, Fort Smith, and Little Rock.

A representative of the State ETV commission has presented testimony to the Subcommittee on Communications and Power of the House Commerce Committee, strongly endorsing Federal financial assistance to move the State plans forward. In 1961, the chairman of the State ETV commission testified in support of proposed ETV legislation before the House Commerce Committee.

Governor

1953: In January 1953 the Governor appointed a 24-member committee to investigate the use of TV channels for education.

The committee recommended creation of a State ETV authority and the construction of six ETV stations to cover the State; it estimated the cost for

construction and operation as \$450,000 annually for 7 years, and after that \$275,000 annually for operation.

Commercial broadcasters in Arkansas requested the FCC to continue to hold the channels reserved for education in the State.

Legislature

1958: The legislature authorized a 25-member State steering committee to work with the department of education in developing educational programs on commercial TV stations to test public acceptance.

Programing began fall 1958, and 26 programs of 30 minutes each were broadcast on commercial TV stations throughout all parts of the State. Similar series began in the fall of 1959. The programs were of three types: course enrichment for schools, public information panels about schools, and other adult programs.

1959: The legislature authorized the appointment of the Arkansas ETV Commission to study and plan for the construction of ETV stations, and appropriated \$5,000 for its use. The nine-member commission was appointed as specified: four by the Governor, two by the chairman of the senate (Lieutenant Governor) and three by the speaker of the house.

1961: The legislature appropriated an additional \$10,000 to the ETV commission to continue its study of a statewide plan for ETV station construction and operation.

Universities

Since 1953 the University of Arkansas, Fayetteville, has presented educational programs on commercial TV stations and has participated in the work of State groups seeking to obtain ETV service for Arkansas.

Southern State College, Magnolia, presented conversational Spanish on commercial TV in 1956 and 1958 and a weekly series for high schools.

Public schools

Local committees of public school principals and teachers participated in planning the program series broadcast in their area (see statewide project described above under the 1958 legislature). A number of regional committees were set up for this purpose. A similar procedure was followed for the 1959 series.

In 1958, the State department of education purchased a filmed high school physics course (taught by Dr. Harvey E. White) at a cost of \$15,000 and screened it on projectors at several high schools, as a test of the effectiveness of using recorded teaching.

The following year, the department arranged for the entire course to be broadcast over the Memphis ETV station WKNO-TV, and the series was received by high schools in Marianna, West Ridge, Leachville, Parkin, Forrest City, Wynne and West Memphis, Ark. Some of these high schools were offering no physics course prior to the TV course.

The Little Rock schools used commercial TV for teaching during the school crisis in that city in 1959, and one program proved so popular that it was continued as a regular daily half-hour broadcast (at 7:30 a.m.)

Community groups

The Arkansas Educational Television Association was chartered in 1955. Made up of educators and laymen throughout the State, the association worked toward a State ETV network.

In 1961, the Arkansas ETV Association, which had been inactive for several years, reorganized, elected new officers, and began to work toward the activation of reserved ETV channels in Little Rock and Fayetteville, as first steps toward a State network.

CALIFORNIA

Summary

Colleges, universities, public schools, community groups, and the State legislature have actively supported the development of educational television, both closed-circuit and broadcasting stations, in California, for nearly a decade. Representatives of the Governor's committee on ETV have come to Washington on two occasions to testify for the need for Federal assistance to help finance an extension of the present ETV efforts.

The two VHF channels (in Sacramento and San Francisco) reserved for education in the State have already been activated. Six additional UHF reserved channels await activation. The FCC has recently initiated an inquiry into how a VHF educational service can be provided for Los Angeles. Califor-

nia's wealth of experience in this field and its desire to improve the existing service insures effective use of Federal funds for the construction of facilities.

The Central California Educational Television, Inc., has supported the recent proposed ETV legislation.

Governor and legislature

1952: The Governor appointed a citizens advisory committee on educational television and called a conference on the subject.

1953: The house ways and means committee studied ETV and recommended closed circuit projects at the State colleges.

1957: The legislature passed bills empowering local school groups to make financial contributions to ETV programming.

1959: The Governor asked the citizens advisory committee on ETV to make a careful study of the State's experience with ETV and recommend legislative action.

1961: The committee presented its report on January 1, 1961.

The report recommended the creation of an ETV agency to work with all appropriate educational agencies in promoting and guiding the development of ETV and to receive and allocate any Federal funds which might become available for ETV.

The report recommended legislation permitting school agencies to own and operate ETV stations and other enabling or clarifying legislation with reference to the schools and TV, and a regular means of providing State aid in financing the operation of present and future ETV stations.

Universities

Closed-circuit TV systems were installed in State colleges and universities pursuant to the recommendation of the legislature in 1953. Since funds for the systems came from the budgets of the several institutions, they do not appear as separate legislative appropriations.

San Jose State College and others have issued reports on their closed-circuit TV experience which have proved valuable as reference and source materials both inside the State and throughout the Nation.

Among the colleges, public and private, operating closed-circuit TV systems are:

Compton District Junior College, Compton	University of Southern California, Los Angeles
University of California, Berkeley	University of California, Los Angeles
Orange Coast College, Costa Mesa	Los Angeles City College, Los Angeles
Valley College, San Bernardino	Los Angeles State College, Los Angeles
San Jose State College, San Jose	Los Angeles Valley College, Van Nuys

The University of California and other colleges and universities in the San Francisco and Sacramento areas participate in the programing of ETV stations KQED and KVIE, San Francisco and Sacramento, respectively (see "Community Groups").

Public schools

The public schools of San Francisco and Sacramento and their surrounding areas participate in the school programing of ETV stations KQED and KVIE, described below under "Community Groups."

In San Diego, the public schools are offering a before-school TV course in advanced high school algebra over a commercial TV station.

The Anaheim city elementary schools operate a closed-circuit system with four studios in a new building and using cable service from the telephone company. Operation began in September 1959 with 1 to 8 telecasts daily for fourth and fifth grades in 12 schools, and has been expanded to reach 20 schools. Programing has also been expanded and includes third graders.

The Lennox School District (Los Angeles County) and Carlsbad Union School District also operate closed circuit TV systems.

Community groups

ETV station KQED, San Francisco, channel 9 began broadcasting programs on June 10, 1954. It was established by the Bay Area Educational Television Association, which is composed of 38 organizations and many individual members. Among the participating organizations are seven teacher associations and the principals' association for the area, six colleges and universities, and libraries, museums, and civic groups.

KQED is lively and enterprising, as befits one of the Nation's earliest ETV stations to go on the air. Its annual campaign for operating funds is conducted in an entertaining manner and attracts widespread attention.

KQED has produced several series for NET distribution. It carries NET programming and locally produced series of general interest, for example "Profiles: Bay Area." Currently KQED is on the air about 32 hours a week.

In-school programming is produced in cooperation with local school systems and consisted, as of fall 1960, of 12 different series. Outstanding among these is 3 years of Spanish instruction for elementary grades.

KQED is linked by microwave with KVIE (below). Instructional telecasts are shared by the two stations and serve a combined classroom population of more than a quarter-million elementary and intermediate grade students.

ETV station KVIE, Sacramento, channel 6, began broadcasting programs on February 23, 1959, licensed to Central California Educational Television, Inc. The nonprofit organization is composed of educational and cultural institutions and organizations in the Sacramento area.

KVIE carries NET programs for home and school and many locally produced instructional and enrichment series for schools, planned in cooperation with the school systems. The station is on the air 55 hours a week. Programming for classroom use (as of fall 1960): 13 separate series for elementary and high school students and 2 methods series for teachers (art and music). Two years of Spanish are offered for elementary students and a news series for grades 7-12. There is also a college credit course in Philosophy.

School programming is exchanged by microwave with KQED.

COLORADO

Summary

Major educational institutions and community groups have supported ETV construction and operations for many years. One of the country's outstanding ETV stations, KRMA, is located in Denver. It has served the schools of the area as well as providing informal, noncommercial programs for both children and adults since 1956.

The University of Colorado is now seeking funds to establish an ETV station on reserved channel 12 at Boulder. Two additional educational channels have been reserved at Colorado Springs and Pueblo.

A statewide system of ETV programming could unquestionably be stimulated through the provision of Federal assistance. Proposed ETV legislation has been supported by representatives of the Denver public schools and KRMA-TV.

Legislature

1960: The legislature passed an act enabling school districts to operate TV translator facilities.

Universities

The University of Colorado, Boulder, offers courses in television production and has produced telecourses on commercial TV stations.

The university is currently attempting to secure funds to establish an ETV station on reserved channel 12 and is preparing an application for a construction permit.

Colorado State College, Fort Collins, offers courses in television production and has produced telecourses on commercial TV stations.

The University of Denver offers courses in television production.

Public Schools

ETV station KRMA-TV, Denver, channel 6, began broadcasting on January 30, 1956. It is licensed to the public schools of the city and county of Denver. The station is currently on the air 30 hours a week, carrying 22 program series for elementary grades, including 2 years of French and Spanish, and literature, science, social studies, mathematics, and geography for various grades.

Typing, home economics, and college algebra are offered by TV for older students and adults, as well as public affairs and miscellaneous cultural programs produced locally or obtained through the NET service.

CONNECTICUT

Summary

The legislature has been active in fostering the development of ETV programs for the State since 1953.

The Connecticut Educational Television Corp. which includes businessmen and representatives of leading educational associations, colleges, and universities, was established after the Connecticut Citizens Committee for the Public Schools made an extensive study of ETV operations in other States.

The corporation is now seeking a transmitter site for the construction of an ETV station on channel 24, reserved for Hartford.

Meanwhile, public school officials and laymen in the Norwalk-Stamford area are making plans to establish an educational station in that area.

As our more detailed report indicates, educators in the State have had much valuable experience in the use of the medium. The provision of Federal funds for ETV construction in this State would greatly strengthen the regional ETV network opportunities in the Atlantic coastal area.

Legislature

1953: The legislature appropriated \$5,000 for use of an ETV study commission to be appointed by the Governor.

1954: The legislature received the report of the ETV commission recommending a seven-member permanent ETV commission, and a 2-year-experimental ETV project.

1955: The legislature appropriated \$150,000 to finance TV programs on commercial stations. Over 400 programs were presented by the State education department.

1957: The legislature directed its legislative council to study in what way the State should give further support to ETV.

1958: The legislature received the report of the legislative council recommending that State funds be used to establish a production center for ETV programs to be broadcast on commercial stations, and that after 2 years a State ETV network be considered.

Universities

University of Connecticut, University of Hartford, and Southern Connecticut State College (New Haven): All have presented academic courses on commercial TV stations, as well as noncredit programs of cultural interest. In the summer of 1959, the Southern Connecticut State College presented a credit series of especial interest in that it was a part of an intensive program to prepare graduates of liberal arts colleges to qualify for teaching.

Central Connecticut State College, New Britain, has a closed circuit TV system connecting 30 classrooms with the audio-visual center. Its first use was to enable the art teacher to teach all sections at one time. Other uses are planned.

Yale University presents a noncredit science series for the layman on a commercial TV station. It is called "Yale Reports" and has run for many years.

Public Schools

Many public schools in Connecticut are reported as using the in-school programs of ETV station WGBH-TV in Boston.

In southwest Connecticut, 30 school systems are using the programs of the New York Board of Regents broadcast from commercial station WPIX in New York City. This programming is described briefly under New York public schools.

Public school officials and laymen in the Stamford-Norwalk area are working toward the establishment of an ETV station for the area. Channel 55 is reserved.

Community Groups

The Connecticut Citizens Committee for the Public Schools made a study of ETV stations in other States and proposed the formation of a nonprofit corporation to establish a station in Hartford.

The Connecticut Educational Television Corp. was formed, pursuant to the proposal of the citizens committee. The corporation is made up of businessmen and representatives of educational organizations including (in addition to the citizens committee) the State Education Association, the Association of Boards of Education, and several colleges and universities.

The corporation is seeking a transmitter site for constructing an ETV station on channel 24, reserved for Hartford, and is preparing an application for construction permit.

DELAWARE

Summary

The Delaware Educational Television Association, Inc., is made up of the State department of public instruction, the University of Delaware, the Wil-

mington Board of Public Education, the Delaware State Educational Association, the Delaware Congress of Parents & Teachers, and 17 other organizations, plus an advisory council representing business and industry. The association has joined forces with ETV station WHYY in Philadelphia in attempting to secure channel 12 in Wilmington for an ETV station.

There are competing commercial applications for channel 12 and the case has been pending for several years. The FCC has agreed to enlarge the issues in the case to include matters of program content, and has denied the request of a commercial broadcaster to dismiss WHYY's application for a construction permit.

The provision of Federal funds for ETV construction in Delaware would have an important bearing upon the future noncommercial TV broadcasting in this area.

Public schools of Delmarva Peninsula

Representatives from county boards of education in the Delmarva Peninsula are producing programs of direct televised instruction and enrichment in science, music, history, and French. The instruction originates at a commercial TV station in Salisbury, Md. Teachers drawn from the participating schools systems give full time to TV work. The programs total 1½ hours per school day and reach 141 classrooms in 8 school systems in Delaware, Maryland, and Virginia. Costs are met by an assessment of \$1 per pupil per year. The Delmarva ETV project has been running since 1958.

State Department of public instruction, University of Delaware, and community groups

The Delaware Educational Television Association, Inc., is made up of the State department of public instruction, the University of Delaware, the Wilmington Board of Public Education, the Delaware State Educational Association, the Delaware Congress of Parents & Teachers, and 17 other organizations, plus an advisory council representing business and industry.

The association has joined forces with ETV station WHYY in Philadelphia in attempting to secure channel 12 in Wilmington for an ETV station. There are competing commercial applications for channel 12 and the case has been pending for several years. The FCC has agreed to enlarge the issues in the case to include matters of program content, and has denied the request of a commercial broadcaster to dismiss WHYY's application for construction permit.

The Governor of Delaware is strongly in favor of the proposal to make channel 12 an educational reservation in Wilmington and is supporting the application of WHYY-TV for a construction permit. The Governor has recently suggested that the Legislature and General Assembly of Delaware enact a joint resolution to this effect.

DISTRICT OF COLUMBIA

Summary

More than 8 years of concentrated effort on the part of the Greater Washington Educational Television Association (GWETA) has not yet succeeded in establishing an educational TV station in the Nation's Capital, although this group of citizens and representatives from all leading educational and cultural institutions are nearer to the goal than at any time in the past.

The principal obstacle has been lack of funds for construction. The achievements of area school and college courses broadcast on commercial stations are well known throughout the country.

GWETA representatives have testified in support of the pending ETV legislation on many occasions. The ability to purchase equipment for a first-class ETV station in the Capital would result in educational advantages for the entire Nation, since the programs produced here, utilizing the outstanding resources of the area, would be distributed widely.

Universities

George Washington University presented telecourses in the Russian language, beginning in February 1959 on a commercial TV station, a half hour three mornings a week; 3,600 noncredit viewers registered at \$15 each, which included the textbook and TV study guide. The course was repeated in the summer under a different instructor and a more advanced course was offered the next fall. An earlier series by George Washington University was "The Other Two Billion."

American University presented a very well received telecourse in the Bible and received a grant for recording it on videotape.

Community group

An active effort to obtain financing for an ETV station in Washington on reserved channel 26 is being carried on with considerable success by the Greater Washington Educational Television Association, Inc. With an initial grant of \$25,000 from the Ford Foundation to use in seeking further sources of support, GWETA has obtained \$80,000 from private donors and foundations and hopes to be able to begin station construction in the fall of 1961.

GWETA was organized in 1953, and its membership includes the colleges and universities of the Washington metropolitan area, representatives of area elementary and secondary school systems, the Library of Congress, the Folger Shakespeare Museum, the National Gallery of Art, and the Smithsonian Institution.

FLORIDA

Summary

A vigorous program of ETV station construction and operation, as well as utilization of closed circuit facilities, has been underway in the State for many years. Testimony of Florida educators provided to the Subcommittee on Communications and Power of the House Commerce Committee has strongly supported the pending legislation. It has also indicated that through the use of TV, educators have found a means to raise the quality of instruction while, at the same time, lowering educational costs.

Our detailed report on Florida reflects the substantial financial assistance which schools, colleges, and community groups have received from the State legislature. Five VHF educational stations are now in operation. Plans are being made for their interconnection and the development of new ETV stations in order to serve the entire State.

Florida provides a good example of the effectiveness of capital fund stimulation in this field.

Legislature

1953: The legislature authorized a survey of State resources for ETV by an advisory committee and appropriated \$20,000.

1954: The advisory committee recommended a production center at the University of Florida, the establishment of a State agency to approve TV standards, and additional funds for ETV stations.

1957: The legislature appropriated \$600,000 for use of a seven-member ETV Commission to be appointed by the Governor. The Commission's responsibilities are to assist communities to construct ETV stations, to facilitate cooperation among existing stations, to construct microwave interconnections between them, and to coordinate Florida's ETV system with those of other States.

1959-61: The legislature appropriated \$605,576 for the first year of the biennium and \$115,076 for the second, to the ETV Commission.

Of the five Florida ETV stations in operation in early 1961, two (Jacksonville and Gainesville) have been connected by microwave links by the ETV Commission. Completion of the microwave system is planned, but awaits financing.

Universities

ETV station WUFT, Gainesville, channel 5, began broadcasting programs on November 17, 1958. It is licensed to the University of Florida. Currently (1961) the station is carrying art for grades 1 through 6; Spanish for grades 3 through 6; music for grade 3; elementary science (5th and 6th together); high school chemistry; and college courses in magazine writing and humanities. In addition, there are net programs for children and adults. The university also has a closed-circuit system used for three college French courses.

ETV station WFSU-TV, Tallahassee, channel 11, began broadcasting programs on September 18, 1960. It is licensed to Florida State University. Programs for inschool use are shown from 11 a.m. until 3 p.m. and include four college credit courses and, for younger students, enrichment programs. Net programs are carried from 6 to 10 p.m. The university also has a closed-circuit system used for teaching mathematics, the humanities, geology, and English.

University of Miami, Miami, uses closed-circuit TV and broadcasts credit and noncredit courses on ETV station WTHS-TV (see Public Schools). Closed-circuit TV is also used at University of South Florida, Tampa, and the St. Petersburg Junior College.

Public schools

ETV station WTHS-TV, Miami, channel 2, began broadcasting programs on August 12, 1955, and was Florida's first ETV station to go on the air. The station is licensed to the Board of Public Instruction of Dade County.

WTHS-TV is currently on the air about 74 hours a week offering (in addition to informational and cultural programs for home viewing) TV instruction for grades 5 through 7 in science, Spanish, history, and literature; for grades 9 through 11, science, English, history, civics, biology, and driver education; junior college biology; and French, Hebrew, and two series in Spanish for noncredit viewing. The board also has a closed circuit system which is used for training in television techniques and in preparation of the above programing.

Dade County has seen its school population increase rapidly in recent years and school authorities feel that the use of ETV has saved money by permitting maximum use of school properties.

Community groups and public schools

A community group in Miami, the Community TV Foundation of South Florida, Inc., originally developed ETV Station WTHS-TV and made it possible for the school system to put the station on the air. The Foundation cooperates in planning all nonschool programing.

ETV station WJCT, Jacksonville, channel 7, began broadcasting programs on September 10, 1958. It is licensed to Educational Television, Inc., a nonprofit group of citizens and educators.

WJCT is on the air 23 hours a week and carries, in addition to NET programs, telecourses in magazine writing, social studies, French, history, elementary art, science, Spanish, and college French. The programs for inschool viewing are produced in cooperation with the public schools.

ETV station WEDU, Tampa-St. Petersburg, channel 3, began broadcasting on October 27, 1958. It is licensed to a nonprofit corporation, West Coast Educational Television, Inc., and is currently on the air about 50 hours a week.

Programing in fall, 1960, included three methods courses for teachers (arithmetic, algebra, and reading), Russian, German, French, and Spanish (on two levels); religions of man, survey of biological science, magazine and feature writing, survey of communications, and a series for mothers, "Kindergarten Corners." These are in addition to NET programs.

The public schools in Tallahassee and Gainesville cooperate with the university ETV stations in those cities in producing the program series planned for inschool viewing.

GEORGIA

Summary

Two of Georgia's five reserved channels are now in operation (Athens and Atlanta) and the State board of education holds construction permits for stations in Waycross and Savannah. A network of ETV stations to serve all the schools in the State has been planned and will move into the construction phase when necessary funds become available.

A review of the detailed report on ETV activities reveals enthusiasm and interest in local and statewide developments.

The legislature has appropriated sizable sums for station construction backed by the support of educational institutions at all levels.

House subcommittee hearings were held in Atlanta during the 86th Congress and representatives of educational organizations in the State have testified in the 87th Congress, strongly supporting the proposed legislation.

Universities

The University of Georgia (Athens) installed a closed circuit system connecting 25 conference rooms and 148 bedrooms in the Georgia Center for Continuing Education. The center was financed by an appropriation of \$1,900,000 from the legislature (1953) plus a grant of \$2,144,000 from the Kellogg Foundation and \$300,000 from the university.

ETV station WGTU (Athens) channel 8, began broadcasting programs on May 23, 1960, licensed to the university. The station is on the air 25 hours per week, carrying programs for home viewing (in addition to NET programs) and Spanish, science (elementary and 10th grade); music (two elementary levels), mathematics (7th and 8th grades), and the literacy course developed by the Memphis ETV station, called "Streamlined Reading."

The university's college of education has its own closed circuit system used for observation of public school classes by teacher trainees. A separate closed

circuit system in the school of journalism is used to teach TV techniques and one course in accounting.

Public schools

The State board of education obtained construction permits for stations in Waycross and Savannah in 1959 and 1960, respectively, and construction of a network of stations to serve all schools in the State will proceed as fast as funds permit.

Before deciding to undertake a State network, the State board equipped the Conley Hills Elementary School in Fulton County with a closed circuit system as an experiment in ETV and to gain experience in its use. This experiment has been in operation since 1957 teaching music, science, and art to 900 students in grades 1 through 7.

ETV station WETV (Atlanta) channel 30, began broadcasting programs on February 17, 1958. It is licensed to the board of education of the city of Atlanta. The station is on the air 37 hours per week offering, in addition to NET programs, the following series for schools: French I and II (for grades 3 through 5), Spanish I and II (grades 2 through 4); science (grades 3-4, and 6-7, and 12); health (grade 8); biology (grade 10) and physics (grade 12); social studies (grades 5 and 7); mathematics (grade 6) and world history (grade 10).

The Dudley M. Hughes Vocational School in Macon, Ga., installed a closed circuit system entirely from its own funds. It is used mainly for laboratory demonstrations, assembly programs, and to train students to maintain it.

Public schools in Macon used a complete high school physics course developed and filmed at ETV station WQED in Pittsburgh. The course was carried as a sustaining feature on a commercial TV station.

Columbus schools have produced programs for broadcast by commercial TV stations.

The Board of Education of the Muscogee County School District (Columbus) wishes to have an ETV station in Columbus. The board has acquired a transmitter, and the State board of education has agreed to cooperate with the county board in establishing the station. The State board is sending a committee to see the Governor about ways of obtaining funds for this new station.

HAWAII

Summary

Early efforts were made toward the establishment of an educational TV station in Hawaii, and during the past year ETV programs have been presented over a commercial station. These programs are adapted to Hawaii's role in democracy and citizenship.

That ETV will be used in the Nation's newest State is apparent from studies and planning now underway.

The probable solution will be the use of a main ETV station on one island with its programs rebroadcast by stations on the other islands.

Governor

In 1953, the Governor called a conference on educational television in Honolulu. As a result of this conference, the Citizens Committee on Educational Television was formed to work toward an ETV station on reserved channel 7 in Honolulu, Oahu.

Hawaii Education Association

In 1954, some educational programming was broadcast by several of the commercial TV stations in the islands.

The Hawaii Education Association made a survey to determine how widely these programs were being used in classrooms.

Community Groups

The Hawaii Citizenship Committee initiated in 1960 a program of broadcasts to island classrooms over commercial TV stations. The project was also sponsored by the Hawaii Employers' Council, the Oahu Railway & Land Co., and by public subscription.

Hundreds of films were screened, and of these 13 were selected as being most appropriate for Hawaiians. They concerned American history and citizenship. Local comment and interpretation accompanied each broadcast showing of the films. In the future, the group hopes to produce some programs designed especially for its audience.

High schools, private schools, and parochial schools participated in this project, the films being shown during school hours. Receivers were also installed in a number of public places for viewing by the public.

State department and public instruction

A State director of visual education was appointed to the department of public instruction in 1960. Recommendations concerning the use of television for education will be made by the department on the basis of a study being made by the U.S. Office of Education at the request of State officials.

IDAHO

Summary

Within the limits of financial resources, several of the State's educational institutions—Boise Junior College, Idaho State Teachers College, the Boise Public School System—have done a remarkable job of educational programing. There is experience in the State with both broadcast and closed circuit production.

Two channels are reserved for education in Idaho, channel 4 in Boise and channel 15 in Moscow. It is hoped that these channels may soon begin serving the educational and cultural requirements of the State.

Colleges

The Boise Junior College has produced art and political science credit courses for broadcast on a commercial TV station.

Idaho State Teachers College, Pocatello, has a closed circuit TV system and produces enrichment programs for the Pocatello schools in music, health, safety and Idaho history. The programs are carried to the schools by the community antenna system which provides all TV service for the area; thus they are receivable in homes having TV sets, and the improved relation between home and school has been a rewarding facet of this project of several years standing.

The college has issued reports describing results. The project has also served to train the student-teachers in the techniques of developing and using TV for schools.

Public Schools

In addition to the public school cooperation in the above programs for the Pocatello schools, the Boise public schools have produced series carried on commercial TV. Among these "Zip and the Three R's" is an enrichment series in spelling, reading and phonetics; and for older students series in industrial arts and social science.

ILLINOIS

Summary

Two of the three VHF channels reserved for education in Illinois have been in operation since 1955 (WILL-TV at the University of Illinois, and WTTW in Chicago).

The third reserved VHF channel will be on the air in Carbondale (Southern Illinois University) in the fall of 1961. The reserved UHF channels in DeKalb, Peoria, Rockford, and Springfield remain unoccupied.

About nine colleges and universities in the State have had extensive experience in educational closed circuit programing, some of this being in the field of teacher training. The legislature has authorized local school boards in the State to contract for ETV programing.

An entire junior college curriculum is offered by the public schools of Chicago through the facilities of WTTW.

Federal financial assistance for the purchase of ETV equipment in Illinois would not only bring new educational facilities into being but would greatly assist in the expansion and effectiveness of existing operations.

Legislature

1955: The legislature passed a bill authorizing school boards to contract for ETV programing.

Universities

ETV station WILL-TV, Champaign-Urbana, channel 12, began broadcasting on August 1, 1955. The station is licensed to the University of Illinois and is on the air about 31 hours a week, carrying locally produced programs for home viewing in various subjects, as well as NET programs, and college credit courses in economics, sociology, and library science.

Southern Illinois University, Carbondale, is constructing an ETV station on channel 8. The call letters will be WSIU, and operation is expected to begin in September 1961.

Colleges and universities in the Chicago area cooperate with ETV station WTTW in Chicago, described under community groups, below.

Closed circuit ETV is used in colleges and universities in Illinois as follows:

Chicago Teachers College-----	Classroom observation, program production, and other uses.
University of Chicago School of Medicine.	Teaching of gross anatomy.
University of Illinois College of Dentistry.	Six dental courses.
Millikin University, Decatur-----	Five courses in TV techniques.
Northwestern University, Evanston----	Two separate CCTV systems, used to teach TV techniques and TV and radio writing, etc. Graduate and undergraduate.
Western Illinois State College, Macomb--	Classroom observation; library orientation, general psychology, other subjects.
Illinois State Normal University, Normal.	Classroom observation by teacher trainees.
University of Illinois, Urbana-----	TV techniques: mechanics, and program production for WILL-TV.
Loyola University, Chicago-----	Dental instruction.

Public schools

The public schools of Chicago produce for broadcast on ETV station WTTW a complete 2-year college curriculum by TV. Written assignments and examinations are handled by the eight branches of the Chicago City Junior College.

The TV junior college from its inauguration in the fall of 1956 through the spring term of 1960 had an average semester enrollment for credit of 1,281 persons taking 2,321 courses, the equivalent of about 500 full-time students requiring a faculty of at least 25. Many credit students are housewives who hope to become teachers.

Noncredit enrollments average 3,550, and the regular viewing audiences ranged from 5,000 to 35,000 persons per course. The TV junior college is now in its fifth year.

Chicago public schools also produce programming for broadcast during school hours on a local commercial station, an arrangement of long standing.

Evanston Township High School has a closed circuit system serving 49 classrooms and labs and used to teach 9th grade speech and science, 10th grade biology, and 12th grade English and typing. In the typing course, the total instruction is by TV. The CCTV system is also used in training teacher-counselors.

Community groups

ETV station WTTW, Chicago, channel 11, began broadcasting on September 19, 1955. It was established by the Chicago Educational Television Association, whose membership includes colleges and universities, the public schools, and cultural, scientific, and historical associations in the Chicago area.

WTTW is on the air 50 hours a week and in addition to the nine credit courses that form the spring, 1961, curriculum of the TV junior college (described above under public schools), the station carries NET programs and locally produced programs of a general and nonacademic nature.

INDIANA

Summary

A statewide educational television council was established in Indiana as early as 1952. Representatives from 34 colleges and universities in the State participated in planning, and a preliminary engineering survey was made.

Further evidence of cooperative planning is seen in the formation of the Southwest Indiana ETV Council which presents programs in mathematics, science and other subjects to 24,000 students in 102 schools of this region, using commercial TV facilities.

None of the nine channels (eight of them UHF) reserved for education in Indiana have been placed in operation.

Indiana University, Purdue University, Indiana State Teachers College and the University of Notre Dame all have closed circuit TV facilities.

Purdue is the headquarters for the Midwest program on Airborne Television Instruction which is expected to reach schools throughout Indiana and in portions of neighboring States.

It is hoped that Federal funds will provide the opportunity for the State to build upon its valuable experience in the production of noncommercial programs.

Legislature

1959: The legislature enacted a bill empowering public schools to pay for the use of television facilities for the production of educational programs.

Universities

The Indiana Conference on Higher Education established an ETV Council in 1952 composed of representatives from 34 colleges and universities in Indiana. The Council requested the legislature to establish an ETV authority to make a 2-year study of an ETV network for the State. Purdue University made a preliminary engineering survey in connection with this request.

Indiana University, Bloomington, has for many years produced in its own studios educational programs which are relayed for broadcasting to commercial TV stations. The university uses a well-equipped closed circuit studio for this purpose, and the program series include credit courses in several college subjects and cultural programs in drama, literature and public affairs.

Another closed circuit system is in the Department of Education of the university and is used for observation of teaching methods in classrooms connected with the system. A third CCTV system is in the university's School of Dentistry in Indianapolis.

The Division of University Extension maintains one of the Nation's leading audio-visual centers. Through its film distribution service, schools can order educational motion pictures produced by commercial and educational studios all over the United States and in some foreign countries. It is through this film distribution center that NET programs that have completed the circuit of ETV stations can be obtained for audio-visual (non-TV) use.

Purdue University, Lafayette, also has a well-equipped closed circuit system used for producing adult education programs for broadcasting, and another CCTV system for teaching basic college subjects.

Purdue is the headquarters for the Midwest program on Airborne Television Instruction, which is expected to reach schools all over Indiana and in portions of neighboring States.

Closed circuit TV is used also in Indiana State Teachers College, Terre Haute, and at the University of Notre Dame, South Bend. Notre Dame owns and operates commercial TV station WNDU-TV, on the air since 1955. In addition to the usual commercial broadcasting, the station carries some programs for schools.

Public schools

Public schools of southern Indiana, southern Illinois and northwest Kentucky have organized the Southwest Indiana ETV Council which presents programs in mathematics, science and other subjects to 24,000 students in 102 schools. The project is supported by a per-pupil assessment and by a grant from the Ford Foundation.

Public schools of Floyd and Clarke Counties, Indiana, are participating in the school broadcasts from the ETV station in Louisville, Ky.

Indiana schools near Chicago make use of educational TV programs from that city.

School administrators and teachers from all parts of Indiana are participating in the planning of programs for the Midwest program on Airborne Television Instruction, which is expected to include all of Indiana and parts of neighboring States in its service area.

Broadcasts will be on two UHF channels from an airplane circling over Montpelier, Ind. Experimental programming is to begin May 15, and full programming in September (1961).

The project is financed by grants from foundations and industries. Except in a few chosen experimental locations, schools and colleges will provide their own reception equipment, and participation is, of course, voluntary.

Programming is for all levels, elementary through college, and the broadcasts will be from videotape recordings which have been in preparation for the last several months.

IOWA

Summary

Only one of the six TV channels reserved for education in Iowa has been placed in operation (channel 11, KDPS-TV, Des Moines). The station is licensed to the Independent School District of Des Moines and its programming emphasizes televised lessons.

The State University at Iowa City would like to construct an ETV station on reserved channel 12, but lack of sufficient capital funds has retarded these plans.

Six institutions of higher learning in the State operate closed circuit facilities. Iowa State University, the State University of Iowa, State Teachers College, the State Board of Education and the State Department of Public Instruction have formed the Iowa Joint Committee on Educational Television to promote the use of TV in education in the State. The planning of this and other organizations in the State points toward a most effective program for the use of Federal funds for ETV construction on a statewide basis.

Universities

Iowa State University of Science and Technology, Ames, established a commercial TV station (WOI-TV) in 1950, before TV channels had been reserved for education. WOI-TV is still operated by the university as a commercial station, but carries an excellent series of enrichment programs for schools called "Iowa School Time." The programs are regularly followed by 33,000 school children in 142 schools.

Iowa State University, the State University of Iowa, State Teacher's College, the State Board of Education, and the State Department of Public Instruction have formed the Iowa Joint Committee on ETV to promote the use of TV in education throughout the State.

The State university at Iowa City would like to construct an ETV station on reserved channel 12, but has not yet obtained sufficient funds.

Iowa State Teacher's College in Cedar Falls produces college credit courses on its closed circuit system, and some of these are broadcast on commercial TV stations.

Other colleges having closed circuit TV are Iowa State University, Ames; the State University of Iowa, Iowa City; and Drake University, Des Moines.

Public schools

ETV station KDPS-TV, Des Moines, channel 11, began broadcasting on April 27, 1959. It is licensed to the Independent School District of Des Moines. The station is currently on the air 40 hours per week. It carries programs for 4th through 8th grades in social studies, art, music, science, English, and Spanish; for secondary students, literature and driver education. These are, of course, in addition to NET programs.

KANSAS

Summary

The State has been represented at the House subcommittee hearings on proposed ETV legislation in the 87th Congress, at which time eloquent testimony describing the need for Federal financial assistance for ETV was offered by a citizen of the State and an officer of the parent-teacher association.

Kansas has shown its readiness to use Federal assistance through its legislative actions. In 1959 the State legislature authorized a State ETV authority to plan for a State ETV network and appropriated \$25,000 for its use.

In 1961, the ETV authority recommended to the legislature the creation of a permanent nine-member ETV authority representing the various branches of education and an appropriation of \$1 million to begin construction of a State network to consist of six transmitters and three major production centers. A bill to appropriate \$100,000 toward this project was passed by the senate in March.

The University of Kansas Medical School was one of the first in the Nation to use closed circuit TV for medical education. Other educational institutions in the State have likewise had much ETV closed circuit experience: Kansas State College, Kansas State Teachers College, and three Wichita high schools.

ETV broadcasts for schools are used in Topeka and in the Wichita elementary schools. The school system of Kansas City, Kans., contributes programming to the ETV station in Kansas City, Mo.

Legislature

1959: The legislature authorized a State ETV authority to plan for a State ETV network and appropriated \$25,000 for its use.

1961: The ETV authority, after study, recommended to the legislature the creation of a permanent nine-member ETV authority representing the various branches of education, and an appropriation of \$1 million to begin construction of a State network to consist of six transmitters and three major production centers.

A bill to appropriate \$100,000 toward this project was passed by the State senate in March.

Universities

The University of Kansas (Lawrence) produces two live programs a week for broadcast on commercial TV, using students in its courses in TV training. For these courses a closed circuit TV system is maintained.

The University of Kansas Medical School in Kansas City was one of the very first in the Nation to use closed circuit TV for medical education.

Other colleges and universities using closed circuits TV are Kansas State College, Emporia, and Kansas State Teachers College, Pittsburg, Kans.

Public Schools

Closed circuit TV is used at three high schools in Wichita, and four Wichita elementary schools are participating in programs broadcast from commercial stations.

The public schools of Kansas City, Kans., produce in school programing for broadcast on the ETV station in Kansas City, Mo. These programs are also received in Topeka public schools.

KENTUCKY

Summary

An excellent example of regional cooperation is found in the joint planning between the Jefferson County public schools in Louisville and Floyd and Clarke Counties of Indiana, resulting in the Kentuckian ETV Council which produces educational programs on WFPK, operating on reserved channel 15 in Louisville.

At the recent request of the University of Kentucky, the National Educational Television & Radio Center petitioned the FCC for the reservation of a UHF channel to be used for noncommercial broadcasting in Lexington.

The State legislature in 1960 directed its legislative research commission to survey ETV potentials in Kentucky, and with the assistance of the research commission, the State advisory committee appointed by the lieutenant governor is studying a plan for a State ETV network.

Kentucky educators have testified before the senate commerce committee, strongly supporting legislation which would enhance the State's ETV activities through the provision of Federal funds for capital equipment.

Legislature

1960: The legislature directed its legislative research commission to survey ETV potentials in Kentucky: the condition and needs of education in the State, the educational resources of the State, and what educational television has accomplished in other places.

The research commission made its report to the State advisory committee, appointed by the lieutenant governor, and the advisory committee then directed the research commission to develop a State plan for ETV.

A tentative plan was developed and, after further study, the advisory committee will make a recommendation to the legislature as to what action should be taken.

Universities

The University of Kentucky (Lexington) has had a closed circuit system in its education department for 2 years, used for classroom observation.

At the request of the university, the National Educational Television & Radio Center recently petitioned the FCC for the reservation of a UHF channel for an ETV station in Lexington.

Public library and public schools

ETV station WFPK-TV (Louisville) channel 15, began broadcasting programs on September 5, 1958. It is licensed to the Louisville Free Public Library, which has an enviable record of broadcasting service to schools and to homes.

In 1947, the library equipped the central library and all 10 branches with television sets. Discussion groups met at the libraries, and during the first 2 years of library TV, the 11 sets were watched by an average of 1,800 people a night and book borrowing increased 40 percent.

Records and transcribed radio programs were obtained—music, documentaries, dramas, forum discussions—and housed in a nine-room addition to the central library. Selections were transmitted on facilities leased from the telephone company to the branch libraries, to junior and senior high schools, parochial schools, the University of Louisville and its school of music, to the psychiatric ward of the general hospital and the local home for juvenile delinquents.

In 1950, the library established a 10-watt FM station, later increased (with the cooperation of the police department) to 20,000 watts. Taped radio programs were prepared for elementary schools, which were not included in the telephone line service. In 1952, a second radio station was acquired through the generosity of a commercial broadcaster. The two stations supplement each other, one carrying instruction and the other chamber music. After school hours, one carries music and the other lectures, book talks, and foreign policy panels.

In 1958, the library added an ETV station to its services to schools and the general public. NET programming is carried, together with locally produced series of general interest, and instructional programs described below.

Programs designed for the classroom are produced in cooperation with the Jefferson County public schools (Louisville) and the schools of Floyd and Clark Counties of Indiana, which together have formed the Kentuckiana ETV Council. The council participates actively in the operation of WFPK-TV.

WFPK-TV is on the air 30 hours a week. Its programming for schools includes are for grades 4 and 6; remedial reading for grades 3 through 5; reading for grades 5 and 6; geography for grades 5-6; 10th grade English, 11th grade American history, 3 years of Spanish (3d, 4th, and 5th grades), 7th grade math, 8th grade math, 3d and 5th grade music, science for grades 3-4 and 5-6 and 9, and social studies for grades 3-4.

The closed circuit TV system is used for teaching some high school subjects and is used after school hours for special teacher training programs.

LOUISIANA

Summary

Both of the VHF reserved channels in Louisiana have been activated (KLSE, channel 13, in Monroe, and WYES-TV, channel 8, in New Orleans). The reserved UHF channels in Baton Rouge and Lake Charles remain unoccupied.

The history of legislative action in the State from 1952, when the Governor appointed the first ETV commission, and the intensive work of public schools, universities, and community groups within the State strongly suggest an atmosphere receptive to assistance for future development. Beyond the broadcasting service of the two ETV stations in the State, Louisiana State University and Southwestern Louisiana Institute make use of closed-circuit facilities.

Field hearings of the House Commerce Subcommittee on Communications and Power on the proposed ETV legislation were held in New Orleans during the 86th Congress, at which time many witnesses testified in support of this legislation.

Legislature

1952, 1953: The legislature authorized the Governor to appoint an ETV committee. The committee recommended a five-step plan for ETV for the entire State and an annual appropriation by the legislature.

1954: The legislature authorized the appointment of an ETV commission and appropriated \$52,000 for its use in 1954 and 1955.

The legislature also appropriated \$150,000 for the State department of education to establish ETV facilities.

Universities

There are closed-circuit TV systems in use in the Louisiana State University School of Medicine in New Orleans and in the Southwestern Louisiana Institute in Lafayette.

Public schools

ETV station KLSE, Monroe, channel 13, began broadcasting on March 9, 1957, and is on the air 30 hours a week with a wide variety of programming, both locally produced and from NET. Inschool programs include filmed courses in physics, chemistry, and biology for junior and senior high schools and music for elementary grades. Three enrichment program series for students are presented in afterschool hours.

For ETV activity in the New Orleans schools, see "Community Groups," below.

Community groups

ETV station WYES-TV, New Orleans, channel 8, began broadcasting on April 1, 1957. The station was established by the Greater New Orleans ETV Foundation, whose membership includes the public and parochial schools and other groups. The station is on the air 53 hours a week with programs for home and school, some locally produced and some NET.

Public, private, and parochial schools of the New Orleans area participate in supporting ETV station WYES-TV and in a recent year the schools' contribution amounted to \$90,000 out of a total budget of \$225,000. The inschool programming includes science and social studies for elementary grades, history, driver education, and music and art appreciation for junior and senior high schools.

MAINE

Summary

Since 1955 the Maine Legislature has consistently supported measures designed to stimulate and encourage ETV planning on a statewide basis. Studies of the University of Maine, the State commission on ETV and the State department of education have resulted in a State network plan which envisions the connection of ETV stations in Maine with those in Durham, N.H., and Boston.

Colby, Bates, and Bowdoin Colleges are forming a joint corporation to take over a commercial construction permit purchased by Bates, to operate channel 10 in Augusta noncommercially. The FCC has now reserved this channel for educational purposes, as well as one at Presque Isle, making a total of five educational channels in Maine.

Five commercial TV stations within the State have cooperated with the State board of education to produce instructional programs for the schools.

The president of the University of Maine appeared before the House Commerce Subcommittee on Communications and Power to describe the need for the proposed ETV legislation in this State.

Legislature, State executive council, and Governor

1955: The Governor appointed a commission on educational television with \$1,000 operating funds for the biennium ending June 1957.

1957: The legislature extended the commission on ETV.

1958: The State executive council and the Governor allotted to the State department of education \$7,500 for ETV experimentation, requesting a report outlining results and requesting further funds.

Universities

The University of Maine, Orono, filed a petition with the FCC in May 1960 for three additional ETV reservations, looking toward the realization of a State network plan that grew out of the studies of the university, the above-named legislative groups, and the State department of education.

The plan proposes to connect Maine ETV stations with the ETV stations in Durham, N.H., and in Boston. In April 1961, the FCC approved two of the requested reservations, channel 10 at Presque Isle and channel 10 (again) at Augusta.

Colby, Bates, and Bowdoin Colleges are forming a joint corporation to take over a commercial construction permit purchased by Bates College for channel 10 in Augusta, and to be the licensee and operator of a new ETV station. Transmission equipment has been ordered, and the station is to begin operation in September 1961. It will then be the first ETV station in Maine.

Public schools

The State board of education obtained a grant from the National Defense Education Act for an experimental project involving instructional TV programs on commercial stations. Five commercial TV stations in Portland, Bangor, and Presque Isle and the ETV station WENH-TV in Durham, N.Y., donated air

time of a half hour (a full hour in Presque Isle and Durham) between 9 and 10 a.m. each schoolday for the school year. The programs were produced in the studios of the two Portland stations, with technical assistance from the studio staffs. Broadcasts began fall, 1959, under the titles, "Concepts of Mathematics" and "Science and the Space Age."

High school juniors and seniors with IQ of 120 or more were eligible and 80 schools participated. In addition, over 200 adults registered for the courses, taking their exams and receiving certificates through the State commissioner of education.

A staff of nine planned and taught the courses. Comparisons were made of the effectiveness of using the courses in four different ways: instruction by TV only, and three different combinations of TV and periodic conferences with visiting teachers and/or master teachers. The report of this experiment should be a valuable contribution to the growing body of research on how to use TV most effectively in direct instruction.

MARYLAND

Summary

This State's record in the development of imaginative and effective uses of television in the service of education is outstanding, both in broadcast on commercial TV stations and in the employment of closed-circuit facilities.

Since 1948, Johns Hopkins University has been a pioneer in public affairs and informational programing.

The University of Maryland operates its own closed-circuit facility for the instruction of large groups of students and has produced telecourses on local commercial broadcasting stations, both in Baltimore and in Washington, D.C.

One of the country's most extensive closed-circuit facilities, capable of carrying 6 TV signals simultaneously to 16,500 students, is located in Hagerstown (Washington County).

Public schools in Baltimore and Salisbury have engaged in many large-scale programing efforts, mostly directed to the classroom viewer-student.

Universities

As early as 1948, Johns Hopkins University was producing informational and public affairs programing for broadcast on TV stations. It is reported that one of these programs made the first use of a microscope on television. The series ran on the Dumont network from 1948 to 1953, then on a Baltimore station 1953 to 1955, and recently on the ABC network, a half hour each Sunday.

The University of Maryland has a closed-circuit TV system teaching 1,450 students zoology. The TV course replaced former lectures to 400 students at one time. Students sit in sections of 48 with 2 receivers in each classroom. TV presentations are followed with 10-minute discussions led by the same graduate assistant who supervises the laboratory sessions of that section. The entire zoology staff of 23 plans the week's program of work.

In 1959-60, the University of Maryland presented a Spanish course for adults which was carried on Baltimore and Washington TV stations twice a week in early morning hours.

The State Teachers College in Towson uses closed-circuit TV to observe classrooms in the Villa Cresta elementary school.

Public schools

The board of education of Washington County (Hagerstown) has a closed-circuit system carrying 6 channels by cable to 16,500 of the county's 18,000 public school students. All grades receive TV instruction in one or more subjects ranging from 20 minutes for the first 3 grades up to an hour for most of the older students.

The project was equipped with the assistance of the Electronics Industries Association, and the Fund for the Advancement of Education (Ford Foundation) assisted with funds for administration and evaluation. The telephone company contributed cable service for the first 2 years of the project, now in its fifth year.

The public schools of Baltimore, on sustaining time provided by three Baltimore TV stations, presents programing for inschool use, programs on school public relations, and programs of adult education. The annual report for 1959-60 gives a total of 300 TV programs, an increase of 64 over the previous year.

Subjects included speech for lower elementary grades, a news program for and with upper elementary students, science for upper and lower grades (alternate

weeks), French, story telling, physical fitness, "Let's Read Books," and a series on places of historical interest in Maryland.

Most program series were presented once a week. Of special note among the current (1960-61) programing is a literacy course aimed at the 70,000 adult Baltimoreans whose reading level is below the fourth grade.

In Salisbury, the public schools are cooperating for the third year with school systems in seven other counties (in Delaware, Maryland, and Virginia) in presenting programs totaling 1½ hours per school day and reaching 141 classrooms in the 8 counties.

The instruction (in science, music, history, and French) is given by teachers drawn from the participating school systems, and they devote full time to TV work. The project is financed by a contribution of \$1 per year per pupil.

MASSACHUSETTS

Summary

The State legislature, colleges, universities, public schools, and community groups have all played an active role in the development of educational television in Massachusetts.

On the one VHF educational channel reserved for the State (channel 2 in Boston), ETV station WGBH-TV has been in operation since 1955 and has provided some of ETV's most outstanding programs, distributed nationally through the facilities of the National Educational Television and Radio Center.

WGBH-TV exchanges programs by rebroadcast with WENH in Durham, N.H. This regional programming relationship provides the beginnings of an eastern ETV network which, when further stations along the Atlantic coast are constructed, will serve one of the most thickly populated areas in the country.

Our detailed report on activities in Massachusetts clearly indicates that this State has brought ETV into the mainstream of its cultural and educational life and would make most effective use of proposed Federal ETV funds to construct upon the excellent foundations which have been laid.

Legislature

1952: The legislature authorized a commission on ETV with \$1,000 for expenses.

1953: The legislature authorized the formation of the Massachusetts Board of Educational Television and appropriated \$50,000 for its use for the biennium 1953-55.

1961: The legislature authorized an executive committee for educational television within the department of education. The committee will administer inschool television programs in the State. Over 500,000 pupils in 160 communities will benefit from the project, the local costs of which will be financed by participating school systems.

Members of the committee include superintendents or assistant superintendents of schools in six cities, the administrators of several private schools and parochial school districts, the State deputy commissioner of education, and representatives of museums and art galleries. The secretary of the committee is an official of the State department of education.

Universities

Universities in Massachusetts cooperating with the WGBH Educational Foundation, which operates ETV station WGBH-TV in Boston, are mentioned below under community groups.

Other ETV activities in Massachusetts higher education include closed-circuit systems at the University of Massachusetts, Amherst; Northeastern University, Boston; Endicott Junior College, Beverly; Boston University, and Emerson College, Boston.

Public schools

The public schools of Boston and surrounding areas make use of the programing of ETV station WGBH-TV, described under community groups, below. The planning of the inschool broadcasts is in cooperation with the executive committee for school TV of the Massachusetts Board of Education.

Holyoke public schools began in March 1959 a 2-year research project with a staff of six to produce instructional broadcasts to schools on a commercial station and to evaluate the results.

Community groups

ETV station WGBH-TV, Boston, channel 2, began broadcasting on May 2, 1955. The station was established by the WGBH Educational Foundation, which is also the licensee of educational radio station WGBH. The station now has maximum permissible power and is on the air 47 hours a week.

The officers of the foundation are representatives of the Lowell Institute, Harvard College, Massachusetts Institute of Technology, Trustees of the Boston Symphony Orchestra, the Trustees of the Twentieth Century Fund. Other co-operating institutions are Boston University, Northeastern University, and the Executive Committee for School TV of the Massachusetts Board of Education (representing the public schools).

WGBH-TV exchanges programs by rebroadcast with ETV station WENH, Durham, N.H.

WGBH-TV is one of the major production centers for NET programs. The station is currently producing and videotaping a 3-year series of daily 15-minute French lessons for elementary students. As a part of the series, there is a half-hour program once a week for teachers, to prepare them for the coming week's lessons. The completed parts of the 3-year series are already in use by many of the 56 ETV stations now on the air throughout the Nation.

In addition to the French series, WGBH-TV carries six series for elementary and secondary students, a credit course for teachers in audio-visual methods, a college credit course in literature, and the NET programs for the general audience.

MICHIGAN

Summary

Even the most cursory examination of Michigan's record in ETV will indicate the high degree of enthusiasm and conviction which has been applied to the State's undertakings in this field. Colleges, universities, public schools, and community groups have worked cooperatively to provide educational programming, both formal and informal, to a growing number of citizens.

And yet there is much to be accomplished, with 12 UHF reserved channels still inactive. The Governor's recent proclamation, naming April as Educational Broadcasting Month, provides an insight into how effective proposed Federal funds for ETV may be here:

"Michigan has pioneered in the application of broadcast media to education since 1922 and today enjoys the advantages extended by nine radio and two television education stations. More are in the planning stage. National recognition has been accorded our largest metropolitan area for its classroom use of television from the early grades through the college level. In addition, there are outstanding adult programs * * *. Great credit has been reflected on Michigan's educational system, as [TV] programs have been loaned to school systems throughout the Nation."

The director of broadcasting services of Michigan State University presented testimony in support of Federal assistance to ETV at the recent House hearings of the Subcommittee on Communications and Power, Interstate and Foreign Commerce Committee.

Governor

1961: The Governor proclaimed April 1961 as Educational Broadcasting Month. Portions of his proclamation have been quoted in the summary.

Universities

In 1954, Michigan State University, East Lansing, established ETV station WKAR-TV on UHF channel 60. The station continued broadcasting on this channel until 1958, when it was stopped in order to begin on VHF channel 10.

The FCC approved an application proposing joint operation with a commercial broadcaster on channel 10 in Onondaga. The university owns and operates the transmitter and leases it to the commercial broadcaster, who maintains a separate studio at another location. The university and the commercial broadcaster hold separate TV licenses.

ETV station WMSB, East Lansing, channel 10, began broadcasting on March 15, 1959, licensed to the university, and has a service area of 30 counties. It is on the air 38½ hours per week with programs for home and school, including 2 years of Spanish, the NET French series (see Boston, Mass., for details) and German; a credit course for teachers; science, art, and music for elementary grades; and several series portraying life in foreign countries and coordinated

with the regular social studies curriculum. Programs for home viewing, both locally produced and NET, are broadcast on weekdays from 6 to 7:30 p.m. and on Sundays from noon to 4 p.m.

The University of Michigan at Ann Arbor has four separate closed-circuit TV systems, one of them used for the production of educational programs for broadcast on ETV stations and on commercial TV stations throughout Michigan and in Pennsylvania and other States.

Other Michigan colleges and universities using closed-circuit TV are the University of Detroit School of Dentistry and East Michigan College in Ypsilanti.

Central Michigan University has obtained the reservation of channel 14 at Mount Pleasant and is actively planning an ETV station.

Western Michigan University obtained a lower UHF channel in Kalamazoo as the channel reserved for education, has some equipment in hand, and is seeking funds to enable it to qualify for a construction permit.

Delta College has secured the assignment of channel 19 to Bay City and is now completing a closed-circuit system to begin operation in September 1961. The college hopes to secure funds to establish a broadcast station on channel 19.

Public schools

The State superintendent of public instruction has taken the lead in planning for statewide ETV service for Michigan. He appointed a working committee on educational television which, with several subcommittees, has been active for 3 years.

Pursuant to their studies of channels needed to complete coverage of the State, the superintendent petitioned the FCC for an additional VHF channel assignment for education, and the channels already secured or requested by the colleges and universities in Mount Pleasant, Kalamazoo, and Bay City (mentioned above) would be a part of the planned statewide system.

The committee is continuing its study with a director and offices at the State university in East Lansing. The committee supports the principle of Federal-State cooperation for improving ETV facilities and recommends that greater emphasis be placed on training and recording facilities.

For the nationally known ETV activity of the Detroit public schools, see "Community Groups," below.

Community groups

ETV station WTVS, Detroit, channel 56, began broadcasting programs on October 3, 1955. It is licensed to the Detroit Educational Television Foundation. The public schools of the Detroit area, Wayne State University and the University of Detroit have worked together closely in establishing and operating the station, with cooperation from other educational and civic organizations.

WTVS is on the air 45 hours per week. It offers college credit courses in mathematics, philosophy, history, biology, and adult education series in several subjects; there are also courses in methods of teaching German, French, arithmetic, and reading.

Broadcasts for inschool use include a variety of subject areas, either for enrichment or direct instruction, for grades 3 through 12. Notable is the foreign language project, in which the elementary child may study French or German or Spanish. The station also carries NET programming.

MINNESOTA

Summary

A committee to study the feasibility of a statewide network was established in 1952. One of the two VHF channels then reserved in the State was put into operation in 1957 (KTCA-TV, Minneapolis-St. Paul). A third VHF reservation has since been obtained in connection with plans for statewide ETV service.

Typical of the cooperative spirit which has made the establishment and operation of KTCA-TV successful is the fact that the University of Minnesota and the Council of Minnesota Colleges (representing 15 colleges in the State) joined with other interested groups to form the nonprofit corporation which is the station licensee.

In 1959, recognizing the benefits of KTCA-TV's programming, the legislature approved a transfer grant of \$100,000 to enable the construction of new studios for the station.

The city of Duluth has earnestly sought construction funds for nearly 6 years. If these funds could be partially supplied through Federal assistance, the State would embark upon the first phase of a network system. A second phase would

be the establishment of a station in Appleton, where a community group is working with State ETV leaders toward activating channel 10 which was requested and reserved for Appleton and would serve west central Minnesota.

The manager of station KTCA-TV testified in favor of Federal assistance to ETV in the recent hearings conducted by the Subcommittee on Communications and Power of the House Interstate and Foreign Commerce Committee.

Legislature

1959: The legislature approved the transfer of \$100,000 of surplus from the Minnesota centennial fund, to be used for the construction of new studios for ETV station KTCA-TV, Minneapolis-St. Paul.

Universities

The University of Minnesota and the Council of Minnesota Colleges representing 15 private colleges in the State joined with other interested groups in forming a nonprofit organization to establish an ETV station in Minneapolis-St. Paul. (See "Community Groups.")

The university presents several college credit courses on the ETV station and also has three closed circuit TV systems, one in the school of dentistry, one in the university proper (used to teach experimental mechanics and rigid body mechanics), and one in the university high school (used for observation of teaching methods and for teaching some high school subjects).

Public schools

As early as 1938 the Minneapolis public schools were producing tapes for broadcast on commercial radio stations, and in 1949 they began a series of TV broadcasts on commercial stations. A period of 3 weeks of closed schools in January 1951 gave a tremendous impetus to this pioneer experimentation, as the commercial stations put more time at the disposal of the schools, and parents and students were surprised and pleased to find how much could be learned from a televised lesson. Requests for information came in from all over the United States and from many foreign countries.

The school systems of Minneapolis and St. Paul were therefore ready and eager to cooperate in establishing an ETV station for the Twin Cities, and each school system undertook to supply about one-fourth of all programming when the station first went on the air. For current programs for school use, see "Community groups" below.

Community groups

In 1951 and 1952, many colleges and school systems in Minnesota supported the reservation of TV channels for education, and a statewide committee representing many organizations developed a plan for a State network.

Legislative action in appropriating funds to realize this plan did not come rapidly, however, and a group of organizations and citizens in the Minneapolis-St. Paul area undertook to get reserved channel 2 on the air. The Twin City Area Educational Television Corp. was formed, representing colleges and universities, schools and librarians, and civic and business groups.

ETV station KTCA-TV, Minneapolis-St. Paul, channel 2, began broadcasting on September 3, 1957, licensed to the Twin City area ETV Corp. The station is on the air about 58 hours per week. Programming is supplied by the public schools of Minneapolis and of St. Paul on about an equal basis, and by the University of Minnesota and the Council of Minnesota Colleges.

The station carries NET programs, college credit courses, and noncredit adult programming. There is a series for the preschool child and broadcasts for all elementary and secondary grade levels, in many subjects. Spanish and German are the languages offered, and science is the most frequent subject for all grades above the first. Mathematics, social studies and literature, music and art are not neglected.

The Duluth Citizens Committee for Educational Television was organized in 1953 with 20 members representing education, religion, business, publishing and broadcasting. The Citizens Committee supported statewide planning and efforts to secure legislative support for station construction.

In 1956, the committee obtained legal incorporation as the Duluth-Superior Area Educational Television Corp. and sought funds for construction and operation of a community-based ETV station along the lines of the Twin City's station. Substantial annual pledges have been made for operation of the future station, and some equipment has been obtained. A tower and a site for the

studio are in hand, but a considerable sum is still needed for other equipment and for construction.

The West Central Minnesota Educational Corp. was formed in 1959 in the Appleton, Minn., area to further educational TV in west central Minnesota. In that same year channel 10 was requested and assigned as a new VHF reservation in Appleton. KTCA-TV is cooperating with efforts to activate channel 10 and has agreed to exchange programing with the proposed station.

MISSISSIPPI

Summary

Shortly after the channels (4 UHF and 1 VHF) were reserved for Mississippi, the board of trustees of institutions of higher education made an extensive ETV survey of the State, including engineering data and cost estimates.

In 1961 the presidents of five State colleges and universities created an ETV committee to make plans to activate channel 2 reserved at State College, Miss., and to ask the 1962 State legislature for funds for construction.

Mississippi Southern College and Mississippi State University have produced ETV programs which have been broadcast on commercial TV stations.

Public schools in the northwestern portion of the State have utilized ETV courses originated in Memphis, Tenn., on ETV Station WKNO.

Universities

The board of trustees of Institutions of Higher Education made an extensive ETV survey in 1953 which included engineering data and cost estimates for ETV service on a statewide basis. There was considerable interest in this plan in the State legislature, but funds were not appropriated for its realization.

In 1961, the presidents of five State colleges and universities created an ETV Committee to develop and refine plans for activating channel 2 as a focal point for the development of ETV service for the State, and to propose to the legislature in January 1962 an appropriation to construct a first ETV station on that channel.

The committee held its first meeting in March 1961, and called a seminar for April 25 and 26 on planning, developing and utilizing educational television stations and networks for statewide use.

Mississippi State University has, in the last several years, produced programs on cultural and educational subjects which were broadcast over commercial stations in Jackson and Columbus and a credit course in American history broadcast from Columbus. Personnel of its Cooperative Agricultural Extension Service regularly participate in TV program for the rural population of Mississippi.

The University has consistently defended the reservation of channel 2 before the FCC through several commercial attempts to secure the channel, and is taking an active part in the ETV Committee of the Presidents' Council, mentioned above.

Mississippi Southern College has produced a monthly TV program on a commercial station and is considering the installation of a closed circuit TV system.

Public schools

Many public schools in northwestern Mississippi that are in the coverage area of the ETV station in Memphis, Tenn., are making use of that station's school broadcasts. In particular, the University High School in Oxford used an entire high school physics course from the Memphis station.

The Teachers Association of Meridian and other school groups throughout the State have produced programs on commercial stations designed to interpret the goals and methods of the school system to the community.

MISSOURI

Summary

In the latter part of March 1961, the Nation's newest ETV station, KCSD-TV in Kansas City, went on the air. It joins KETC in St. Louis to become the second educational TV station in Missouri.

The cooperative system of financing and programing of KETC, which was activated in 1957, is described in the full report. It is important to note, however, that school programs on KETC are viewed regularly by more than 100,000 elementary and high school students and that a significant portion of the operating revenue is based upon an assessment of \$1 per pupil per year.

The University of Missouri in Columbia has operated a commercial station since 1953 and makes use of a closed circuit TV system for teaching college subjects. Three other universities operate educational closed circuit systems and four institutions of higher learning produce educational programs on commercial stations.

Educational representatives from the State have several times presented statements in congressional hearings supporting the proposed ETV legislation.

Universities

The University of Missouri, Columbia, established a commercial TV station in December 1953. The station continues to operate commercially, but carries some programs for schools. The university has a closed circuit TV system which is used for four college subjects and for short courses for visiting professional groups.

Of special interest is the university's presentation of advanced high school science and mathematics to strengthen the curriculum of high schools. Special groups of gifted students are organized by the high schools participating, and individuals may also register through the correspondence division of the University.

The physics series is carried on KOMU-TV, the university's own (commercial) station, and college algebra and trigonometry are presented over the facilities of the ETV station in St. Louis, KETC. The math courses offer two hours of college credit to senior high school students.

During the three academic years preceding the above-mentioned telecourses, Washington University in St. Louis presented college algebra and trigonometry over KETC and made an interesting combination of broadcast and closed circuit TV for education: the daily 45-minute broadcast was repeated the same day on the closed circuit system and also repeated three times the following day. This was to enable students to see the explanation as many times as they needed to. Help-sessions with an instructor in charge were available daily on campus.

The course was a subject required of all freshmen, and some are much better prepared for it than others. The flexibility of the repeated showings and the small-group help sessions proved to be a valuable scheme for enabling the poorer-prepared students to perform adequately in the course without slowing down those who were better prepared.

Other universities and colleges having closed circuit TV are Missouri University, Stephens College and the University of Kansas City; all of these, plus Rockhurst College, have produced TV courses at various times on ETV and/or commercial TV stations.

Public schools

The St. Louis city and county public, private and parochial schools all cooperate in using the facilities of ETV station KETC. A TV Teachers' Guide is supplied to all teachers in sponsoring schools and is available for 50 cents to other teachers in the listening area. The total ETV school program (all subjects) is viewed by 100,000 students in elementary and high schools. For further details, see Community Groups.

ETV station KCSD-TV, Kansas City, channel 19, began broadcasting on March 22, 1961, and is the Nation's newest ETV station. It is licensed to the Kansas City School District. KCSD-TV has begun with a broadcast day of 4 hours and plans to expand soon to 7 hours. The programming of the new station may be forecast to some extent by noting the TV activity of the Kansas City schools on commercial TV while plans were being made and funds obtained to construct the ETV station.

In 1958-59 and 1959-60, two commercial TV stations in Kansas City each provided broadcast time of 18 minutes or more daily. The school system presented a science-health-and-safety series for the fifth grade both years on one station, and on the other, ninth grade science the first year and seventh-eighth grade science the second year. TV classes were compared with non-TV classes to determine the effectiveness of this TV instruction.

The programs were also used in 159 schools outside of Kansas City in Kansas, Missouri, and Iowa.

Community groups

ETV station KETC, St. Louis, channel 9, began broadcasting programs on September 20, 1954, marking the successful culmination of efforts of school and college officials, the mayor's office, the newspapers, and businessmen of St. Louis.

Of great impetus to their project was the offer of the Fund for Adult Education of \$1 for each \$2 raised locally for building the station.

School boards promised a dollar per year per student for the operating budget and many industrial and business firms pledged a dollar a year per employee. The station is licensed to the St. Louis Educational Television Commission. The content of the various programs is the responsibility of the educators.

The first programs for schools were "visits" to places of interest, scientific demonstrations, talks by experts in various fields, and musical and literary programs, as well as "readiness programs" for the first three grades. In 1956, under a special grant from the Fund for the Advancement of Education, a controlled experiment was undertaken to test the effectiveness of using TV for direct teaching.

Non-TV groups were taught in the usual manner, and TV groups were taught by TV only. The subjects chosen were ninth grade general science and English composition for one semester and second grade spelling for two semesters. The TV groups all learned as much as the conventional groups, and in a few cases they learned more.

Since that successful experiment, the schools have not hesitated to use TV where convenient for teaching the main body of material in various subjects, and have made good use of supplementary radio broadcasts coordinated with the TV broadcasts, especially in elementary science.

Currently ETV station KETC is carrying Spanish and French for grades 6, 7, and 8, and 27 other series for in-school viewing by grades 1 through 12, and 4 college credit courses. The station is on the air 47 hours per week.

For the coverage of in-school reception of KETC, see public schools. Since KETC has a VHF channel, it is readily receivable in homes, and the NET programs are carried, as well as some locally produced for home viewing.

St. Louis has the honor of having developed one of the Nation's first foreign language courses by TV. It began as a radio series on commercial station KSLH in St. Louis, and in 1953 KSLH-TV made it a TV series, using French speaking puppets and the title "Chez Mimi". The series was then carried on many of the ETV stations through the NET distribution service.

MONTANA

Summary

The public universities, colleges, and secondary and elementary schools of Montana are all represented on the Montana ETV Committee, formed in the spring of 1960. The committee obtained a grant from the Ford Foundation to enable it to employ a full-time director and to formulate plans for bringing broadcast ETV service to Montana.

The committee is studying the distribution of reserved channels in Montana, which is a difficult State to cover with TV service because of mountains and great distances. A large number of translators are in operation over the State and it is the present thinking of the committee that translators would probably be needed in an ETV distribution system in addition to the reserved channels. Efforts are being made to find a possible better channel for Great Falls, the largest and fastest growing city, which now has a UHF channel reserved. A station on Missoula's VHF channel would probably be the first ETV station to be constructed, with others added as fast as funds permit.

The director of the Montana ETV Committee testified in the 87th Congress strongly supporting the proposed ETV legislation. The committee would prefer that States not be required to match Federal grants. They feel that those States with the greatest need for ETV service are the same States in which there will be the greatest difficulty in obtaining State funds for construction of stations.

Universities

There are closed circuit TV systems at Montana State University, Missoula, at Montana State College, Bozeman, and at the College of Great Falls, a private institution, and these institutions have all produced educational programing for broadcast on commercial TV.

Montana participates, along with 12 other Western States, in the Western Interstate Commission for Higher Education, financed by appropriations from each member State. The commission's responsibilities are to promote interstate cooperation in higher education, particularly in professional and technical fields.

The commission is interested in promoting an exchange of college level telecourses to broaden the curricula available to college students in the member States.

Universities and public schools

The public universities, colleges, and secondary and elementary schools of Montana are all represented on the Montana ETV Committee, formed in the spring of 1960. The committee obtained a grant from the Ford Foundation to enable it to employ a full-time director and to formulate plans for bringing broadcast ETV service to Montana.

The committee is studying the distribution of reserved channels in Montana, and in this connection is seeking a possible better channel for Great Falls, now the largest and fastest growing city of the State; the channel reserved for Great Falls is channel 23.

Montana is a difficult State to cover with TV signals because of its mountains and great distances. A large number of translators are in operation over the State and it is the present thinking of the committee that translators would probably be needed in an ETV distribution system, in addition to the channels reserved.

An ETV station on Missoula's VHF reserved channel would probably be the first ETV station to be constructed, with others added as fast as funds permit.

NEBRASKA

Summary

The Nebraska Council for Educational Television is a nonprofit organization with statewide membership representing, at present, 10 public school systems, three agencies of the university (the extension division, the teachers college and ETV station KUON-TV), and the State department of education.

The council has been studying ways of bringing ETV service to the whole State and has had an engineering study made. On the basis of the engineering survey, the council on January 6, 1961, petitioned the FCC to reserve two existing (but unused) VHF assignments in the State and to add three VHF assignments and reserve them for education. These five channel reservations, if granted, would permit the construction of facilities to expand the present ETV service to reach 90 percent of the population of the State.

The council's petition to the FCC cites the large proportion of the population living in small towns and rural areas. Although these citizens support the State's educational program by their taxes, they are largely deprived of many of its benefits, which could be available to them through a statewide ETV service.

In April of this year the Governor appointed a statewide advisory committee on educational television to advise him on all matters related to the expansion of ETV in the State and provide leadership in the field. The committee will also "provide counsel on appropriate use of possible Federal funds resulting from proposed legislation now before the Congress."

Governor

In April 1961, the Governor appointed a statewide advisory committee on educational television to advise him on all matters related to the expansion of ETV in the State and to provide leadership in the field. The committee will also "provide counsel on appropriate use of possible Federal funds resulting from proposed legislation now before the Congress."

Universities

ETV station KUON-TV, Lincoln, channel 12, began broadcasting programs on November 1, 1954, and was thus one of the first 10 ETV stations in the United States. The station is licensed to the University of Nebraska and is on the air about 30 hours a week with programs for home and school, both NET and locally produced.

Currently it is broadcasting three levels of upper elementary science, English for 10th grade, American history for the 11th grade, and two series for teachers—audiovisual methods and methods of teaching science.

In the scholastic years from fall 1957 to summer 1960, the stations broadcast several series of science and math programs for high schools, aided by a grant from the fund for the advancement of education.

Beginning with introductory physics and chemistry and general math in 1957-58, the telecourses offered more advanced work in the 2 succeeding years. The purpose was to broaden the curriculum in small rural high schools not offering the higher courses, and to improve the quality of instruction in other schools.

During the year 1958-59, there were 490 junior and senior high school students enrolled in groups receiving the courses in their schools. Where the school had

no faculty member qualified to assist the TV students and give the examinations, special arrangements were made to provide this service.

The University of Nebraska also has a closed circuit TV system, used largely for producing programs and telecourses for broadcast on KUON-TV.

Other closed circuit TV systems are in Concordia Teachers College, Seward, used for observation of teaching methods, and in the Nebraska Psychiatric Institute's Department of Education and Training. The latter installation has been used to enable students of psychiatry to look and listen while senior staff members are treating patients, without disturbing the doctor-patient relationship by the presence of a group of student psychiatrists. Reports on this project have received attention in the professional press. The closed circuit is also used to provide drama, music, and other programing for patients in an effort to determine how these can be used as a part of treatment?

The University of Omaha has a closed circuit TV system, and has produced college credit courses for broadcast on commercial TV.

Public schools

The public schools within the coverage area of KUON-TV make use of the in-school programing of the station and participate in the planning of these programs. (See ETV station KUON-TV, above, for details.)

Statewide educational group

The Nebraska Council for Educational Television is a nonprofit organization with statewide membership representing at present 10 public school systems, 3 agencies of the university (the extension division, the teachers college, and ETV station KUON-TV), and the State department of education.

The council has had an engineering study made as to how ETV service could be brought to the whole State. A large proportion of the population live in small towns and rural areas, and although these citizens support the State's total educational program by their taxes, many of its benefits are not accessible to them because of distance. A statewide ETV service would go far toward remedying this inequity.

On the basis of the engineering survey, the council on January 6, 1961, petitioned the FCC to reserve two existing (but unused) VHF assignments in the State and to add three VHF assignments and reserve them for education.

These five reservations, if granted, would permit the construction of facilities to expand the present ETV service to reach 90 percent of the population of the State.

NEVADA

Summary

The University of Nevada supported the petition of the public schools in Reno for a VHF educational channel in this community. The petition was granted by the FCC on April 20, 1960. Capital outlay for equipment to activate their channel remains a problem.

Nevada is a participating member of the Western Interstate Commission for Higher Education, which is financed by appropriations from each member State. The commission's task is to promote cooperation among the members States in education for graduate, professional, and technical fields and in the health professions. The commission has studied the possibilities of exchanging telecourses in subjects contributing to those fields of training among the various colleges and universities of its members States.

VHF channel 10 is reserved for education in Las Vegas.

Universities

Nevada is 1 of 13 States participating in the Western Interstate Commission for Higher Education.

The other 12 members are Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Oregon, Utah, Washington, and Wyoming.

The commission is financed by appropriations from each member State and its responsibility is to promote cooperation among these States in education for graduate, professional, and technical fields, and in the health professions.

The commission has studied the possibilities of exchanging telecourses in subjects suitable to these fields among the various colleges and universities of its member States. Oregon has pioneered in this use of ETV, and it is an application that appeals especially to States where other cities are relatively far apart and the population rather thinly distributed between cities.

The University of Nevada supported the petition of the public schools in Reno for a VHF channel for education. (See public schools for details.)

Public Schools

The Washoe County School District, Reno, petitioned the FCC in 1959 for a VHF reservation for Reno. On April 20, 1960, the FCC assigned channel 5 to Reno and reserved it for education.

The school district is seeking funds to construct and operate an ETV station before filing application for a construction permit.

NEW HAMPSHIRE

Summary

An ETV commission was established in New Hampshire at the direction of the State legislature.

The University of New Hampshire in Durham established an ETV station, WENH, in 1959. The station is currently on the air 53 hours per week with programs for home and school, locally produced and from the National Educational Television & Radio Center. The station exchanges programs (by rebroadcast) with educational station WGBH-TV in Boston.

Some 100 schools in 34 communities in southern and central New Hampshire and in nearby portions of Maine make use of school TV programs carried on commercial station WMUR-TV in Manchester (and commercial stations in Maine) and by WENH (above).

Legislature

In 1953, following the reservation of channels for education, the legislature established an ETV commission to study the possibilities of ETV for the State.

Universities

ETV station WENH, Durham, channel 11, began broadcasting on July 6, 1959. It is licensed to the University of New Hampshire. The station is currently on the air 53 hours per week. It carries three college credit courses, American history, biology, and language and linguistics, and noncredit series for home viewing, but locally produced and from NET.

Inschool telecasts include high school mathematics, science, guidance (careers) and driver training; elementary science (on three levels), music and the 3-year French series for elementary students and teachers produced by the Boston ETV station (see Massachusetts "Community Groups" for details).

Public schools

Keene High School in Keene, N.H., has a closed-circuit TV system used to teach multiple classes in general biology and college preparatory biology. The 40-minute TV lectures three times a week for each course were received by small groups of students all at one time. Laboratory sessions met separately.

In 1959-60, the high school offered its gifted students a college level biology course in which TV lectures of 45 minutes were given twice a week plus three lectures under another instructor in person. Four groups viewed the TV lectures at one time, but met separately for laboratory sessions.

NEW JERSEY

Summary

Apart from one channel assigned to Newark, all TV channels assigned to New Jersey, both for commercial and for educational use, are in the UHF band. This fact has had a serious effect on the development of television in New Jersey, both commercial and educational, since much of the State and particularly its principal cities are in range of powerful VHF stations in New York and Philadelphia.

A petition to reserve channel 14 instead of channel 77 at Paterson-Upper Montclair has been brought before the FCC by the Bergen County Federation of Boards of Education. This group hopes to construct an ETV station on this channel when the petition is granted.

Meanwhile, many public schools in New Jersey make regular use of educational programming on Philadelphia and New York stations.

Princeton, Rutgers, and Montclair State Teachers College have had extensive ETV production experience.

Legislature

In 1953, the legislature appointed a legislative commission on educational television and appropriated \$75,000 to the State department of education for experimental work in TV for schools. These funds were used to conduct a

2-year experiment in ETV from a closed-circuit system with studios near New Brunswick.

On the basis of these tests, the State department of education and the State commission on ETV were convinced of the educational value of TV and recommended that the legislature appropriate over \$200,000 for operation of an ETV station to be built on reserved channel 19 in New Brunswick.

Universities

The Montclair State Teachers College began to use TV as early as 1950, and in 1951 undertook a 2-year project of systematic research in using TV for classroom instruction. Under a foundation grant and using closed-circuit facilities supplied by commercial TV interests, the college produced for commercial broadcast a regular series in American history for fifth graders. Evaluations were made in 15 of the listening classrooms. The report on this experiment aroused nationwide interest in the possibility of using TV for education, a rather novel idea at that time.

Later the college acquired its own closed-circuit equipment, which is now used for classroom observation by student-teachers and to instruct teachers in the use of audiovisual methods. The college has also continued to produce programming for broadcast on commercial TV stations.

Princeton University has produced series for commercial broadcast for many years and recently cooperated with the State department of education in an experimental project in teaching foreign language by TV. This project is by commercial broadcast for reception in elementary classrooms.

Rutgers, the State university, New Brunswick, produced more than 25 series of weekly programs between 1954 and 1959 on a commercial station in Newark. The "Rutgers Reports" were widely respected, and concerned many subjects of public interest, such as alcohol, drugs, food additives, politics and labor-management relations, and foreign affairs.

Rutgers also has a closed-circuit TV system.

Public schools

The Newark public schools have produced some programming for commercial broadcast, and schools in Essex and Monmouth Counties use the school programs of the New York board of regents, broadcast (under contract) by commercial station WPIX in New York City. This rather extensive programming is described briefly under "New York Public Schools."

Portions of New Jersey are within reach of the Philadelphia school programs, carried on commercial station WFIL-TV for many years. These are mentioned under "Pennsylvania Community Groups."

The Bergen County Federation of Boards of Education has been experimenting with TV for school use for several years and raising funds to establish their own station. The channel reserved for the area is channel 77 in Montclair. After a search for a lower channel, the federation filed a petition with the FCC on February 14, 1961, requesting that channel 14 be assigned to Paterson-Upper Montclair and reserved for education. The petition is now pending before the FCC.

Community groups

There is a statewide ETV committee in New Jersey and a number of local ETV groups. In all of these, educators are active, and businessmen and others also participate.

The TV channels assigned to New Jersey, both commercial and educational, are all in the UHF band, except for one VHF channel assigned to Newark. This fact has had a serious effect on the development of television in New Jersey, since much of the State and particularly its principal cities are in range of powerful VHF stations in New York and Philadelphia.

A similar situation with reference to channels obtains in neighboring Delaware, which also has only one VHF assignment, a commercial assignment in Wilmington, now vacant, and the object of competing applications.

Neighboring Philadelphia has had a very active ETV station since 1957, but it is on a UHF channel and has limited reception in this VHF market. The Philadelphia area ETV group is therefore very much interested in a better channel for ETV.

ETV groups in New Jersey and Delaware have joined forces with the Philadelphia ETV group to attempt to obtain channel 12 in Wilmington for education, and have filed an application for a construction permit for the channel. The

Governor of Delaware has given his support to the proposal. The educational application faces competing commercial applications for the channel, and the applications are the subject of a comparative hearing before the FCC.

NEW MEXICO

Summary

Six channels are reserved for education in New Mexico.

In 1958, the University of New Mexico and the Albuquerque Board of Education established educational station KNME-TV on reserved channel 5. Altogether, the coverage provided by direct broadcast and extension by cable and translators serves to bring the signal to 10 cities in the State and to Alamosa, Colo.

Group viewing of higher education telecourses with monitor-teachers is regularly scheduled in local school buildings.

Three more ETV stations are planned to reach the balance of the State's communities and the rural areas between them when funds become available.

University and public schools

ETV station KNME-TV, Albuquerque, channel 5, began broadcasting programs on May 1, 1958. It was established by the University of New Mexico and the Board of Education of the City of Albuquerque. The coverage provided by direct broadcast has been extended by various community cable systems and translator services to Gallup, Farmington, Truth or Consequences, Tucumcari and Roswell (all in New Mexico) and to Alamosa, Colo.

For reaching the balance of the State and the rural areas not served by the community cable systems, three more ETV stations are planned, but funds for this are not yet available.

The station is on the air 65 hours a week. Three 15-minute programs for young children begin the broadcast day at 9 a.m. and two others come later, plus repeats of the first three. The TV kindergarten series has received national attention.

A variety of programs suitable for home or school viewing follow, alternating with direct instruction in sixth and ninth grade science, produced by the public schools. There are also three college credit courses, and two Spanish series. Cultural programs for adults end the broadcast day.

The University of New Mexico has a closed circuit system which it used before the broadcast station was completed to produce on film freshman college classes in English, biology, mathematics, and anthropology. The films were on projectors in eight New Mexico cities by groups of students under monitor-teachers.

Group viewing under monitor-teachers is regularly used for the college credit TV courses, the students meeting in local school buildings in Albuquerque, Belen, Espanola, Farmington, Gallup, Los Alamos, Santa Fe, Socorro, Toas, Truth or Consequences (and Alamosa, Colo.). By this means young people who do not realize that they have the capacity for college work may be identified and encouraged to continue their education on campus.

KNME-TV is an affiliate of the National Educational Television and Radio Center, and NET programs are interspersed with locally produced programming during all parts of the broadcast day.

NEW YORK

Summary

The State legislature has played an active role in ETV developments in New York since channels were reserved for education. Although the legislature has appropriated nearly \$2 million for ETV projects, ranging from the establishment of closed circuit systems to aiding community groups in the establishment of educational stations.

Most of these funds have been directed to the support of in-school lessons produced on commercial stations, for all 10 of the channels reserved for education in New York are UHF and capital for constructing stations on these frequencies has been scarce.

A small group of leading businessmen and educators are presently making every effort to purchase a VHF commercial station in New York City. The station, if purchased, would be converted to noncommercial purposes immediately.

Our detailed report indicates the strong cooperative spirit which has motivated the work of public schools, universities, and community groups. One ETV

station, WNED-TV, is now operating on channel 17 in Buffalo and it is hoped that another ETV station will be in operation soon, in the Albany-Schenectady-Troy area.

There are several ETV associations in the State and many colleges and universities produce programs for closed circuit use and for broadcast on commercial outlets.

Legislature and Board of Regents

1952, 1953: The Board of Regents of the University of the State of New York obtained construction permits for ETV stations on 7 of the 10 channels reserved for education in New York.

1954: The legislature authorized the board of regents to charter nonprofit groups to build and operate ETV stations. Three such regional groups have been chartered.

1955: The legislature appropriated \$200,000 for closed circuit TV facilities for ETV experimentation, and these were installed at Levittown Memorial High School (Long Island) and at the teachers colleges in Albany and Brockport.

1956-60: Between 1955 and 1960, the State has supplied a total of over \$1,300,000 for ETV programing in the schools. Some of this has been used for additional closed circuit work and some for instructional TV programing on time purchased from commercial TV station WPIX in New York City.

The cost of air time for an academic year on WPIX is approximately \$225,000. The amount varies with the actual amount of time contracted for each year. In several other cities and for lesser amounts of time, instructional series of the State department of education have been carried on commercial TV stations. The programing will be described under public schools.

1961: The legislature appropriated \$200,000 to be used in aiding community ETV councils to establish ETV stations; another \$200,000 was appropriated to aid school districts in developing classroom television, and \$50,000 was appropriated for a study of the need for television in higher education.

Universities

New York University, New York City, has been the producer of the well-known "Sunrise Semester" (courses in the classics, mathematics, government, and literature), broadcast on WCBS-TV in New York and on some other CBS outlets, including one in Alaska. The university has a closed circuit TV system and operates a center for instructional TV experimentation and training.

Columbia University and other universities and colleges have produced programing on commercial TV.

Closed circuit TV is used in 10 New York colleges and universities in addition to the three already mentioned. Some colleges have more than one CCTV system.

Public schools

Since New York local school officials are often leaders in local ETV associations, it is difficult to ascribe activities correctly to the public schools or to community groups. Both groups, however, have been active in ETV developments. Leadership in ETV has also been provided by the board of regents of the university and by the State department of education.

All four of these agencies/categories have been active in ETV, and their activities will be briefly reported, with the credit distributed as accurately as possible.

Probably the largest ETV project in the State in terms of broadcast hours and number of pupils participating is the in-school programing carried under contract by commercial station WPIX-TV in New York City and produced under the sponsorship of the State department of education. This has also been called "The Regents' Program." A total of 26 hours a week for the year 1960-61 contains something for all grades from kindergarten through the sixth.

Science is separately presented for each grade above the second; arithmetic for grades 2, 4, 5; 3 years of Spanish; high school algebra; art, music, and some miscellaneous programs for young children; and two methods courses for teachers (science and high school English). Programs are 20 to 40 minutes long and may be repeated at another hour on subsequent days (for flexible scheduling).

Since this project began in the fall of 1958, there has been a steady increase in the number of New York City public schools making use of the programs. TV receivers are not provided by the project and must be locally financed. As of September 1960, there were 664,540 public school students viewing the

broadcasts in New York City. By February 1961, this had increased to 1 million pupils in 15,352 classrooms, and every public school building had at least one TV receiver. In addition, many private and parochial schools participate.

Within range of the broadcasts are 13 county areas with a viewing potential of 125 school districts and almost 2 million pupils. No estimate is available as to the number of viewing students in northern New Jersey, western Connecticut, and eastern Pennsylvania, but it is known that many public, private, and parochial schools in these areas make use of the programs.

The ETV programing for schools in the Rochester area, in Albany-Schenectady-Troy, in the St. Lawrence Valley, and in the Buffalo area will be briefly described under community groups.

The public schools of Erie County applied for a construction permit in March 1961 for an ETV station on channel 29 in Williamsville, near Buffalo. Their station will be a second ETV station for the Buffalo area, and is intended primarily to provide a larger amount of broadcast time for in-school programing, as well as programs suited especially to the system's curriculum.

In Corning, Cheektawaga, and Cortland, N.Y., the public school systems have rather extensive closed circuit TV systems. In the Corning system, 3,000 elementary students receive TV instruction in some subject, and college-credit math is offered for gifted high school students. The Cortland system provides spelling, Spanish, and science for 32 second- and third-grade classes, and art, English, health, and mathematics for high schools. The Cheektawaga CCTV system connects one elementary school and a junior high and a senior high school.

In addition to these, eight large public high schools in the State have closed circuit TV systems.

Community groups

Local groups of educators and private citizens were formed in a number of sections of New York State. Often these groups arranged for local commercial stations to carry programs produced in cooperation with the public schools. Some encouraged the use of closed circuit TV in the local schools. One has been able to get an ETV station on the air, and another is close to beginning construction. Below are listed some of these organizations and their principal projects:

Western New York ETV Association, Inc. (with public schools of Buffalo, Niagara Falls, and Erie County):

Programs on commercial TV for several years.

Constructed ETV station WNED-TV, channel 17, Buffalo. The station began operation March 30, 1959, and is on the air 31 hours a week with instructional series for all grades, plus NET programing.

Mohawk-Hudson Council on ETV (with public schools of Schenectady-Albany-Troy area, and the State department of education):

School programs on three commercial TV stations in many subjects, usually once a week or less for elementary; one high school math series was in cooperation with the State department of education ETV project and was broadcast daily, Monday through Friday.

For the past year the council has been raising funds to establish a station. Studio space and a transmitter are in hand and a microwave unit and use of tower was given by a commercial station, for picking up ETV programs from Boston, Durham, and New York City.

The council applied for a construction permit on March 9, 1961 for an ETV station on channel 17.

St. Lawrence Valley ETV Council (Watertown, New York): Produces school programs on a commercial TV station.

Rochester Area ETV Association: The association has been working for several years to bring ETV to Rochester. It has presented programs about the school system on commercial TV and is currently presenting French instruction for elementary students for 15 minutes twice a week.

Recently the Rochester association has been attempting to secure sufficient financial backing to enable it to file an application for channel 13 which has been proposed as a third TV assignment for Rochester. The FCC has not assigned the channel to Rochester, nor has it agreed to reserve the channel for education should it be assigned.

If the channel is assigned but not reserved, then Rochester's ETV group will need to present evidence of financial ability to construct and operate a station in order to file an application that could compete in a comparative hearing with several well-financed commercial applicants.

Should the channel go to a commercial applicant, then Rochester would join the list of cities of significant size that have three or more commercial TV assignments but no VHF channel for education.

Money is the problem, and time is of the essence.

New York State has 10 channels reserved for education, but not one of these is a VHF channel. Here in Rochester is an opportunity to obtain a good channel for school instruction and excellent programs for the home.

But can Rochester move fast enough?

It is in such a case as this that outside financial resources could stimulate local hopes and efforts and secure a valuable natural resource for the use of the public.

NORTH CAROLINA

Summary

With an excellent channel reserved at Chapel Hill (channel 4), the University of North Carolina was able to secure financial support from many parts of the State and from some outside sources, and began broadcasting in 1955 under the call letters WUNC-TV.

State funds totaling about \$800,000 have consistently been made available for the operation of the station and its three producing studios located at the university, Chapel Hill; at State college, Raleigh; and at Woman's College, Greensboro.

School programs are a definite part of the WUNC-TV schedule. Through special arrangement, some TV lessons are rebroadcast by commercial stations in Charlotte, Greenville, Washington, Wilmington, and Winston-Salem.

The seven additional channels reserved for education in the State are all in the UHF portion of the band, making a full statewide coverage extremely difficult until further funds for construction can be found.

Legislature

1953: The legislature established an educational television commission and appropriated \$5,000 and later an additional \$12,000 for its use.

1955: The legislature appropriated \$215,000 for operating expenses of ETV Station WUNC-TV, established by the University of North Carolina with funds contributed from various sources.

1957: The legislature appropriated \$39,992 for the operation of the WUNC-TV transmitter and other consolidated university functions.

Biennium, July 1959 to July 1961: The legislature appropriated \$75,000 for use of city and county boards of education in continuing the program of inschool TV lessons begun by WUNC-TV in 1957 under a grant from the Fund for the Advancement of Education. This appropriation was administered by the State board of education.

The legislature also appropriated for this period a total of \$410,276 for the administration and operation of WUNC-TV studio and transmission facilities at the university at Chapel Hill and for the operation of the studios at State college, Raleigh; and at Woman's College, Greensboro.

Universities

The Consolidated University of North Carolina occupies a very special place in the hearts of North Carolinians. With an excellent channel reserved at Chapel Hill (channel 4), the university was able to secure financial support from many parts of the State and from some outside sources, and began to broadcast on January 9, 1955, under the call letters WUNC-TV.

ETV station WUNC-TV has been regularly supported by State funds, as have its three producing studios (at the university in Chapel Hill; at State college, Raleigh; and at Woman's College, Greensboro).

The programs of WUNC-TV originate at the studio of the producing institution, and inschool programs are planned in cooperation with public school administrators and teachers.

Of the inschool programming of WUNC-TV, the eighth grade mathematics and ninth grade physical science are both half-hour lessons broadcast daily. One or both of these series are rebroadcast by commercial TV stations in Charlotte, Greenville, Washington, Wilmington, Winston-Salem (and for a time, Asheville, until reception problems forced discontinuation).

Other inschool series are 2 years of French; history, art and music on several grade levels; three college credit courses; and a special program for the deaf.

The station also carries NET programs and is currently on the air 65 hours a week.

All over North Carolina there is a growing desire to have the ETV service expanded to reach more of the State. The cooperation of the commercial broadcasters is widely appreciated, but the amount of time they can use for WUNC-TV programs is so limited that most of WUNC-TV's programming is not available to homes and schools beyond the reach of its signal.

The unused reserved channels in the State are all UHF, and this would make it more expensive to achieve statewide coverage. A channel study is being made to determine whether any VHF channels could be obtained.

East Carolina College in Greenville has a closed-circuit TV system, as does the Woman's College in Greensboro and the Industrial Education Center in Charlotte.

Public schools

The participation of the public schools in the programming of WUNC-TV has already been mentioned. Altogether, as of May 1959, it was reported that 83 cities and counties of North Carolina had schools using TV.

NORTH DAKOTA

Summary

The State board of higher education and the economic development commission have explored the possibilities for ETV within the State and are participating in the planning for a six-State network for Minnesota, Wisconsin, North and South Dakota, Nebraska, and Iowa. The sparsely settled Western States face particular difficulties in planning to provide coverage for their rural areas, yet they rightly feel that the rural people have as great a need for ETV service as those in the cities.

The University of North Dakota, with much experience in the operation of a closed-circuit system, is seeking financial support for constructing an ETV station on reserved channel 2 in Grand Forks. It is the intention to make this station part of a statewide network.

The North Central ETV Association (a nonprofit organization combining the interests of colleges and universities throughout the State) plans to construct an ETV station at Fargo in the near future.

An ETV bill has recently been passed by the legislature appropriating \$46,000 for the State department of education to take advantage of ETV programs being offered. The responsibility for the selection of programs remains with the State department of education.

With the accelerated interest and possible State appropriation to establish a statewide TV network in the next legislative session in 1963, budget requests for facilities and personnel may be expected.

Legislature

The 1961 legislature appropriated \$46,356 to the State department of education (senate bill 179) and authorized the superintendent of public instruction to contract with nonprofit corporations for the provision of ETV services in the State. The funds are for the biennium July 1961 to July 1963.

Universities

The University of North Dakota has had a closed circuit TV system for several years. It is used for courses in television programming, camera work, and problems of broadcasting, as well as for experimental teaching.

The university is seeking financial support for constructing an ETV station on reserved channel 2 in Grand Forks and has submitted a proposal to the State board of higher education to implement this project and support the proposed plan for a statewide network.

State board of higher education and economic development commission

The State board of higher education and the economic development commission have explored the possibilities for ETV within the State and are participating in the planning for a six-State network for Minnesota, Wisconsin, North and South Dakota, Nebraska, and Iowa. The sparsely settled Western States face particular difficulties in planning to provide ETV service in rural areas, yet they feel that the rural people have as great a need for ETV as those in the cities.

Community groups

The North Central Educational Television Association, Inc., is a nonprofit corporation organized to establish an ETV station in Fargo, and to work toward a statewide network. A petition to assign channel 13 to Fargo and reserve it for education was granted by the FCC on March 30, 1960.

The association is proceeding with its plans and expects to have the station on the air soon. A tower and studio are already available and local commercial stations are giving technical cooperation, as is the ETV station in Minneapolis-St. Paul.

Outstanding leaders from all over the State are on the board of directors of the association, with colleges and universities well represented.

Community leaders and educators in Bismark are also working to establish an ETV station. The channel reserved for Bismark is channel 24.

OHIO

Summary

The nine channels reserved for education in Ohio are UHF. Through the untiring efforts of the State's institutions of higher learning, public schools, community groups, and the State legislature, four of these channels have been put into operation—at Columbus (WOSU-TV), Cincinnati (WCET), Oxford (WUMB-TV), and Toledo (WGTE-TV).

An educational television commission appointed by the Governor has embarked upon plans to develop a statewide network. \$60,000 was initially provided by the legislature for this purpose.

Our detailed report describes the wealth of programing which is originated by the operating stations. While the emphasis is upon lessons for inschool audiences and formal courses for adults, the range of informal, informative programing is constantly being broadened and reaches ever-increasing audiences.

Leading educators from Ohio have presented formal testimony in Washington vigorously supporting the proposed ETV legislation.

Legislature

1953: The legislature instructed the legislative service commission to study educational television.

1955: On recommendation of that study, the legislature enacted a measure permitting boards of education to make contributions to educational television foundations for programs to be shown in schools.

1959: The legislature created an Interim Educational TV Study Commission and appropriated \$60,000 for its use during a 2-year period.

The study commission explored with other State agencies the feasibility of developing a statewide network of interconnected stations.

1961: The study commission submitted its report to the legislature in February 1961. It recommended the creation of a nine-member Educational Television Network Commission composed of the State superintendent of public instruction and representatives from State universities and public schools. The proposed State plan envisioned an eventual 29 station UHF network across the State, with the first phase to be the construction of ETV stations for Akron-Kent, Athens, Bowling Green, Cleveland and Dayton-Zenia. Cost estimates based on an engineering study were included.

In March, bills were introduced to create the ETV Network Commission and appropriate administrative funds, and to authorize the ETV Commission to proceed with the actual establishment of the net work as funds are made available.

Universities

ETV station WOSU-TV, Columbus, channel 34, began broadcasting programs on February 20, 1956, and was the second ETV station in Ohio to go on the air. It was established by Ohio State University.

WOSU-TV broadcasts 72 hours a week with a variety of programs for all ages, including NET programs. Inschool programing includes two French series, science for 2d, 6th, and 9th grades; two college credit courses; and two programs for preschool children.

The programs for elementary and secondary schools are produced in cooperation with the Columbus schools and are used in five counties in central Ohio (40,000 students).

Of special interest is a third college course, mathematics 400, which is received on campuses at Columbus, Newark, Mansfield and Marion. In connection

with this telecourse, evaluations are being made as to the effectiveness of supplementing TV instruction by varying amounts and kinds of non-TV instruction.

Evaluation is also underway of several ways of using TV in teaching a course in personal health required of all students at Ohio State University. About 2,000 students are taking the course. TV sections of 320 are followed by small group discussions in the third phase of the project (spring 1961).

The university has several closed circuit TV systems, including one used to teach dentistry and one for classroom observation by teacher trainees and for occasional demonstrations in a number of subjects.

The university is cooperating in the Midwest project on Airborne Instructional Television.

ETV station WMUB-TV, Oxford, channel 14, began broadcasting programs on October 13, 1959. The station is licensed to Miami University, Oxford.

In February 1956, Miami University began to use closed circuit TV to teach three college courses to about 500 students in each course. These courses are now broadcast in late morning hours.

Other morning programs include series for preschool children and news and general interest programing for the home. The station is on the air three evenings a week with general cultural programing, some produced by the university and some provided by NET.

Ohio University, Athens, has a closed circuit TV system and is planning to construct an ETV station. In February 1961, the university petitioned the FCC to reassign channel 20 to Athens and reserve it for education. In April, the FCC issued proposed rulemaking looking toward the addition of this channel at Athens.

Other colleges and universities having closed circuit TV systems are the Case Institute of Technology, Cleveland; Marietta College, Marietta, the University of Akron, and the University of Dayton.

Public schools

The ETV activities of the Columbus schools have been mentioned under universities, and the Cincinnati and Dayton school ETV activities are discussed below under Community Groups.

The Zanesville Board of Education has presented a high school biology program on Saturday mornings on a commercial TV station, which also carries some programs from ETV Station WOSU-TV, Columbus.

The Newark, Ohio, public schools are planning to construct an ETV station and petitioned the FCC in October 1960 to reassign channel 28 to Newark and reserve it for education; the FCC has made the channel available for Newark ETV use.

South High School and Linmoor Junior High in Columbus have closed circuit TV systems. At South High the student's raised \$6,000 to begin their closed circuit system by devoting to that purpose the proceeds from the noon movies shown during the lunch hour.

Community groups

ETV station WCET, Cincinnati, channel 48, began broadcasting programs on July 26, 1954. Ohio's first ETV station, it was established by the Greater Cincinnati Television Educational Foundation.

Voting members of the foundation are 38 accredited educational institutions in Ohio and Kentucky, including seven colleges or universities, 17 county or city boards of education in Ohio and eleven in Kentucky, two systems of parochial schools, and the Public Library of Cincinnati.

WCET is on the air 49 hours a week with NET programs for home and school and locally produced series. In-school programing includes something for every grade from kindergarten through 12th, and two methods courses for teachers. Three years of French are offered for elementary students immediately after school certain days of the week; the teaching methods are carried after school on other days. The high school biology course is four times a week and is repeated at another hour.

Programs for the home are carried from 7 to 10 p.m. The general cultural programing of WCET is attracting an ever-increasing home audience. TV service men report a recent rush of order for converters, one stating that he has sold out and another that he is weeks behind with his installations.

ETV station WGTE-TV, Toledo, channel 30, began broadcasting programs on Oct. 10, 1960, and is Ohio's newest ETV station. The licensee is the Greater Toledo Educational Television Foundation.

The member institutions of the foundation are eight public school systems, the parochial schools of the diocese, the Toledo Museum of Art, the Public Library, a private school, the Mary Manse College and the University of Toledo.

The Miami Valley ETV Foundation, in the Dayton area, has produced science programs for grades 6-8 on a commercial TV station in Dayton, in cooperation with a local newspaper. The Miami Valley group is currently working toward establishing an ETV station on channel 16, reserved for Dayton.

The Greater Cleveland Television Education Association was incorporated in 1958 as an outcome of the ETV activities of the Adult Education Association and other groups.

The association is working to obtain financial support to construct an ETV station on reserved channel 25. It has secured a rental option on a former broadcasting property, is making an engineering study of available transmitter sites, and has the cooperation of three major school systems.

The Ohio Council on Educational Television is a statewide organization of educators and interested citizens that has been working toward the expansion of ETV service in the State. The council has voted to support the recommendations of the interim ETV study commission (described under legislature) for a state network of ETV stations.

OKLAHOMA

Summary

Oklahoma was one of the Nation's first States to establish an educational television authority (1953). Seven channels have been reserved for education in Oklahoma and two of them are in operation (the two VHF channels); KETA-TV went on the air at Oklahoma City in 1957 and KOED-TV was activated in 1959 at Tulsa. Both are licensed to the State authority. In addition, unreserved channel 25 in Oklahoma City has been placed in operation by the board of education of that community, and produces programs principally for an inschool audience.

When funds permit, microwave facilities will be installed for transmission of signals from Oklahoma City to Tulsa and the beginnings of a very effective network will be enlarged in order that more citizens of the State—particularly those in the rural areas—may be served.

Legislature and Oklahoma ETV Authority

1953: The legislature created the Oklahoma Educational Television Authority and authorized it to use \$700,000 from the state public building fund to construct ETV stations on reserved channels.

1956: The Oklahoma ETV Authority on April 13, 1956 began operating ETV station KETA-TV, Oklahoma City, channel 13.

1957: The legislature appropriated \$100,000 for the biennium for educational television.

The ETV authority decided to reserve half of these funds for the activation of channel 11 at Tulsa.

1959: ETV station KOED-TV, Tulsa, channel 11, was activated by the authority on January 12, 1959.

A second station for Oklahoma City was activated the following month and will be described under public schools.

The legislature appropriated \$200,000 for the biennium for ETV.

KOED-TV in Tulsa picks up the programs of KETA-TV in Oklahoma City off the air and rebroadcasts them on its own channels. The Authority plans to install microwave interconnections when funds permit.

KETA-TV and KOED-TV carry the full schedule of NET programs and in the studios of the authority in Oklahoma City many program series are produced, both general programs for the home and instructional series for school use. In school programming includes science for grades 4-6, three high school science courses, French, and social studies for several grade levels.

Public schools

ETV station KOKH-TV, Oklahoma City, channel 25, began operation on February 2, 1959. The station is licensed to the Oklahoma City Board of Education and was constructed by the board in order to increase the amount of air time available for in school programs. The schools also make use of the programs of KETA-TV, described above. Channel 25 does not carry NET programs, these being already available on channel 13.

Channel 25 is on the air 27 hours a week. Its schedule for the fall of 1960 included two literature series (for upper and for lower elementary grades), called "Telestory" 2 years of elementary French, seventh grade literature and geography, eighth grade science, and filmed courses for high schools in biology and physics (in some years chemistry is offered). The two filmed courses are each repeated at different time spots so that all participating classrooms can arrange to schedule their viewing. The science telecourses are broadcast 4 days a week, with the fifth day left open for application and review under the classroom teacher.

OREGON

Summary

Beyond providing moral support and assisting in the early planning for ETV in the State, the legislature has, since 1953, appropriated more than \$350,000 for stations construction and operation.

Two of Oregon's three reserved channels are now in operation. KOAC-TV in Corvallis went on the air in 1957, and was followed by KOAP-TV in Portland in February of 1961.

The two stations are linked by microwave and are licensed to and programed by the State board of higher education. Programs, however, are not limited to adult audiences. Public schools in the Corvallis area make use of elementary lessons broadcast over KOAC-TV and collaborate in their production.

Several institutions of higher learning in the State operate closed-circuit TV facilities.

Legislature

1953: The legislature authorized the Governor to appoint an ETV committee. The committee recommended a 2-year plan to develop ETV in Oregon.

1955: The legislature continued the ETV committee and appropriated \$5,000 for its use.

1957: The legislature appropriated \$145,500 to ETV, to be administered by the State department of higher education. Purposes: \$48,000 for programing on ETV station KOAC-TV, Corvallis; \$97,500 for programing on the ETV station begun by a community group in Portland. This sum was to be matched by local funds.

1959: The legislature authorized the State department of higher education to complete planning and construct and operate the Portland station. The community group that had been active in Portland was invited to appoint a 15-member advisory committee to work with the State board on programing.

The legislature appropriated \$200,000 for the biennium for constructing and operation a station on channel 10 in Portland.

State board of higher education

ETV station KOAC-TV, Corvallis, channel 7, began broadcasting programs on October 7, 1957. The station is licensed to the State board of higher education and is operated under the extension division of the state board.

KOAC-TV is currently on the air 35 hours a week. It carries nine college credit courses. In the fall of 1960, they were history of western civilization, problems of philosophy, first year French (college), general hygiene, descriptive meteorology, American literature, fundamentals of accounting, 19th century poets, and elementary ethics.

The station also carries NET programs and several series, locally produced for upper elementary grades.

ETV station KOAP-TV, Portland, channel 10, began broadcasting programs on February 6, 1961. It also is licensed to the State board of higher education. A new studio is being constructed, and meantime the station is broadcasting programs from KOAC-TV, to which it is linked by microwave facilities.

Universities

In 1958-59, four colleges used the credit courses of KOAC-TV: Oregon State College, the University of Oregon, the Oregon College of Education, and Willamette University, a private institution. Between 700 and 1,000 students were registered in these courses.

In the spring quarter of 1961, 15 college courses are offered by TV on one or more of 6 TV stations (2 educational stations and 4 commercial stations).

Some of the college TV courses are offered for credit to resident students only, and are broadcast simply to make them available to remote campuses. Other

courses are open for credit registration by high school graduates not attending college and, in special cases approved by the principal, by high school seniors. Examinations and credit for nonresident students are handled by the extension division of the State board of higher education, and the credit is transferable to colleges or universities.

The University of Oregon, Eugene; and Oregon State College, Corvallis; both have closed-circuit TV systems used for teaching the techniques of television production and for producing the college credit courses broadcast on the ETV stations, KOAC-TV and KOAP-TV.

The Oregon College of Education, Monmouth, has a closed-circuit TV system with mobile cameras which is used for observation of elementary teaching and for some experimentation and training in the use of televised materials in the classroom.

Southern Oregon College, Ashland, has produced programs relating to biology on a commercial TV station in Medford.

Oregon is one of the 13 States participating in the Western Interstate Commission on Higher Education, supported by appropriations from each State and authorized to promote cooperation among member States in training programs, particularly in professional and technical fields. The commission is studying the possibility of linking ETV stations in member States for the exchange of college level telecourses, as is being done in Oregon at present.

Public schools

The public schools in the Corvallis area use the elementary programs broadcast over KOAC-TV, and collaborate in their production.

The Pendleton and Eugene public schools have produced science programs for elementary and junior high school students on commercial TV stations.

PENNSYLVANIA

Summary

The legislature established an ETV advisory committee for the State as early as 1953. Like many other State legislatures it has passed legislation permitting local school districts to participate in the operation of ETV stations. As a result, hundreds of public schools in the State contribute to, and make use of, ETV programming.

Three of the country's outstanding ETV stations are in operation in Pennsylvania—WQED and WQEX in Pittsburgh, and WHYY-TV in Philadelphia. WQEX broadcasts school programs entirely and was put on the air in 1959 to supplement the programing of WQED, which carries a schedule of broad audience interest.

WHYY-TV is one of three applicants for channel 12 in Wilmington, Del., and plans to cooperate with educators in Delaware and New Jersey to provide a regional ETV service.

The Pennsylvania State University was a pioneer in the use of closed-circuit television facilities. Seven additional colleges and universities utilize such facilities in their educational program. Plans are being made to develop a statewide ETV system.

Leading educators of the State have testified in the 86th and 87th Congress strongly supporting proposed ETV legislation.

Legislature

1953: The legislature established an advisory committee on educational television and appropriated \$10,000 from the Governor's contingency funds for a study of ETV under a full-time executive secretary.

Legislation was also passed permitting local school districts to participate in the operation of ETV stations.

Universities

Pennsylvania State University has done pioneer work in the use of television for instruction. On its well-equipped closed-circuit TV system about 20 academic courses have been taught. The universities division of academic research and services has evaluated the results of TV teaching and studied faculty and student attitudes toward it. A careful cost analysis was also made.

In the experience of the university, using closed-circuit TV to teach entire courses is relatively expensive for small enrollments but begins to save money when class size has reached 200. The savings increase as class size increases above that number.

Reports on this 3-year project (1954-57) were printed under a grant from the Fund for the Advancement of Education. The reports have been valuable as a source of information on closed-circuit TV systems and their uses, as well as on the effectiveness of TV instruction. There are at present (1961) a number of good books dealing with these aspects of ETV, but they have become available only recently, and the "Penn State Reports" served a great need during the early days of the development of instructional TV in the United States.

The university continues to use closed-circuit TV and is now planning an ETV broadcasting station. The channel reserved for University Park is UHF, and the university is attempting to obtain a VHF channel.

Other colleges and universities using closed-circuit TV are:

Lafayette College, Easton	Temple University, Philadelphia
Duquesne University, Pittsburgh	University of Pittsburgh
Williamsport Technical Institute	State Teachers College, Millersville
University of Pennsylvania, Philadelphia (two separate systems).	

State Teachers College in Indiana, Pa., presented in the summer of 1958 two series of programs to prepare high school graduates for college work in chemistry and physics. Since then, the college has presented programs in science for elementary classrooms. All of these were broadcast by a commercial TV station.

Public schools

The extensive TV activities of the public schools of the Philadelphia and Pittsburgh areas will be mentioned under "Community Groups."

The public schools of Harrisburg and Lancaster have presented broadcasts for school use on local commercial TV stations.

Community groups

ETV station WQED, Pittsburgh, channel 13, began broadcasting programs on April 1, 1954. It was established by a group of businessmen, educators, and interested citizens who organized a nonprofit corporation under the name "Metropolitan Pittsburgh Educational Television Station." The station began broadcasting programs for homes produced in its own studios, using the cultural resources of the Pittsburgh area.

Individuals from the Pittsburgh group were instrumental in the organization of the NET service, which the station has carried since it became available. A number of outstanding NET series have been produced by WQED. Two of these are the prize-winning "A Dancer's World," featuring Martha Graham, and the "Heritage" series with Robert Frost, Walter Lipmann, Eleanor Roosevelt, Dame Edith Sitwell, and others.

Enrichment and instructional series for schools have steadily increased, in cooperation with local school systems. The desire for more air time for this type of ETV has led to the establishment of a second ETV station in Pittsburgh.

ETV station WQEX, Pittsburgh, channel 16, began broadcasting to schools on March 20, 1959, and is licensed to the same organization as WQED. WQEX serves mainly to make available at other hours the programs carried by WQED.

The importance of being able to broadcast carefully prepared TV programs at more than one hour may be realized by remembering that schools must stagger the use of playgrounds, cafeterias, gymnasiums, and laboratories.

The resulting class schedules may prevent some groups concerned from listening to a broadcast at any given moment.

A further expansion of program service is desired, as funds permit.

WQED is on the air 72 hours a week, which includes the schoolday and from 4 or 5 p.m. until 10:30 p.m. 5 days a week, plus more than 5 hours on Sundays. WQEX is on the air only during school hours.

Inschool programing ranges from elementary to college level and includes (as of fall, 1960) French and Spanish for elementary grades, with an additional French broadcast for teachers; science on three elementary levels; three sciences and driver education for high schools; and several series in literature, art, and history.

The college credit course is world geography. This subject, ignored by most colleges of 30 years ago, has become recognized in importance in recent years and is a "natural" for TV instruction. Local scenes can be clipped from newsreels and other sources to make vivid to the student the facts of climate and terrain, agriculture, industry and commerce. The appearance of world geography as a college level or adult education subject on many ETV

stations indicates a growing awareness in the United States of the importance of being informed about the rest of the world.

ETV station WHYI-TV, Philadelphia, channel 35, began broadcasting on September 16, 1957. It was established by a nonprofit corporation composed of educational, cultural, and public service interests in New Jersey, Delaware, and Metropolitan Philadelphia. The same group also operates educational radio station WHYI-FM. WHYI-TV is on the air 33 hours a week with local and NET series.

For many years commercial station WFIL-TV in Philadelphia made time available for broadcasts to schools of a number of weekly programs for various grades. These broadcasts reach a wide area, as WFIL-TV is on a VHF channel. As early as 1957-58, the reception of classroom television in the Delaware River Valley rose to 213,000 viewers, an increase of 34 percent over the previous year.

WHYI-TV has wanted to increase its power and make other technical arrangements to expand its coverage, but these are very expensive and even when they are provided, homes cannot receive the signal unless their TV sets are capable of receiving UHF channels.

WHYI-TV is therefore very much interested in cooperating with New Jersey and Delaware educators and other leaders who are attempting to secure channel 12 in Wilmington for an ETV station. The Governor has given his support to this proposal, which faces strong commercial competition for the channel.

PUERTO RICO

Summary

The development of educational television broadcasting in Puerto Rico has added much to the educational and cultural life of the island.

There are now two ETV stations established, WPIR-TV Hato Rey (San Juan) and WIPM-TV, Mayaguez. Together they cover the entire island. Both stations are licensed to the Department of Education of the Commonwealth of Puerto Rico. The detailed report lists nearly two dozen program titles suggesting the broad range of educational and cultural material seen on the ETV channels.

Department of education of the Commonwealth

ETV station WPIR-TV, Hato Rey (San Juan), channel 6, began broadcasting January 6, 1958. It was established by the department of education of the Commonwealth of Puerto Rico.

ETV station WIPM-TV, Mayaguez, channel 3 (not reserved), began operation March 19, 1961. It is also licensed to the department of education.

The two stations carry similar programming to different parts of the island: a description of programming will be limited to WPIR-TV, which is on the air a little more than 33 hours a week. Program schedules are issued weekly, and are in Spanish. A program from the fall of 1960 has been translated, and several NET series are recognizable through the translation, which is as follows:

Children's Hour	Understanding Numbers
Club 6	Facts of Medicine
World Panorama	Medicine, 1960
Kingdom of the Sea	Legal Counsel
Junior Science	NET Drama Festival
Of Science and Scientists	Casals Master Class
Life with Radiation	Books and Authors
Two Centuries of Symphony	Jorge Morel, Guitarist
Seven League Boots	A Time for Dance
United Nations	American Album

RHODE ISLAND

Summary

Rhode Island has encountered difficulties in the development of educational television, due largely to the fact that the one channel reserved for noncommercial, educational use in the State is UHF (channel 36 in Providence). Nonetheless, the legislature has been active in exploring ETV possibilities.

The University of Rhode Island, the Rhode Island College of Education and Brown University used closed-circuit TV facilities, and several institutions of higher learning in the State have produced programs for viewing on commercial stations.

A number of public and parochial school systems make use of the inschool programs originated on ETV station WGBH-TV in Boston. Moreover, a Citizens Television Council of Rhode Island has promoted local use of cultural and informational programming.

Legislature

1954: The Governor established an advisory commission on educational television with \$5,000 for its use.

1955: The legislature authorized the creation of an advisory commission of 20 members to work with the State board of education toward the construction of a state-owned ETV station.

Later that year the legislature approved an appropriation of \$150,000 for constructing a station on Rhode Island's only reserved channel, channel 36 in Providence.

Channel 36 was considered undesirable because of the lack of UHF receivers in the area, and attempts to secure a better channel have not yet succeeded.

The \$150,000 has continued to be held in reserve by the State board of education for future use when additional funds are available and the channel matter is settled.

Universities

Closed circuit TV is used at the University of Rhode Island, Kingston; at the Rhode Island College of Education, in Providence, and at Brown University, Providence.

A number of colleges and universities have participated in programming for broadcast on commercial TV stations. The Providence Public Library presents a series "Once Upon a Time" which stimulates reading among youngsters. Brown University faculty has appeared in "A Prospect in Literature", and University of Rhode Island professors were featured in "Perspectives and Close-ups," a series which examined history, political science and current events.

Public schools

Five public school systems in northern Rhode Island are making use of programs of the Boston ETV Station WGBH-TV, and more and more schools are acquiring TV receivers. The parochial schools of that area began to participate in 1960-61.

Community groups

Rhode Island has only one channel reserved for ETV, and that is channel 36 in Providence.

Efforts have been made to obtain a better channel in Providence—channel 16 instead of channel 36; also, that if and when another VHF channel was assigned to Providence that it be made available for the proposed ETV station of the State board of education.

The Citizens Television Council of Rhode Island was organized by a number of groups in the State to promote the local use of ETV where available and more cultural and educational TV programs on commercial stations.

SOUTH CAROLINA

Summary

With the active support of the State legislature, public school officials and other educational leaders in South Carolina, a statewide system of closed circuit ETV programs have been developed as the following description indicates:

"The South Carolina Educational Television network is a statewide network of 31 junior and senior high schools stretching from the coast at Charleston to the mountains in Spartanburg. In all, 17 cities are included in the network. Programming is done at the studios in Columbia and carried to the schools using the facilities of the Southern Bell and General Telephone Cos. Elementary algebra, plane geometry, South Carolina history and college algebra are taught. All lessons are video taped two weeks in advance. Each subject is programed twice daily. WFBC (channel 4) in Greenville videotapes Continental Classroom, which is, in turn shipped to Columbia to be played in the afternoon on the closed circuit network. WNOK-TV (channel 67) is fed three programs daily and WUSN (channel 2) is fed two. Nearly 75 schools are served by the open circuit telecasts."

Legislature

1953: Authorized a committee to study the feasibility of developing an ETV project. The committee recommended an experimental instructional TV project.

1958: The legislature appropriated \$120,000 for a closed circuit TV project to begin in September 1958 in the Dreher High School in Columbia. Later, other funds were appropriated to expand the project to other schools.

The budget for 1958-59 was \$80,000 and for 1959-60 the budget was \$100,000.

1960-61: The budget for 1960-61 is \$773,600 in contrast to \$652,000 requested. The South Carolina educational television project is totally State supported. Programs originated at first in the Dreher High School and were used there the first year (1958-59). The following year four more Columbia high schools were connected. The first courses taught were plane geometry and French I. The next year, algebra I was added. Expansion of coverage and subject matter has continued to take place.

In the summer of 1960, new studios and offices were equipped in a building providing 6,500 square feet for two studios, engineering space, photo lab, visual aids department, control room and offices. In these studios tapes are prepared for use on broadcasting stations now cooperating in the project.

The present extent of the project may be seen from the following excerpt from a communication from the South Carolina Educational Television Center, Columbia:

"The South Carolina Educational Television Network is a statewide network of 31 junior and senior high schools stretching from the coast of Charleston to the mountains in Spartanburg. In all, 17 cities are included in the network. Programing is done at the studios in Columbia and carried to the schools using the facilities of the Southern Bell and General Telephone Co.'s. Elementary algebra, plane geometry, South Carolina history and college algebra are taught. All lessons are video taped 2 weeks in advance. Each subject is pragramed twice daily. WFBC (channel 4) in Greenville videotapes Continental Classroom', which is, in turn shipped to Columbia to be placed in the afternoon on the closed circuit network. WNOK-TV (channel 67) is fed three programs daily and WUSN (channel 2) is fed two. Nearly 75 schools are served by the open circuit telecasts.

"As the programs emanate in Columbia, they are microwaved over existing telephone circuits. At tower locations, coaxial cable carries the program to the schools * * *." (for closed circuit distribution).

Approximately 3,200 high school students are receiving South Carolina history via television instruction in some 110 classes. About 2,600 students are receiving algebra I instruction in some 104 classes. Around 800 students are receiving geometry instruction in 29 classes and some 600 are receiving instruction in college algebra in 27 classes.

"Lesson plans are prepared by the TV teachers and sent out to the cooperating teachers 2 weeks in advance. Followup conferences are arranged three times during the year to insure adequate communication between the TV teacher and the classroom teacher."

Hopes for the future expansion of this project are also described in the communication:

"First priority is to connect the secondary schools, 413 in number. Estimated yearly cost to telecast 36 high school subjects over a 3-channel network is approximately \$4 million per year."

Universities

Closed circuit TV is used in the Medical College of South Carolina, Charleston, in the South Carolina Area Trade School of Columbia, and at Clemson College, Clemson, S.C.

The University of South Carolina produced a TV course in music for which registered students might earn a certificate of accomplishment.

Public schools

The participation of the public high schools in the South Carolina project described above is obvious and does not need to be repeated here.

In 1958-59, many schools were using the 9th grade science programs of ETV station WUNC, Chapel Hill, N.C. The half hour lessons were broadcast each school day by local commercial TV stations which relayed or rebroadcast the WUNC signal, either direct or from participating commercial stations in North Carolina.

Presumably in those communities now reached by the South Carolina network, the WUNC programs have been replaced by the taped programs from Columbia. Communities that received rebroadcasts of WUNC material in 1958-59 were: Agnor, Conway, Darlington, Effingham, Greeleyville, Kingstree, Lamar, Lake City, Loris, McCall, McBee, Pamplico, Marion, Limmonsville and Myrtle Beach, Florence, Spartanburg, and York. York received its programs directly from WSOC, a commercial station in Charlotte, N.C., cooperating with the WUNC program.

SOUTH DAKOTA

Summary

There are two VHF and two UHF channels reserved for education in South Dakota. The actions of the State legislature in 1953, 1954, and 1955, have resulted in the development of closed circuit television and, if present plans materialize, the State University of South Dakota will begin the operation of an ETV station at Vermillion on reserved channel 2 this spring (1961).

Other stations are planned for the future, as funds permit. A VHF channel is reserved at Brookings and UHF channels are reserved at Pierre and Sioux Falls. In addition to the closed circuit unit at the university, South Dakota State College uses a closed circuit TV system to facilitate the observation of classrooms for teacher-trainees.

Legislature and Governor

1953: The Governor invited representatives from over 70 organizations to participate in an ETV workshop in Pierre.

1954: The Governor appointed a 17-member ETV committee. The committee, after study, recommended that the legislature appropriate funds for an engineering study and that educational institutions be encouraged to experiment with closed circuit TV.

1955: The legislature authorized \$17,500 for a closed circuit system at the University of South Dakota, Vermillion. The closed circuit is used for student training in speech and for rehearsals for regular TV productions on commercial stations.

Universities

The closed circuit TV system installed at the State University of South Dakota in Vermillion is used to train students in speech and for rehearsing the regular university TV productions broadcast on commercial TV stations throughout the State.

The university applied to the FCC for a construction permit for an ETV station on channel 2, reserved in Vermillion. The permit was granted March 30, 1960, and the station is expected to begin operation in the spring of 1961. Other stations are planned for the future, as funds permit. South Dakota has another VHF channel reservation at Brookings and two UHF reservations at Pierre and Sioux Falls.

The South Dakota State College at Brookings has a closed circuit TV system used to facilitate observation of classrooms for teacher-trainees. It is also used experimentally for some course work.

TENNESSEE

Summary

In 1953 the legislature established a State ETV commission which has become a permanent planning group for developing a statewide network. The legislature has also provided a significant portion of the operating funds for the existing ETV station in Memphis since 1955.

Five UHF and three VHF channels have been reserved for education in the State. The VHF channel in Memphis was placed in operation as ETV station WKNO-TV in 1956. It has distinguished itself in many programming areas, including the production of the first adult TV literacy lessons in the Nation. This ETV literacy series has been used in many other parts of the country and provides much of the groundwork for literacy lessons by TV in other parts of the world. Schools in Knoxville, Memphis, and Chattanooga cooperate in the production of in-school TV lessons.

The Nashville ETV Foundation is now actively engaged in a fund raising campaign to secure enough funds to supplement the State funds that have been set aside for a station in Nashville. The foundation has applied for a construction permit for channel 2, reserved for Nashville.

Legislature

1953: The legislature appointed an educational television commission and appropriated \$10,000 for its use. An additional \$5,000 was later appropriated and the committee was continued to June 1955.

The commission requested that a permanent educational television commission be established and an annual appropriation made for ETV.

1955: The legislature established a permanent State ETV commission and appropriated \$2,500 annually for its use. It also authorized the State ETV commission to grant matching funds not to exceed \$50,000 per year to any one applicant for establishing ETV facilities. (a total of \$100,000 was granted to the Memphis Community TV Foundation.)

1957: The legislature appropriated \$200,000 for the biennium for ETV. Of the total \$100,000 was applied to the operation of the Memphis station and the other \$100,000 was set aside for constructing the next ETV facility in the State.

1959: The legislature appropriated \$100,000 for the operation of the Memphis station for the biennium 1959-61.

Universities

Closed circuit TV is used at Fisk University, Nashville, to teach French, German, speech, and educational tests and measurements. It is also used for a graduate audiovisual workshop emphasizing teaching training in the educational application of television.

The George Peabody College for Teachers, Nashville, has a well-equipped closed circuit system with two studios which it intends to make available to a Nashville ETV station when that station is constructed. Meantime the closed circuit is used to teach the teaching of mathematics, the teaching of physical science, and the teaching of mathematics in the elementary school. It is also used as a workshop for senior and graduate students for learning how to be an effective studio teacher.

Siena College and other institutions in the Memphis area produce TV programs and/or telecourses on the Memphis ETV station.

Public schools

The public schools of the Memphis area cooperate in producing classroom TV programming on the ETV station in Memphis (see community groups for details).

In January of 1960, the public schools of Knoxville began to present general science for fifth and sixth graders for a half hour three days a week on a commercial TV station. At first only 7 schools were viewing the series, but by the end of 1960 the number of participating schools reached 27.

Community groups

ETV station WKNO-TV, Memphis, channel 10, began broadcasting on June 25, 1956. It was established by the Memphis Educational Television Foundation which is made up of educational institutions and agencies in the area and civic and cultural groups including PTA's, the Junior League, and the Council on Jewish Women, all of whom continued to support the operation of the station.

WKNO-TV is on the air from 1 to 10 p.m. 5 days a week (Fridays, 1:30 to 10 p.m.) making a broadcast week of 44½ hours. In the fall of 1960 the program series included "Treehouse" for young children, 2 years of Spanish, science separately presented for fifth, sixth, and seventh graders, guidance for high school students and two college credit courses—basic mathematics and Civil War history. These are in addition, of course, to the NET program service described in other documents.

WKNO-TV is the originator of "Streamlined Reading," a TV course prepared to teach illiterates or semilliterates to read and write. The project was begun in 1956 under the sponsorship of the Council of Jewish Women and with the assistance of Dr. Frank Laubach. The series was recorded and is available to other TV stations, commercial or educational. It has already been used in Tennessee, North and South Carolina, Alabama, Georgia, and Pennsylvania. No doubt other States will also use it, as there are 10 million persons in the United States, well distributed over its whole area, who can neither read nor write, or so little as to be worth nothing to them. These people are sensitive and quite adept at hiding their deficiency. In some areas where the Memphis literacy series has been used it has been retitled "Improve Your Reading" to avoid offending the sensibilities of prospective students of this unique telecourse. In most communities using the series, viewing rooms and volunteer teachers are provided to assist the students before and after broadcasts.

The venture has attracted worldwide attention and its method has already been adapted to the local language for broadcasting on TV stations in Kenya and Egypt.

The Nashville ETV Foundation is now actively engaged in a fund-raising campaign to secure enough funds to supplement the State funds that have been set aside for a station in Nashville. The foundation has applied for a construction permit for channel 2 reserved for Nashville. With well-equipped studios already available at the George Peabody College for Teachers and at Fisk University, the Nashville group will find additional funds for transmission equipment and continued operation.

Tennessee has two other VHF reservations, both in small cities, and UHF reservations for Knoxville, Chattanooga, and two smaller cities. A plan for statewide coverage has been in existence for several years, but funds have not been available as yet to make it a reality.

TEXAS

Summary

Three ETV stations are presently operating in Texas: KUHT, channel 8, Houston (the first station in the country to operate on a reserved channel), is licensed to and operated by the University of Houston; KRET, channel 23, Richardson, operates noncommercially on an unreserved channel and is licensed to the Richardson Independent School District near Dallas; and KERA-TV, channel 13, Dallas, is operated by the Area Educational Television Foundation, a nonprofit corporation with 50 directors representing business, education, civic, and cultural organizations in the Dallas area.

The Southwest Texas Television Council has been granted a construction permit to build a station on channel 9 in San Antonio and it is expected that the station will be on the air in the spring of 1962.

Eleven colleges of the Austin-San Antonio area have worked out an agreement to exchange college telecourses. The group has obtained authorization from the FCC for a microwave network to transmit the telecourses for distribution over closed-circuit systems on the 11 campuses. Two sections of the microwave system are already in operation.

Leading educators have testified in Washington during the 86th and 87th Congresses strongly supporting the proposed ETV legislation.

Legislature

1954: The legislature instructed the commissioner of education to appoint a special committee on educational television.

1957: The House of Representatives of the Texas legislature adopted a resolution urging the Federal Communications Commission to protect reserved channels in Texas from commercial encroachment. (A number of determined efforts have been made since 1952 by several commercial applicants to obtain the reserved channels for commercial broadcasting.)

Universities

The University of Texas in Austin has well-equipped production studios and closed circuit distribution system, and in 1958 it acquired a videotape recorder. Programs are produced and recorded for later use on the closed circuit system and for use on TV stations, commercial and educational.

A few of the series are: "Science Close-Ups," "Active German," "Geology and Introduction to the Visual Arts." Chemistry instruction is distributed by closed circuit to 1,500 students in 120 chemistry laboratory sections. The German series is repeated several times a day. The university will become the producing center of the new ETV station under construction for the Austin-San Antonio area (see community groups).

Closed-circuit TV systems are used in Amarillo College, Baylor University College of Dentistry (Dallas), Ursuline Academy (Dallas), Texas Western College (El Paso), the University of Texas Dental School and Hospital (Houston), Abilene Christian College, and Baylor University School of Medicine (Houston), an unusual installation enabling physiology students in laboratory booths to watch the professor perform the demonstration they themselves are learning to perform.

Eleven colleges of the Austin-San Antonio area have worked out an agreement to exchange college telecourses. The group has obtained authorization from the FCC for a microwave network to transmit the telecourses for distribution over closed circuit systems on the 11 campuses. Two sections of the microwave system are already in operation.

St. Mary's University, San Antonio, has presented a series on high school algebra on a commercial TV station. Other colleges presenting telecourses or cultural series are East Texas State, Southern Methodist, Pan American, Odessa, and Baylor.

ETV station KUHT, Houston, channel 8, began broadcasting on May 23, 1953, and was thus the first noncommercial educational television station in the United States. The station was built by the University of Houston. It is currently on the air 29 hours a week and offers four college credit courses (biology, plane trigonometry, psychology, and accounting I.) It also offers literature, mathematics, and chemistry for high schools, and Spanish, language and social studies for various elementary grades. KUHT was one of the early participating stations in the NET program service and carries the full range of NET programing. Its school broadcasts are at various hours between 7:30 a.m. and 2 p.m. and programs for homes are shown between 5 p.m. and 10 p.m.

Public schools

The public schools of the Houston area cooperate in producing the classroom TV programs of KUHT, mentioned above. Of special interest is the series in modern physics for high school students—45-minute programs broadcast twice each school day in 1958-59 and 1959-60 covering subjects not included in the high school text. The 2-year project was under a grant from title VII of the National Defense Education Act and included comparisons with control groups not receiving the TV lessons. The series was taped in the labs of the University of Houston and was received in 30 school districts of the gulf coast.

The Snyder, Tex., public schools have a closed-circuit system which they have installed without outside aid and with the cooperation of local electronic firms. They have completely rearranged their high school schedule to make optimum use of TV and have found that the collaboration among teachers in preparing the TV lessons has increased faculty rapport and resulted in superior performances from the same group of teachers, and superior response in learning on the part of students.

ETV station KRET-TV, Richardson, channel 23, began broadcasting on February 29, 1960. The station is licensed to the Richardson Independent School District. It was constructed primarily to offer classroom TV, since Richardson is in the Dallas area and will receive NET program service from the Dallas ETV station which went on the air in September of 1960 (see community groups). KRET is on the air as yet only 8 hours a week, all of it during schooltime. It broadcasts enrichment programs for grades 1 through 6 in art, music, science, and social studies, plus Spanish for grades 3 and 4 and junior high school science (fall programs, 1960).

Community groups

ETV station KERA-TV, Dallas, channel 13, began broadcasting on September 11, 1960. The station is licensed to the Area Educational Television Foundation, a nonprofit corporation with 50 directors representing business, education, and civic and cultural organizations in the Dallas area. It broadcasts 15- or 30-minute programs for schools and carries the full NET program service. Evening hours are from about 5 to 9 p.m. The station offers for classroom use "Adventures in Reading" (on two levels); two years of Spanish; science demonstrations (on three levels); home economics; driver education and counseling for high school students; and teaching methods in mathematics.

The Southwest Texas Educational Television Council is a nonprofit corporation composed of private citizens in the San Antonio-Austin area. On September 28, 1960, the council was granted a construction permit for ETV station KLRN-TV on channel 9, and plans to have the station in operation by the spring of 1962. The University of Texas, Austin, will operate the station under contract with the council. A survey of program needs and interests is now underway among educators and civic groups in seven cities and towns of the area.

UTAH

Summary

In 1953 the Utah Educational Television Foundation was formed by the three major universities in the State, the State department of public instruction, and the Salt Lake City schools. The foundation directed its efforts toward informing the public on the potentialities of noncommercial TV and toward activating Utah's only reserved VHF channel, in Salt Lake City.

When the board of regents agreed to help finance a station at the university, the Utah ETV Foundation was asked to serve as a coordinating agency among the many civic and cultural groups interested in ETV programming.

ETV station KUED, Salt Lake City, began broadcasting in January of 1958. Construction funds were provided by the board of regents (\$100,000) which was matched by a grant from the Fund for Adult Education (Ford Foundation). In 1958, the legislature provided \$200,000 to the University of Utah for the operation of KUED for 2 years. Another ETV station, KWCS, concentrating on inschool programs, went on the air in 1960. It is licensed to the Weber County School District of Ogden, Utah. Two additional stations are planned, one at Logan under the auspices of Utah State University and one at Ogden by the Ogden city board of education.

Legislature

Following the activation of ETV station KUED in 1958, the legislature appropriated \$200,000 to the University of Utah for the operation of the station for 2 years. (See "Universities.")

Universities

ETV station KUED, Salt Lake City, channel 7, began broadcasting on January 20, 1958. It is licensed to the University of Utah. The Utah board of regents supplied \$100,000 from the uniform school fund for the construction of the station and this was matched by a grant from the Fund for Adult Education (Ford Foundation). Existing building on the campus were adapted for studio and other space.

As early as 1953 a group of Utah educators began to work toward the activation of reserved channel 7 in Salt Lake City, and the station at the university marks the culmination of their efforts. (See "Community Groups.")

KUED is on the air 63 hours a week. The morning schedule includes a net program for children and televised courses produced by the universities (some in cooperation with the State department of public instruction): 2 years of French plus a separate French course for elementary classes supplemented by extra broadcasts for teachers; 2 years of Russian; natural science programs for schools; and a history series "Utah in Perspective." Some series appear daily and others less often. In the afternoon there is another series for preschool children and repeats of several of the morning series. The "Continental Classroom" mathematics course is offered at 5:30 p.m. daily, followed by the two French credit courses. The evening hours present many programs produced by the University of Utah, Utah State University, and Brigham Young University. These include a week's news summary, "Civic Dialogue" (Utah affairs), national affairs, "How's Your Health?" "You and Your Job," and "History and Appreciation of Art." Many net series of general interest are also appearing during the evening, the broadcast day ending at 11 p.m. (from schedule for March 1961).

Utah State University, Logan, is planning an ETV station in the near future. On November 8, 1960, the FCC granted approval to the transfer to the university of an existing commercial construction permit for channel 12. The university has chosen the call letters KUSU-TV for its new station, which will be operated noncommercially. The university has had a closed-circuit TV system for several years, used for teacher training and classroom observation.

All this ETV activity in Utah is concentrated in the north-central portion of the State, and providing ETV service for the less thickly populated portions of the State will not be easy. All reservations except Salt Lake City are in the UHF band.

Public schools

In 1959 the Weber County School District of Ogden, Utah, constructed for the Weber High School a studio building and a closed-circuit TV system costing \$25,800, including receivers. The schools were faced with an increase in enrollment of 400 and wished to avoid spending about \$350,000 for more high school classrooms.

The system is operated by seven crews of electronic students. Two presentations can be given at any one time. Programming is prepared by the regular teachers working in teams, each teacher selecting the portions of the course in which he or she is best qualified—3 out of 9 or 10 teachers were involved in each telecast, 1 as the studio teacher and other 2 as monitors in the auditorium where the telecasts are received. The remaining teachers of that subject are free to work on their own material, grade papers, and so on.

The telecasts were on alternate days for each subject, and on non-TV days the students meet with their teachers in classroom groups.

There was discussion as to whether the close-circuit system should be extended to the junior high schools which would otherwise need a construction program amounting to a million dollars. In 1960-61, the system was extended to the new Bonneville High School (Ogden), and the school district applied for a construction permit for an ETV station on reserved channel 18.

ETV station KWCS-TV, Ogden, channel 18, is licensed to the Weber County School District, Ogden, and is on the air as of early 1961 for 30 hours a week. It presents school programs, offering children's literature for elementary grades, art separately presented for each grade 3 through 6, music similarly, seventh grade social studies, fifth and sixth grade science (separately) and two science courses for eighth graders, one the regular material and the other an accelerated course for gifted students.

Another ETV station is planned for Ogden. On December 20, 1960, the Ogden City Board of Education petitioned the FCC to reserve channel 24 for education, now assigned to Ogden but not reserved.

Statewide group

In 1953 the Utah Educational Television Foundation was formed by the three major universities in the State, the State department of public instruction, and the Salt Lake City schools. The foundation directed its efforts toward informing the public on the potentialities of noncommercial TV and toward activating Utah's only reserved VHF channel, in Salt Lake City.

When the board of regents agreed to help finance a station at the University, the Utah ETV Foundation was asked to serve as a coordinating agency among the many civic and cultural groups interested in ETV programming.

VERMONT

Summary

The legislature has promoted the use of ETV in this State through the creation, in 1954, of an educational television commission. Funds have been appropriated for its continuation.

The State department of education and the University of Vermont have had much experience in producing educational programs on a Burlington commercial station.

Norwich University in Northfield and the University of Vermont's College of Medicine have closed-circuit facilities and make use of them for scientific and medical purposes.

Legislature

1954: The legislature established an educational television commission consisting of both educators and laymen and appropriated \$3,500 for its use.

The commission recommended exploring the possibility of building an ETV station in cooperation with Maine and New Hampshire.

1955: The legislature continued the commission.

1957: The legislature again continued the commission.

1959: The legislature appropriated \$1,500 for the commission, and continued it for another 2 years.

Universities

The University of Vermont presented its first TV programs as a series of lectures called "TV University" on commercial station WCAX-TV in Burlington.

Since 1955, at least 75 faculty and staff members have appeared on the same station presenting a range of subjects under the series title, "Living and Learning."

From September 1959 to May 1960, the general subject was "Zoology" and the broadcasts were from 11:30 to noon on Saturdays. This series, like the other "Living and Learning" programs, was a noncredit adult education series.

The University's college of medicine installed a closed-circuit TV system in late 1958.

Norwich University, Northfield, Vt., installed a closed-circuit TV system in early 1960. The camera can point through a microscope lens, transmitting a picture of high definition. No sound system was installed, as the closed circuit is used in a metallurgy class to show the effects of stress on metals. Other uses are planned for the future.

State department of education

Beginning in September 1958, the State department of education presented on commercial TV station WCAX-TV, Burlington, a half-hour program each school day for 15 weeks. Five subjects were taught, one broadcast period for each subject, and the programs were directed to either of two levels: grades 1 through 3 or grades 4 through 8.

VIRGINIA

Summary

The State legislature and community groups have actively supported plans for the development of educational television in Virginia.

The Virginia Educational Television Association represents institutions of higher education, public and parochial school systems, cultural, civic and religious institutions, and interested individuals. In 1958 this chartered organization announced a four-phase program of action: The continuation of ETV programming on commercial stations; the construction by the association of a studio for producing ETV programming; establishing a first ETV station on a reserved channel for inschool programs and direct teaching and later, the addition of general programs for homes on the station.

Closed-circuit TV facilities are being used by William and Mary, the University of Virginia, the Medical College of Virginia, and Union Theological Seminary in Richmond.

Public schools in the Norfolk area are now attempting to establish an ETV station with the assistance of the school system in Hampton. These schools have had much programming and production experience as have the schools in Roanoke and in northern Virginia (within the signal area of commercial stations in the District of Columbia).

Legislature

1959: The legislature created the Commission to Study the Feasibility of Educational Television in Virginia.

The commission reported its decision that ETV was feasible and that the State should encourage its use.

1960: The legislature passed an appropriation of \$100,000 to develop ETV but the Governor vetoed the bill.

State agencies continue to study and plan for ETV.

Universities

Virginia Polytechnic Institute produces agricultural films which are widely used by commercial TV stations throughout the State.

The College of William and Mary in conjunction with the Norfolk Division of Virginia State College has produced telecourses for college credit in astronomy, geology, physics and chemistry. The College of William and Mary has a closed circuit TV system which can operate on three channels at one time. It was first used to teach Introduction to the Arts, presented for 1 hour twice a week.

The University of Virginia Library in Charlottesville has a closed circuit system used in a special project to study the feasibility of transmitting reading material from the main library to other points on campus, especially the "extension library" in a classroom building.

Closed circuit TV is also used in the School of Dentistry of the Medical College of Virginia, Richmond, and in Union Theological Seminary, Richmond.

Public schools

Public schools of the Norfolk area are now (spring 1961) attempting to establish an ETV station. In the fall of 1957 the Norfolk City Public Schools began an ETV experiment using 2 hours of air time each school week on commercial TV station WVEC. The subjects were geometry, elementary science and American history. At the beginning of the project one or more of these series were received in nine schools.

The project has been continued and expanded. In its second year (1958-59), the schools broadcast 20 minutes of science instruction each school day for 5th, 6th and 9th graders in three separate series with a different TV teacher for each grade. The geometry course for 10th graders was for 25 minutes and was also daily. The programs were used in all the Norfolk schools and in several surrounding counties.

In 1959-60, Spanish for elementary students was added and FM radio broadcasts were used to supplement the TV instruction. In preparation for the series, a workshop for teachers was held in late August of 1959.

Station WVEC has said that it cannot supply air time for this ETV programing after June 1961. The Norfolk schools are attempting to gain sufficient promises of cooperation and financial support from the neighboring school systems to enable the group to construct an ETV station. Construction cost is estimated at \$200,000 and first year's operating costs at \$150,000. Hampton, Va., schools have indicated a desire to participate, and other systems are interested but have taken no official action as yet.

Should Norfolk and Hampton construct and operate the station without help from other school systems, construction costs would be a little under \$3 per pupil, and operating costs would be a little over \$2 per pupil per year.

Public schools of Roanoke have presented for several years a series called Schooltime and the Richmond schools are presenting art instruction, both on local commercial TV stations.

School districts in northern Virginia contribute financially to the upper elementary "Time for Science" and lower elementary "Time for Art", presented by the Greater Washington Educational Television Association on commercial TV station WTTG. For further details, see District of Columbia, Community Groups.

The public schools of Norfolk county obtained a grant from the National Defense Education Act for an experiment project using closed circuit TV for elementary school. The grant was matched by an equal amount from county school funds and the closed circuit was installed in the new elementary school then under construction at Great Neck, but now completed. The system will be operated experimentally for the balance of this school year, with full programing to begin in the fall (1961).

Public schools of Accomac County participate in the Delmarva ETV project using the facilities of commercial TV station WBOC-TV, Salisbury, Md. Daily lessons in science, music, history and French are financed by a contribution of \$1 per pupil per year paid by the school districts. Further details are given under Public Schools, Maryland.

Statewide and community groups

Virginia's reserved channels are all in the UHF band because all available VHF channels were already in commercial operation at the time the reservations were made by the FCC. Nevertheless, a number of local and statewide organizations representing educators and laymen have been trying to obtain sufficient public support to establish ETV stations and have promoted the sponsorship of ETV programing on commercial stations.

The Virginia Educational Television Association represents institutions of higher education, public and parochial school systems, cultural, civic and religious institutions, and interested individuals. In 1958 this chartered organization announced a four-phase program of action: the continuation of ETV programing on commercial stations; the construction by the association of a studio for producing ETV programing; establishing a first ETV station on a reserved channel for in-school programs and direct teaching; and later the addition of general programs for homes on the station.

WASHINGTON

Summary

Ten TV channels have been reserved for education in Washington, three of them VHF. A State ETV Commission was appointed by the Governor as early as 1954 and effective recommendations were made for the development of non-commercial broadcasting.

The University of Washington promptly established an ETV station, operating on reserved channel 9, in December of 1954. The station, KCTS-TV, derives its operational funds from the university, the Seattle Public Library and 14 school district in King County.

The State's second ETV station, KPEC-TV, went on the air in 1960. It is licensed to the Clover Park School District (Tacoma) and its programing reflects a special interest in serving the needs of elementary and secondary education. A third station will be established soon on channel 62 (by Tacoma School District No. 10), which will also serve portions of the area outside the coverage of KPEC-TV.

Governor

1954: The Governor appointed a State committee on educational television. The committee made a study and later in the year recommended:

A statewide council on ETV.

The construction of several production centers.

Cooperation with local efforts to establish an ETV station in Seattle.

Legislation permitting educational institutions and agencies to join non-profit ETV groups.

Universities

ETV station KCTS-TV, Seattle, channel 9, began operation on December 10, 1954. The station was established by the University of Washington at a capital expense of more than \$400,000. Operational funds come from the university, the Seattle Public Library and 14 school districts in King County that make an annual contribution of \$1 per pupil and cooperate in the production of programs for classroom use.

KCTS-TV is currently on the air about 45 hours a week. Its programs for schools include calculus for qualified 12th graders, a learn-how-to-study series, English grammar, and a social studies series for junior and senior high schools; clothing construction for senior high schools; and a variety of series for elementary grades, including 2 years of Spanish.

KCTS-TV uses the programming of the NET service and also produces a number of noncredit series for adults featuring activities and hobbies as well as more serious subjects such as personnel management and history of the Pacific Northwest, on which credit is offered to registered viewers meeting the requirements. The station is on the air school days from about 10 to 3 and resumes with programs for homes from 6 to 10 in the evening.

The university has two closed circuit systems. One is used as a laboratory for 3 courses in TV techniques, and the other is used for 11 postgraduate and undergraduate courses in the medical and dental schools and for nurses training.

Central Washington College, Ellensburg, has a closed-circuit system with mobile cameras used for selected observations and demonstrations from any of six public schools. A talk-back circuit connects the cameramen and classroom teachers with the professor, who is commenting on the classroom observed to more than 200 student-teachers at the college. The closed-circuit system is also used for courses in television for the student teachers.

Public schools

ETV station KPEC-TV, Lakewood Center (Tacoma), channel 56, began operations on April 1, 1960. It is licensed to the Clover Park School District, Tacoma, and offers inschool programs of music on four elementary levels; science for 4th, 5th, 6th and 9th graders, separately; career and occupation guidance, and driver education for high school; also literature for the 10th grade.

Tacoma School District No. 10 is constructing an ETV station on channel 62, an unreserved channel. The construction permit was granted January 13, 1960, and the station hopes to begin broadcasting in late spring of 1961. The station also will serve portions of the area that are outside the coverage of ETV station KPEC-TV.

WEST VIRGINIA

Summary

Four UHF channels in the State have been reserved for education—at Charleston, Huntington, Morgantown, and the Wheeling-Steubenville (Ohio) area. None of these has been placed in operation.

A number of institutions of higher learning in West Virginia, including Morris Harvey College and Concord College, have produced courses for credit on commercial broadcasting facilities.

Three colleges in Wheeling alternately present adult courses in a series entitled "TV College."

Other ETV production experience has been gained by the public schools in Huntington and by the Junior League of Charles Town.

Universities

Morris Harvey College, Charleston, has been producing TV credit courses since 1954, for broadcast on commercial TV stations. By fulfilling the assignments and examinations provided for registered students of these telecourses, hundreds of West Virginia public school teachers have been able to renew or

upgrade their teaching certificates and housewives have been able to reenter the teaching profession by reinstating their expired certificates. Other hundreds have taken the course for college credit and have thus been able to complete college degrees with shorter campus periods.

Concord College, Athens, W. Va., has also produced educational programs on commercial TV stations. An audience of about 60,000 followed a noncredit series on consumer problems.

Three colleges in Wheeling alternate in presenting noncredit programs for adults entitled "TV College."

Public schools

In Huntington, educators have cooperated for 5 years in a series promoting better understanding of educational problems and processes. It is entitled "The Camera Goes to School."

Community groups

The Junior League of Charles Town has produced enrichment programs in music and West Virginia history for the elementary schools.

WISCONSIN

Summary

Legislative actions in 1953 prompted the establishment in 1954 of ETV station WHA-TV in Madison, which is licensed to the University of Wisconsin—one of the first ETV stations to be established in the United States. The legislature has regularly appropriated operational funds for the station.

ETV station WMVS-TV, licensed to the Milwaukee Vocational and Adult School, operates on the one VHF channel reserved for education in the State. There are nine additional UHF channels reserved. The Milwaukee public schools cooperate with station WMVS-TV in planning school series and make a financial contribution to the operation on a per pupil basis.

Our detailed report describes the wide range of noncommercial programming material which is seen on these outstanding ETV stations.

Legislature

1953: The legislature authorized the Governor to apply for construction permits for the channels reserved for education in the State, and directed the legislative council to study the feasibility of a State network.

That same year the State radio council was instructed to study programming and operating costs.

Five reports have been submitted. The final report recommended a State network of 12 transmitting and relay stations and requested funds to begin construction.

The legislature appropriated \$75,000 for an experimental television operation at the University of Wisconsin in Madison. An ETV station was established at the university by the State radio council and began broadcasting in 1954 (see universities for details.)

The legislature has regularly appropriated operational funds for the station.

1957: The legislature appropriated \$98,300 for the biennium for the operation of the ETV station at Madison and transferred operation of the station from the State radio council to the university.

Universities

ETV station WHA-TV, Madison, channel 21, began broadcasting May 3, 1954, thus pioneering in TV as Wisconsin has done in AM and FM. The university worked closely with the State radio council in the operation of the station, and (as noted under legislature), control of the station was given to the university exclusively in 1957.

WHA-TV is not only a broadcasting station; it is a production center for the "Wisconsin School of the Air," carried on many commercial stations.

The WHA-TV series usually enrich the classroom by bringing outside resources in, by way of the TV screen. Some series, however, offer complete teaching, such as the German and Spanish courses carried on WMBV-TV, Marinette, WBAY-TV, Green Bay, and WISN-TV, Milwaukee.

WHA-TV is currently on the air about 22 hours a week. It carries NET programs as well as its own productions. In-school programming includes fourth grade arithmetic, history for fourth, fifth, and sixth graders (together); science demonstrations, beginning French for seventh graders, ninth grade algebra and high school chemistry. A new series for the upper elementary grades is

of particular interest. Music is also carried. In a recent year, a series called "Patterns in Mathematics" presented TV instruction twice a week for eighth graders and gifted seventh graders; on the other 3 days of the school week, the students worked under the classroom teachers. This series was a part of the Wisconsin improvement program for teacher education.

Marquette University School of Dentistry installed a closed circuit TV system in the spring of 1958. It is used in five basic dentistry courses.

Public schools

ETV station WMVS-TV, Milwaukee, channel 10, began broadcasting on October 28, 1957. The Milwaukee Vocational and Adult School installed a closed circuit TV system in 1954 to train students in television engineering and production, and began soon thereafter its courageous and persistent effort to activate channel 10. It encountered strong opposition from commercial interests who desired to obtain the channel, the only VHF reservation in the State. Other opposition challenged the right of the school to use tax funds for broadcasting. The FCC preserved the channel for education, and the Wisconsin courts ruled that the school was within its rights in constructing the station. Every ETV station has problems, most of them, of course, being financial. The saga of Milwaukee is a special case of trouble and determination and final victory.

The Milwaukee public schools cooperate with the station in planning school series and contribute to the operation of the station on a per pupil basis. The State Radio Council work with the station in producing noncredit series for adults. The school programs of WMVS-TV have proved so popular in the Milwaukee area that a second channel is needed. On February 7, 1961, the school applied for a construction permit for channel 36, and plans a UHF station for inschool programming exclusively.

The VHF station already on the air carries the full range of NET programs plus its own productions and is on the air about 52 hours a week.

Some 31 different series for schools are broadcast regularly. There is science, music, art, physical education, French and Spanish for the various elementary grades; biology, general science and technical math for high schools. The "Patterns in Mathematics" series produced by WHA-TV for teachers and students is currently on the air at WMVS-TV.

The public schools of Wausau, Wis., have cooperated in the production of a science series called Through the Classroom Window, broadcast on commercial TV station WSAU-TV.

WYOMING

Summary

The president of the University of Wyoming recently stated: "Wyoming needs educational television. With our sparse and scattered population, use of this medium is particularly important in providing educational opportunities for the general public and in supplementing the instructional programs of our schools and junior colleges. Television teaching for our university students is also needed."

Only channel 8 in Laramie has been reserved for education in the State, and recently commercial interests have proposed that this channel be moved from Laramie to Nebraska and used for commercial purposes.

The University of Wyoming has developed plans for an educational television project, the success of which largely depends upon securing funds for construction.

Universities

The University of Wyoming, Laramie, appointed a committee to develop plans for a television project. Detailed study has been made of facilities, equipment and personnel that would be needed. Existing ETV stations were visited and a consultant was engaged to make recommendations. Foundations were contacted as to possible grants to assist in acquiring facilities. Federal and State aid is hoped for.

A community television system in the State has requested the university trustees to consider a cooperative project in ETV that would carry the ETV programs to many communities in the State. The trustees have authorized the president to investigate this possibility and others.

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general public and in supplementing the instructional programs of our schools and junior colleges. Television teaching for our university students is also needed."

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The Extension Division has produced a number of agricultural programs which have been carried on commercial TV stations. Each of the agricultural and homemaking programs produced emphasizes "how-to-do-it" demonstrations, highlighting new procedures and practices. Agents and specialists involved in television planning and production have attended workshops conducted at the TV stations by a TV specialist from the Federal Extension Service of the U.S. Department of Agriculture; County agents consider the programs a valuable supplement to their work.

Wyoming is a member of the Western Interstate Commission for Higher Education which is financed by appropriations from each of 13 member States. The commission promotes cooperation among those States in higher education and is interested in developing an exchange of college-level teaching by TV.

Northern Wyoming Community College in Casper has given a college course in basic physics on commercial TV station KGHL. The course offered 3 hours of credit to registered viewers completing assignments and passing examinations. An additional hour of credit was available for those who could attend laboratory sessions at the college.

Mr. MOULDER. This morning it is indeed our great pleasure to hear from a former colleague of ours and former Governor of the State of Connecticut, Abraham Ribicoff. Mr. Secretary, we are glad and proud to have you here this morning. Your Department, through the Office of Education, is greatly concerned with the legislation which we have before us. Your Department has been engaged, under the provisions of the National Defense Education Act, in making grants for the promotion of research into educational television operations. Now, we are glad to have you before the committee to testify on legislation providing for a joint Federal-State program to promote the construction of educational television facilities.

The fact that you are testifying in person before this subcommittee on this subject is in itself significant because your participation in these hearings further demonstrates the importance of this legislation.

Mr. Secretary, will you kindly identify your associates accompanying you this morning so that we will have the correct names and titles in the record.

STATEMENT OF HON. ABRAHAM RIBICOFF, SECRETARY OF HEALTH, EDUCATION, AND WELFARE, ACCOMPANIED BY SIDNEY SAPERSTEIN, OFFICE OF THE GENERAL COUNSEL; C. WALTER STONE, DIRECTOR, EDUCATIONAL MEDIA BRANCH, OFFICE OF EDUCATION; AND CHARLES W. RADCLIFFE, LEGISLATIVE REFERENCE OFFICER, LEGISLATIVE PROGRAM DEVELOPMENT BRANCH, OFFICE OF EDUCATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Secretary RIBICOFF. Yes, sir. Thank you very much, Mr. Chairman.

Accompanying me here are Mr. Sidney Saperstein, Office of the General Counsel of this Department; Dr. C. Walter Stone, Director of the Educational Media Branch of the Office of Education; and Mr. Charles W. Radcliffe, Legislative Reference Officer, Legislative Program Development Branch of the Office of Education.

Mr. Chairman and members of the committee, I appreciate this opportunity to appear before you to offer this testimony relating to six bills designed to complete a nationwide system of educational television.

I am here to support the general objective of these bills.

I shall also suggest some modifications through which I believe this objective will be more quickly and efficiently achieved. The modifications would be to meet technical situations in the television field.

The bills on which I am making this statement are: H.R. 965 by your chairman, Representative Oren Harris, of Arkansas; H.R. 132 sponsored by Representative Kenneth A. Roberts, of Alabama; H.R. 5099 by Representative Byron G. Rogers of Colorado; H.R. 5536 by Representative Harris McDowell, of Delaware; H.R. 2910 by Representative Clifford G. McIntire, of Maine; and H.R. 645 by Representative Hale Boggs, of Louisiana.

The very fact that these gentlemen come from geographical areas so widely scattered over the country is evidence of the general need for this legislation.

Each of these bills would authorize, for the purpose of educational television, grants to the States of a total not to exceed \$1 million in any State. These grants would be used to assist public agencies and non-profit organizations to acquire broadcasting apparatus for educational television.

H.R. 932, H.R. 5099, and H.R. 5336 include two further provisions:

- (1) State matching of Federal funds on a 50-50 basis.
- (2) State surveys of the needs for educational television and State plans for a construction program.

We recommend the inclusion of such provisions in the legislation. I do not believe that ETV stations will have enough vitality to survive unless the areas they serve show enough interest to put up at least half of the funds. And I consider the most careful planning absolutely essential if the entire country is to be served by educational television.

For the surveys and plans we recommend the same amount mentioned in the three bills, an authorization of \$520,000, with not more than \$10,000 to be granted to any one State.

For construction, we recommend the authorization of \$25 million which when matched by the States would mean an investment which will average about \$1 million for each State, which is included in all the bills.

The total authorization for Federal grants in the 4 years would thus be \$25,520,000.

In addition, and for the technical reasons which will be developed in this testimony, we recommend:

1. That provisions be included whereby State plans may be developed cooperatively into interstate or regional plans.
2. That construction grants be made on a project-by-project and not a State-by-State basis.

Any one of the bills now before you could be modified to meet our recommendations.

THIS ADMINISTRATION FAVORS ETV

This administration strongly favors a nationwide system of educational television. No domestic challenge which faces us is more critical than education.

Educational television could help us catch up on our school work, in which, I regret to say, we are behind. It could focus sustained national attention on music, art, literature, and drama.

It could help us to make scientific progress.

And educational television will advance as science advances.

Already an experiment is underway on an airborne instructional program in the Midwest. We look forward to a future in which information and instruction may be conveyed from nation to nation through installations in outer space.

President Kennedy in his education message of February 21 this year said:

Our twin goals must be a new standard of excellence in education—and the availability of such excellence to all who are willing and able to pursue it.

The achievement of those two goals could be hastened by the legislation now before us. Television is as great in its possibilities of increasing the excellence of education as the invention of printing was in its time. And no medium has ever equaled television in availability to all.

Of course we should all understand that television will never do all of our education. It will never supplant person-to-person and classroom teaching. Television is simply a powerful instrument to open up many more vistas in the lifelong educational process.

The States are ready for ETV: The chairman of your full committee, Representative Oren Harris, recently sent an inquiry to the Governors of all the States with regard to their readiness to participate in a cooperative Federal-State matching program for the establishment of educational television plans and facilities.

The replies were turned over to our Department for analysis.

Before I analyze it I want to pay special tribute to you, Chairman Harris, for doing this because I think that what you have done was most important and gave us a real understanding and the committee and you can use this information before Congress to explain the problem and show the States' interest. I believe that, without this particular type of survey from you, we would have been really handicapped in getting the scope of the problem. I think this was a very important key for our development of the program as a result of your work, Chairman Harris.

Mr. HARRIS. Thank you.

Secretary RIBICOFF. Twenty-five replies from Governors were in the affirmative. These came from Alabama, California, Hawaii, Idaho, Illinois, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New Mexico, North Carolina, New York, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Vermont, Washington, and the Commonwealth of Puerto Rico.

Mr. HARRIS. Mr. Chairman, I would like to interrupt there.

We received, Mr. Secretary, some additional responses after you had worked on these wires. I think probably they should be made available to you in order that they might be included.

Secretary RIBICOFF. I think, for the purpose of the press, if the affirmatives were here it would be of interest, of course, to complete the story. I think that, if you do have affirmative responses, it would be good.

Mr. HARRIS. I remember specifically the wire we received from Mississippi and I think there were some more included, too.

Secretary RIBICOFF. Eight replies were indefinite. In these cases, the question was pending before State legislatures, or the opinion of another official was being sought, or the Governor was not yet ready to deal with the question. These replies were from Alaska, Delaware, Kansas, Maine, Nevada, New Hampshire, Ohio, and the District of Columbia.

Fourteen States have not yet been heard from. From other records, however, we know that six of these have one or more operating educational television stations within their borders. They are Colorado, Florida, Iowa, Kentucky, Louisiana, and Utah. It seems reasonable to anticipate that later replies from these areas will maintain the high ratio of affirmative responses evidenced by those already in hand.

A good foundation has been laid: Many here remember the dramatic hearings before the Federal Communications Commission in 1952 which resulted in the reservation of a block of television channels for educational television.

These hearings made possible the ETV stations now broadcasting in this country, which we now seek to add to and also to link together in networks for broadcasts important to an entire area.

The evidence presented to the FCC in 1952 was impressive indeed. It had been assembled by trained researchers who sat, hour after hour, day after day, in front of television sets in New York, Chicago, and Los Angeles. The subject matter on all channels was charted and analyzed from sign-on to signoff—so many minutes devoted to entertainment, to crime and violence, to advertisements, to education and culture.

Obviously educational television is needed as much now as it was in 1952, and we are encouraged by Federal Communications Commission Chairman Newton Minow's announcement that he will do all in his power to promote a nationwide educational television system.

The channels set aside for educational use in 1952 totaled 242. These have since been increased to 268, of which 90 are VHF (very high frequency) and 178 are UHF (ultra high frequency).

These are all open-circuit stations and include such important trailblazers as the community-supported stations of Boston, Chicago, St. Louis, Pittsburgh, San Francisco, Minneapolis-St. Paul, and New Orleans.

The typical educational television station devotes its schoolday hours to programs for the classroom at all levels—elementary, secondary, and higher. The late afternoon is usually devoted to programs for women and children, whereas the evenings are devoted to adult education as well as cultural and educational types of programing.

Of the stations now on the air, about 40 percent are financed and controlled by universities, about 20 percent are part of a public school system, and the remaining 40 percent are sponsored by independent community agencies.

Two cities, Oklahoma City and Pittsburgh, already have started their second ETV stations. Miami and Milwaukee have applied for their second allocations.

In contrast, there are great areas still largely unserved by ETV. One of them is the vast metropolitan complex starting in New England and reaching on down to Washington, D.C., and Virginia.

In much of this area, which includes about one-fifth of the population of the United States, commercial stations had been set up to use all existing channels before the FCC set-aside for educational television was made. New York State conducts its extensive programs of inschool television over a commercial station. A study is now underway to find out if frequency allocations are available to set up a regional educational television network in this highly populated area—which, incidentally, is exceptionally rich in education resources.

All the VHF channels reserved by the FCC in areas of more than 300,000 population have now been assigned.

The task of the next 4 years will be stimulating new VHF stations in low-population areas and in making use of the UHF channels in all areas needing ETV.

Where it is in use, ultra high frequency television has been well accepted. Its adoption has been hampered by the fact that the manufacturers have not produced many sets capable of receiving UHF. However, it is entirely possible to produce TV sets which do receive all frequencies.

The problem now being faced by this committee is to make it possible for the remaining bands to be used in such a fashion as to best serve the population which does not yet have access to educational television.

It is obvious from the situation I have described that the plans and services often should be interstate or regional and that the allocations of funds should be project by project, rather than State by State.

OUR PROPOSALS

Our proposals are put into legal language in my letter to the chairman, which I hereby furnish for the record.

In essence, these proposals provide for:

Surveys and program development: We recommend authorization of \$520,000 to enable the Commissioner of Education to make grants to the States to cover one-half the costs of conducting surveys and developing programs for educational television. Not more than \$10,000 would be granted to any State. The legislation should make clear that multistate, area, or regional planning and surveys would be encouraged. Modifications of the requirements otherwise applicable on a State basis to facilitate accomplishment of this objective should be authorized.

Projects for construction of ETV facilities: The legislation should authorize the Commissioner of Education to make grants on a project basis under priorities to be established. The criteria for such priorities should be designed to achieve the prompt and effective use of the available channels, equitable geographical distribution of the facilities throughout the country, and the setting up of the facilities in such a way as to serve the greatest number of people and broadest uses

possible. We recommend an aggregate of \$25 million to be authorized over a 4-year period to pay up to one-half the costs of approved projects. This would be matched by the payment of one-half the costs by the individual sponsoring agency.

If State plans have been made, the grants would proceed in accordance with the State plan. If not, the grants could be made available by the Commissioner directly after the State has had a reasonable opportunity to prepare such a plan.

Our proposals would include a definition in the bill which would exclude from Federal grants closed-circuit transmission within a single school or occupying a single site. We do not believe Federal funds are warranted for this limited type of facility.

Research and experimentation: Two other pieces of legislation recommended by the Kennedy administration could round out Office of Education services to educational television.

One is the "Educational Assistance Act of 1961" which provides for new demonstration programs to meet special educational problems. Such programs might include the use of a new media such as television.

The other is currently in progress—the provision under title VII of the National Defense Education Act whereby research is being carried on to evaluate and aid in the development of television and other audio-visual education media. President Kennedy has recommended that the National Defense Education Act, which expires next July 1, be extended and improved.

ETV HAS PROVEN ITS WORTH

Educational television has proven its worth. More than 50 careful studies provide evidence that anything that can be taught by lecture and demonstration in the classroom can be taught at least as well by television.

As one example, a complete junior college curriculum has been on the air for 5 years in Chicago. It has been taken by thousands of students. Tests have proven that these televised courses have brought students to the level of skill attained by classroom practice.

There have been spectacular demonstrations that television can do certain instructional tasks much better than they can be done in the classroom.

For instance, in test-tube chemistry and other courses requiring minute motions, every television student can watch as well as though he were in the front row in the classroom.

A 10-member educational media study panel of the Office of Education met in January and, on the basis of the 50 studies, compiled a list of the areas in which educational television appears to offer important advantages. A summary of their findings follows:

(1) Educational television affords unique opportunities for massive and rapid qualitative improvement of education which is now a total challenge.

(2) Educational television provides a means of removing the barriers which have kept American teachers from being able to observe their colleagues in action. For years teachers never see other teachers in action—it is as though actors could never see plays.

(3) Educational television gives parents a chance to get back into the orbit of education. They can look at will into the classroom.

(4) Educational television offers opportunities to focus national attention and effort on general cultural improvement.

(5) Educational television, by strengthening the fiber of our own education and culture, will also provide the needed basis for strengthening similar efforts elsewhere in the free world.

Educators have accepted TV: For some years educational leaders were cautious about using television in the classroom. There were even fears that TV would replace the teachers, that it would make teaching mechanical, and that pupils would become mere robots.

Nine years of experience with educational television stations have brought the whole subject into perspective. Educators have learned that TV is neither a curse nor a cure-all. They have learned that it is simply another medium for getting ideas across—and a very powerful one.

As I see it, the legislation you are considering today has for its primary purpose making educational television available to every section of the United States where it is needed and can be useful.

It seems to me that the time is ripe for such action. The administration is ready for it. The States are ready for it. The foundation has been laid. Experience has proven its worth, and the educators now accept it.

The problem now, gentlemen, is in the hands of this committee.

Mr. MOULDER. Thank you, Mr. Secretary.

Mr. Harris?

Mr. HARRIS. Mr. Secretary, I appreciate, as I know the entire committee does, having this information which you have imparted to us today. I am very glad that an administration proposal has been worked out through your efforts and the cooperation with your associates for the utilization of these valuable channels that have been set aside for years for the educational benefit of our people.

I am quite interested in your approach to the problem. You say that the various bills that have been introduced could very easily be amended to adopt the suggestions that you have, but it is not clear to me about the State-matching provision.

Do I understand that so much of the funds will be made available to each State for a period of 4 years?

Secretary RIBICOFF. I would say that they would be used on a basis of projects, and it is anticipated that many States will adopt them. Some States could have more than one allocation. Some States, because of indifference and inertia, would not have.

I think the difficulty of the previous thinking on this legislation was to treat every State the same, and the basic needs are different. For example, you might have a State geographically and population-wise, a State like New York and California, which would have a different problem, let us say, than a State the size of Connecticut or Rhode Island or Delaware.

I think that, since television certainly crosses State lines, the best utilization would indicate in many areas a regional approach because all of us, knowing the geography of our own States, realize that you could have a station in one section of a State that would not reach all the areas of the State. Yet you could have a station on the borders of a State that could get to other States.

I think what we have worked out here is a much more flexible program, flexible for coverage, flexible for utilization, and flexible for cooperation to make the greatest use of what we have; and I would think that all of us should encourage the regional use of these television stations by getting a number of our States, geographically adjacent, to work together.

Mr. HARRIS. I am very much impressed with the objectives sought, but I was trying to get clear in my own mind how it would work on a State-by-State matching basis, recognizing of course that you suggest that it be done on a project-by-project approach within a State.

Secretary RIBICOFF. Let me put it this way. If two States or four States, depending on the geography, combine together, funds would be available under a single plan submitted by these States.

Mr. HARRIS. In other words, if there is a project, as for example, in south Arkansas or let us take Louisiana because there is an allocation for educational television in Monroe, La., that could serve not only areas of Louisiana but south Arkansas and western Mississippi, as an example. The idea would be that, if the four States could work out a joint program for that type of service, that would be contemplated by this approach.

Secretary RIBICOFF. That is right.

Mr. HARRIS. You say that it would be limited to \$25,000 for each project?

Secretary RIBICOFF. No; I would say that basically it is contemplated that it depends upon what the project costs. We figure that the estimated average cost of a television installation would be \$250,000. That would mean that we would pay one-half of that. That would be \$125,000. To give you the cost range for the purpose of the record, the minimum cost to set up a facility would be about \$50,000. The average cost is \$250,000. In large metropolitan areas the cost could very well run up to a million and a half dollars for an installation. The operating costs, for the purpose of the record, that we have figured out are that the minimum operating cost for an educational television station would be \$30,000 a year. The average cost would be \$200,000 a year. The maximum in large metropolitan areas could run as high as \$1,500,000.

Mr. HARRIS. And there would not be any limitation or any formula for an allocation to a given State?

Secretary RIBICOFF. That is right.

Mr. HARRIS. It would be contemplated that there would be that much money made available to each project within a State?

Secretary RIBICOFF. That is right, except that there would be no State allocation.

Mr. HARRIS. That is correct, sir. Has your staff worked up language for a proposed bill to carry out what you have suggested here?

Secretary RIBICOFF. Our staff will certainly be very pleased to work this out with your staff.

Mr. HARRIS. You do not have anything as yet?

Secretary RIBICOFF. We have the specifications but, as you know from long experience, we are available with your staff to go to work immediately once we get some directives from you and your committee, Mr. Chairman, and we will work very cooperatively, once you start working on this program, to give you various drafts to carry out the thinking of this committee. We will be delighted to do it.

Mr. HARRIS. Thank you very much. That is all.

Mr. MOULDER. Mr. Secretary, in the beginning of your statement, did you name the States that you have concluded were opposed to educational television?

Secretary RIBICOFF. I did not say "opposed."

Mr. MOULDER. By the correspondence that the committee furnished you.

Secretary RIBICOFF. Yes, I did.

Mr. MOULDER. I am interested in reference to the State of Missouri. After reading Governor Dalton's letter very carefully, I do not reach the conclusion that he is opposed to educational television.

Mr. HARRIS. He is included here as being in the affirmative.

Secretary RIBICOFF. Twenty-five replies were in the affirmative. I listed Missouri in the affirmative.

Mr. HARRIS. If the chairman will permit, you did not include Arkansas in there and I intended to mention a moment ago that there was a letter from our Governor on it. Perhaps you did not get to see it. His only concern was that these educational television facilities would be controlled and operated by the States or some agency within the States. That is contemplated; is it not?

Secretary RIBICOFF. As a matter of fact, we want no part of that. Basically, it will be initiated and started by a State educational authority. In other words, everything has to be approved and initiated.

I would say, Mr. Chairman, if you will note, most legislation that comes out of this Department at my direction in every field has a very strong States' rights tinge to it.

Mr. HARRIS. I wanted my own State included with this group in the affirmative with that reservation which I, of course, know is contemplated in the legislation.

Secretary RIBICOFF. As a matter of fact, the initiation for these projects will come from the State educational authorities. One thing that we do not want to do is that we do not want, from Washington, to run these television stations all over the United States. This is purely a local matter and I hope that, when we get to the regional question, this will be for the Governors of the associated States to sit down and work out regionally with their associates in adjacent States.

Mr. MOULDER. Mr. Rogers?

Mr. ROGERS of Texas. Mr. Secretary, with regard to the money that is to be allocated, Mr. Harris asked about the allocation of \$1 million to each State. Do you contemplate, let us say, the erection of an installation in southwest Arkansas to serve Arkansas, Oklahoma, Texas, and Louisiana?

Mr. HARRIS. I am sorry. I left out Texas.

Mr. ROGERS of Texas. That is all right. I wasn't bothered about that.

With that example, would you contemplate that we will say Louisiana would have the right to transfer some of its funds over to be used in the station to be erected in Arkansas?

Secretary RIBICOFF. That is right.

Mr. ROGERS of Texas. In other words, there would be a transferral right of the funds but the funds would be charged to the State?

Secretary RIBICOFF. If you had two or three or four and they wanted to pool, we would allow this to be pooled in making allocations, but we are not proposing State allocations.

Mr. ROGERS of Texas. Would that be based upon some coverage or range or some formula set up, or would that be left to the particular States?

Secretary RIBICOFF. Well, basically, keep in mind that the construction funds are not allocated on a statewide basis. They are allocated on a project basis. In other words, each project will get funds but no State will get a specific allocation.

Mr. ROGERS of Texas. Of course, that is one of the things that I had in mind, that, if you allocated on a project basis and the project was located in Arkansas and we will say the project cost \$1,250,000, you are going to have to get \$250,000 from some other State or Arkansas would be over the top.

Secretary RIBICOFF. No, because they would sit down together and available project funds would be divided between the adjacent States that are in the regional pool.

Mr. ROGERS of Texas. I yield to the chairman.

Mr. MOULDER. On that point, would that be based upon a formula of the range of coverage within the respective States?

Secretary RIBICOFF. No, but basically we do not think that we ought to limit this. I think the better thing would be on the project basis.

Mr. MOULDER. The reason I referred to that here is that there is a station mentioned by Chairman Harris that might have more coverage in Arkansas than in Louisiana, even though the installation could be located in Louisiana, or vice versa.

Secretary RIBICOFF. Let me say this. Knowing each State's jealous regard for its own educational system—and you have to have courses that go for credit and they will go into classrooms—unless there was unanimity and understanding between adjoining States the other State would not set up television receivers to get the educational broadcasts of another State and they will not get credit for it. So that, in order to work, there has to be cooperation because do not forget that, in order to work this out, adjoining States would give courses in a station in one State to cover the States and they would have to have cooperation in both States to bring them in and coordinate them with their classroom studies and curriculum; so that, if the two States do not agree on both the building of the stations and the programs and how they are to be allocated and who is to teach the classes, you will not have cooperation. If it is outside of the orbit of the education which we have in mind, then it will be available for anybody to tune in just as it is in any commercial station that crosses State lines.

Mr. ROGERS of Texas. Mr. Secretary, on page 5 I believe you quoted Federal Communications Commission Chairman Newton Minow in his announcement that he would do all in his power to promote a nationwide educational television system. Now, in keeping with that, on page 8 of your statement at the top of the page, you say, "Our proposals would include a definition in the bill which would exclude from Federal grants closed-circuit transmission within a single school or occupying a single site."

Do I understand from that statement and Chairman Minow's statement that an educational television system or network is anticipated?

Secretary RIBICOFF. Is anticipated?

Mr. ROGERS of Texas. Yes.

Secretary RIBICOFF. I would say this. This could be worked out. It would not be required but could very well work out.

Let me show you how it could probably be used to good advantage. Let us say you had a great scientist. I remember being out in California a few years ago and talking to Dr. Teller, the great physicist, who told me that one of the most thrilling experiences of his life was a series of films he had made in teaching physics, and he said one of the things that he would like to do more than anything else would be to lecture in physics for high school students, not college, because he feels that this is where you have to teach it.

Take the teaching of Shakespeare or physics or chemistry, and it could be well worked out that you could have a national educational television system where you do get the greatest minds in fields that everyone agrees on. Now, I can understand that when it comes to certain types of subjects that, as to what is being taught in New York and what is being taught in Texas, there may be a difference of opinion; but I am sure that there could be no difference in opinion on whether you would have a man like Teller lecturing in physics or a man like Glenn Seaborg lecturing in chemistry, or you might have the greatest Shakespearian teacher in the world explaining Hamlet, and this could be worked out; but it is certain in my opinion that, once you had educational television, that the various State educators would get together and try to work out among themselves the great masters in subjects that they can agree upon. I do not personally contemplate this. I would contemplate that generally each State has its own requirements in what it teaches. It has its own programing. I would say that many States adjoining one another would have many things in common and they would have their own systems of education, but I would hope that we would somehow be able to use the great leaders in the fields that we all recognize to do this teaching, and this is one of the values that it would have.

Mr. ROGERS of Texas. I am a staunch advocate of the use of TV for educational purposes. I think it is one of the greatest avenues that man has had to pass knowledge from one individual to another and, it would seem to me that this program should be worked out in contemplation of the possible use and probable use of the facilities in a nationwide network, if you needed them for that purpose, as you pointed out; for the use of people like Dr. Teller. It would be optional with the local stations.

Secretary RIBICOFF. That is right.

Mr. ROGERS of Texas. Now, with regard to your statement on page 8 in which you would exclude from the Federal grants any closed-circuit transmission "within a single school or occupying a single site," do you understand that to mean, Mr. Secretary, a single school system? We will say the school system in Washington, D.C., if they wanted to use a closed circuit, would not be eligible for Federal grants?

Secretary RIBICOFF. I would say they would be eligible if it was available to every school in Washington, but let us say that they

were going to have a closed circuit for just one schoolhouse. I do not think the Federal Government should take that out.

I would say that, if a school wants to do it, it ought to pay its own bill on this one.

If the Federal Government is going to give grants, it would seem to us that it should contemplate a broader area than a single school.

Mr. ROGERS of Texas. Mr. Secretary, the thing that is concerning me is the criteria that the States will be required to meet in order to become eligible for a Federal grant. Now, will this be in the form of spelled-out regulations that will commit the States to follow certain practices although the States will have full control of what they are doing?

Secretary RIBICOFF. I would say, sir, that none of these funds have anything to do with operation. These funds are only to be used for the equipment to set up the station. Consequently, we have nothing to do about programing and practices. Once we make that grant, the programing and running the station on a day-to-day basis is the business of the educational authority in that State and from the time we make the grant we have no strings or ties or anything else.

Mr. ROGERS of Texas. Of course, that was my point. It is contemplated that the grant would be made with the understanding that the funds will not be used for closed-circuit purposes within the school systems?

Secretary RIBICOFF. Well, after all, let me say this. I always have great faith in the integrity and honesty of every State and every State's administration.

The State of Texas would come and say, "We would like in the Houston area or the Dallas area to set up an educational television station which would be made available to the high schools or the grade schools during these hours and we will also coordinate this with the local university and at night we are going to have educational television programs for the adult population," and they would lay out the plan. "This we figure will cost a half million dollars." They submit this and we know it is on an educational television band which has been allocated and is going to be used for education because its whole base is educational. They apply for \$250,000. It is a \$500,000 project.

This is the only thing we have to do.

They build it and buy their own equipment and we have nothing to do with running that program.

Mr. ROGERS of Texas. My fear, or it is not a fear but a concern, is that if such an eligibility requirement was set up I am sure some States would hesitate to move in because, even if you did not have control of their facilities, if they would assure the Federal Government that they would not use such facilities for such thing, I am sure they would keep their word and would not give that word unless they intended to keep it, but I had some concern that it might tend to slow down the program.

Secretary RIBICOFF. I cannot imagine any State being able to afford to set up a television setup that would just take care of one school so that therefore I do not think that this is much in contemplation.

From my experience a State is not apt to use its funds for one school.

Mr. ROGERS of Texas. In other words, if one State wanted to set up, we will say, eight different projects in different cities and use it on a closed circuit basis rather than to set up a statewide system and use educational TV that way, that was the thing I had in mind.

Secretary RIBICOFF. But they would not be using it for one school. In other words, let us say that you had the city of Washington that wanted to set it up for every school in Washington or the city of Dallas or Little Rock for every school there, I would say that in my contemplation they would be eligible; but it is my feeling that this is such a useful thing that, if a State is going to spend its money, it would certainly like to use educational television for adult education. You will find that almost every State university would like to have it for extension courses out of the pride that they have in their faculty and to educate the general level of their entire population.

I have no fears personally that a State would use this money for a very narrow and restricted purpose because this would be a great tool for the State to help raise the educational standards of all of its people.

Mr. ROGERS of Texas. That is the reason I was concerned about the inclusion of such a provision in the bill; in other words, limiting the State.

Secretary RIBICOFF. I think we ought to have a safeguard. I do not think the Federal Government, frankly, should put out its money for just a very, very narrow use of television. If a State or city wants to do that, it ought to do it on its own.

Mr. ROGERS of Texas. That is all you have in mind?

Secretary RIBICOFF. That is all I have in mind.

Mr. ROGERS of Texas. I yield to Mr. Moss.

Mr. Moss. Mr. Secretary, is it not a little simpler than that? The exclusion would go to removing from grants any facility not requiring a broadcast license. A closed circuit does not require a broadcast license. It does not utilize a reserved channel.

Secretary RIBICOFF. There would be a grant even if it did not require a license provided it was more than one school and it was available to a system.

Mr. Moss. I would question whether this committee really would have jurisdiction. I think that is audiovisual aids to education which would be considered by another committee.

We are concerned here with the amendments to the Communications Act. This is a personal opinion. We are dealing with the licensed broadcast facilities.

If we are going to grant funds here for general educational use, utilization of audiovisual techniques which would include closed circuits, then we are in a different area entirely; but the interest here is to activate the reserved broadcast channels and those are dealt with in the Communications Act and are under the jurisdiction of the Communications Commission which must have assurances that the educational operators will not use them commercially. They are noncommercial stations.

Secretary RIBICOFF. I think you make a good point.

Mr. Moss. The grants here then are for the utilization of those stations, the broadcast not only available for classroom viewing but available freely on the air within the broadcast area of that facility to anyone who has a set capable of receiving it.

Mr. STONE. May I comment on that?

Mr. MOSS. I would be interested in clarification.

Mr. STONE. It certainly has been the history of the legislative effort to activate the open channels as you have stated. At the same time there may be cases where a State first surveying and then looking at its own problems will be concerned with the development of a facility which might use such things as a microwave transmission tower. In effect this is a closed circuit type of transmission but does require a licensing operation with the Federal Communications Commission.

Also, as the consequence of State plans and development of survey activities, other States may conclude that it is in the best interest of their State to have some types of closed circuit facilities and these provisions are so incorporated to make this possible.

Mr. MOSS. Am I correct that they would deal with the licensed broadcast facility utilization in connection with educational television operation?

Mr. STONE. As the material has been presented, that is not entirely correct, sir.

In some cases that would be true in reference to the microwave operation. In other cases it might be that certain installations would require the use of cable and in those cases licensing is not involved; but this would be a second priority item. It would not be an item which would allocate funds for the use within a single school, within a single classroom, or anything of the kind.

Mr. MOSS. I would have reservations on any program which takes this committee into the field of audiovisual educational aids. I think we are very much interested in the activation of the broadcast facilities that are reserved at this moment for use to better education and serve the public.

Mr. STONE. May I make one additional comment, sir?

Secretary RIBICOFF. I would say that, if this were the objective of this committee, we would understand that and the legislation can so be written to reflect that point of view, sir.

We are going a little broader, but naturally, if this is what the objective of the committee is, this can be done easily.

Mr. MOSS. I am merely voicing my own opinion on this matter. I would not presume to speak for the committee at this moment.

Secretary RIBICOFF. I would say that, if there was an interest on behalf of the committee to contemplate this other point of view and the general need for it, we would be pleased to get up a memorandum for you for your consideration because you think you might want to consider that and we would be glad to give it to you and indicate what the problem is.

Since you raise this point, Congressman Moss, I might give you the station situation as it stands presently.

Present channel reservations: VHF, 90; UHF, 178.

Number of stations activated: VHF, 40; UHF, 16.

Stations under construction now: VHF, 7; UHF, 5.

So that you get a general idea of how many open channels there are as of now.

Mr. MOSS. Thank you.

Mr. ROGERS of Texas. Mr. Secretary, you have not prepared any language with regard to this limitation, have you?

Secretary RIBICOFF. No, I have not.

Mr. ROGERS of Texas. I do not want to burden the point further but I do think it would be very well to consider the situation. That is the reason I brought it up. I do think that it would get you into a field of requiring the exercise of discretion that might be a source of a great deal of trouble.

I think it would require very careful language.

Thank you very much, Mr. Chairman.

Secretary RIBICOFF. Knowing this committee, I would say that this committee, whatever it got out of it, would have the careful language right in the bill.

Mr. ROGERS of Texas. Thank you.

Mr. MOULDER. Mr. Younger?

Mr. YOUNGER. Mr. Secretary, there are two statements here which I would like to have you comment on. On page 3, you say: "It will never supplant person-to-person and classroom teaching," and on page 8 you say:

It has been taken by thousands of students. Tests have proven that these televised courses have brought students to the level of skill attained by classroom practice.

Secretary RIBICOFF. That is right. You have two factors involved.

First, let me say this: I do not think there is ever a gadget in the world that will ever substitute for one human being conveying knowledge to another human being. The key to education, in my humble opinion, is the pupil-teacher relation, a dedicated, inspired teacher and a willing and able pupil, discussions, the give and take, questions back and forth between the teacher and the pupil, what you people are doing to me right now. You could not do this on television, the back-and-forth discussions that we are having. Much of education is along that line, the question and answer, the discussion from one pupil to another, one mind sharpening on another mind. I think this is important to convey learning and knowledge between us.

Now, there are certain courses, however, that lend themselves to the lecture type. Certainly, a chemistry lecture, a mathematics lecture, the question of a play or music or drama, this can be done in large groups and so I would say that there is a role in television as only one part of the educational process; but I can never contemplate and would never advocate anyone to substitute a complete education by mechanical devices as against one human being working with another human being, sir.

Mr. YOUNGER. But you state "a complete junior college curriculum."

Secretary RIBICOFF. That is right.

Mr. YOUNGER. You do not say that specifically in mathematics or in science or chemistry or whatnot. You say, "a complete junior college curriculum has been on the air for 5 years," and that tests show that the level of skill attained was the same as by classroom practice.

Now, you either have to modify that or stand by it, Mr. Secretary.

Secretary RIBICOFF. No, sir. I would say this. I will not modify it or stand by it, but let me say this: I would never want to get a com-

plete education that way; nor would I want my children to get a complete education that way, but that does not mean that some people who have no alternative cannot get an education that way that they could not get any other way because you can do this by lecture. But I do think that you miss something in education by not having the give and take and the association, the personal association with the teacher. But you can do this.

Mr. YOUNGER. I agree with your general theory but I think that this statement just by itself gives an impression, so far as your Department is concerned, because this is your statement. You are advocating it and you say that this can be done and has been done.

Secretary RIBICOFF. That is right.

Mr. YOUNGER. I am not sure that it can be done.

Secretary RIBICOFF. Well, I will give you the results that have been proven out in Chicago. Yet, I modified it myself previously by saying that, in my opinion, you will never substitute but it certainly plays an important role.

Mr. YOUNGER. There has been an electronic device made which does substitute this exchange between teacher and student. That is going to be demonstrated here tomorrow before the committee. Unfortunately I will not be here, but I ask that you have somebody in your Department here tomorrow to watch that demonstration.

Secretary RIBICOFF. Someone will be here.

Mr. YOUNGER. I think it would be worthwhile.

Secretary RIBICOFF. Let me make this statement. Maybe I am just a little old fashioned. I think a lot of the trouble in the world is that we are trying to do everything mechanically. I would say it would be a great tragedy for man and mankind to take out the human relationship in anything that mankind does, and certainly in education; and I would hate to see the day when everybody was being spoon fed his education through mechanical devices whether they are learning machines or electronic machines or television. Just the association of one human being is what human beings need, and that is why I am very careful to say that this is a tool, this is one method, but it is not the entire answer and I would never want to be quoted as saying or advocating that I seek to substitute educational television for all methods of teaching and the educational process, sir.

Mr. YOUNGER. I think that is true. Of course, if you did that, all you would do is add to unemployment. We are having enough trouble with automation as it is. If you substituted one teacher for everything, you would certainly add to that burden.

I have the same feeling that our chairman has about working out these agreements. Would it not be necessary to incorporate in this legislation authorization for State compacts?

Secretary RIBICOFF. Let me think about that. I would say that one State could be the sponsoring agency if a television station was on the soil of one State and they could probably work out an arrangement with an adjoining school system without the necessity of a compact. My offhand opinion is that you would not need a State compact for that purpose but we would look into it and, if we think that legally a compact would be necessary, we would so advise you, sir, in having that authorization.

Mr. YOUNGER. It would seem to me, sir, that you would have to have some kind of an authorization for the States to make the joint agreements which they have to make.

Secretary RIBICOFF. We will have this looked up.

Mr. YOUNGER. You have to do that in other fields, as you know, give the States authorization to make those joint agreements.

What assurance would your Department require as to the operation before authorizing a grant?

Secretary RIBICOFF. Well, I would say that, if the State board of education of any State would come in with its plan that was using one of these channels for the purpose of educational television and laid it out, as far as I am concerned that would satisfy me. I would take the word of the Governor or the State board of education or any State university in any State of the Union. I would not question their bona fides, sir.

Mr. YOUNGER. But you would require a statement from them that they do have the funds for the operation?

Secretary RIBICOFF. Oh, yes. This would also require, in a State, a legislative authorization and an appropriation of funds by the State legislature for this purpose or it would require a State university allocating from its budget x amount of dollars for this purpose.

These plans are then made by the president of a State university, or a community or a city council, or the State board of education. They sit down and lay out a program and they have their planning. They have their engineers and they present it and they are ready to go ahead.

I would not look beyond the good faith of a State agency which came in on this basis, sir.

Mr. YOUNGER. I have one other question that Mr. Moss raised. I think, if you had in mind in drafting this legislation, for instance, the University of California, which has branches all over the State, and they contemplate a network and it may be by cable instead of broadcast, to me, if they set up an educational TV system covering all of their branches over the State, it ought to be covered under this grant even though they may not have a license, nor be required to have a license.

Secretary RIBICOFF. You see, this is between you and Congressman Moss. I mean, once this committee expresses its intention, then we will draft the legislation accordingly after discussing it with you gentlemen and your staff.

What you say now is what was in the contemplation of our draft, that the project might contemplate this. This is why it is on a project basis, because it is obvious that a State the size of California has an altogether different problem than a State like Rhode Island or Connecticut.

Mr. YOUNGER. Thank you.

That is all, Mr. Chairman.

Mr. MOULDER. Mr. Moss?

Mr. MOSS. Mr. Secretary, in the discussions relative to requirements which might be imposed on the State in securing assurance satisfactory to the Department, you discussed dealing with a State department or State board of education. Now, I am not current on changes which may be in the mill in the legislature at the present time but in California our school boards cannot own or operate a broadcast

facility. So that, the two educational TV stations on the air in California, one in San Francisco and one in my own home city of Sacramento, are operated by nonprofit organizations. They are dependent solely on voluntary contributions of viewers. To a limited extent they enter into contracts with school districts for specific types of programming.

What requirement would be imposed upon an operation of that type?

Secretary RIBICOFF. I would say that a legitimate nonprofit organization so recognized, who are doing educational television as you contemplate, would be eligible for a project grant because there are areas where just what you are talking about is being done and the State is not involved in it. As long as it is for a public purpose, used by the public and for educational television, even though they are not State-sponsored or State-controlled, if they are voluntary and nonprofit they would be eligible for a grant just like a State television station.

Mr. Moss. You envision no difficulties in dealing with such groups?

Secretary RIBICOFF. No, sir.

Mr. Moss. I want to compliment you on the statement you have made here to the committee. I am pleased that the administration is supporting this effort to activate these channels so long reserved and so infrequently utilized.

Secretary RIBICOFF. I would say, Congressman Moss, that I think it is absolutely essential. As I indicated last week before the National Association of Broadcasters, I think that there is a dearth of the use of one of the greatest media of all times for educational purposes.

I think that these public service programs are vitally needed.

I have no quarrel with commercial television stations who use entertainment, and what they are doing. This is their business. I think they have a duty and they were originally contemplated to contribute so much to public service programs. There is not enough of it. There is not enough in prime time. I think that they have been derelict in what they have been giving to the public for the licenses and grants they have received from the public domain. But this is so important that we are not going to get the proper utilization for public service programs unless we have educational television as we are contemplating and talking today, and I do hope that your committee will work its will on this type of legislation.

As you realize, the other body has passed an educational television program, the Magnuson bill, and I am confident that, should this committee work out a bill of its own, that between both bodies you can come out of conference with a bill that will be satisfactory to both committees, both bodies, and also the administration.

Mr. Moss. I hope we can and I also am hopeful that we can reduce the problems you will have in administering this program by not hooking it up to all of this closed circuit problem. While I am in general agreement with my colleague from California that I would like to see my State university aided, I think it should be under a different type program rather than the program here, principally aimed at the activation of the reserve broadcast channel.

That is all, Mr. Chairman.

Mr. MOULDER. Mr. Sibal?

Mr. SIBAL. Mr. Secretary, as I understand your statement and testimony which I have read and which I was unable to hear all of, my feeling is that this media of educational television will apply itself primarily to the broad education of individuals rather than at the extremely high levels which sometimes students of superior quality and motivation reach. Perhaps I can clarify that. In other words, what we are trying to do is give opportunity to people who now do not have it to be educated, but not necessarily in the graduate work; is that correct?

Secretary RIBICOFF. No. Every project will have its own decision, sir. Basically we are not going to tell the State what to do, or the project. All I know is that, if I were running the operation from my own State, I would try to get the broad spectrum. I would use it in the grade schools in certain hours. I would use it in the high schools for certain hours. I would use it for graduate work on the college level in certain hours and I would like to use it at night for adult education where no one is taking it for credits or courses but to improve their knowledge. It would be my feeling that any State or educational body or any authority who would set this up would make the fullest possible use of it, and I would think that public opinion in any community would want to make sure of the fullest possible use of the facilities; and the medium can be so used in almost every field that I could foresee it as part of a tool and one of the tools for every educational need covering all groups.

Mr. SIBAL. The reason I asked that question was because, on page 3 of your statement, you say: "Educational television could help us catch up on our school work, in which, I regret to say, we are behind," and I was not sure in what way we are behind. I recognize and I think we are all in agreement that further education and broader education must be stimulated as a great need, but I am curious as to how you feel we are behind and whom are we behind and in what programs are we behind?

Secretary RIBICOFF. Well, I would say that, when I say we are behind, there is a lot more that can be done. I would say that we have to improve our educational standards from one end of the country to the next. In many areas the quality of teachers is not what it should be. In certain areas in rural areas they cannot get the teachers and have the broad programing that they should have. They may not be able to get math teachers or language teachers or chemistry teachers or teachers to inspire people in the fields of history and literature.

I would say that this is something that everyone from every community knows, whether his community is up to date or is not up to date.

We believe that a greater effort has to be made in education in the field of excellence and we believe that educational television could be a tool for educational excellence by bringing and making available to our entire population, every segment, some of the great teachers in the country. In other words, you take the State of California today. It has some of the greatest teachers in the world in the sciences. They are in the California community.

I have talked to some of these men. They look back as part of a thrilling experience to try to reach youngsters in their fields.

You have people on the east coast who are experts in their fields and I would hope and I know that these men would be glad to make themselves available in a series of films, educational films, covering a course of lectures which are then implemented.

Going back to you, Congressman Younger, you could very well have lectures by the greatest men in your own area. Let us say you would have Dr. Teller lecturing in elementary physics to get the interest of the students in physics. Then, of course, you would then have to have the experimental work in the laboratories so that, after the general lecture is given, the students then go into the laboratory and work with their teachers. Then, of course, it is difficult to ask a question of Dr. Teller. A student raises his hand when he does not understand something. So the teacher implements and complements what Dr. Teller would lecture in the field of physics. So that, I would say we would be getting the best of face to face education and also of the broad spectrum of the great students and lecturers in these fields. Every community has its own needs. Every community knows what it wants implemented, where its lacks may be.

The beauty of this would be that every State and project could develop its project for the needs of its particular community.

I do not want to be in the position of having Washington telling any community how it should run its educational television.

Mr. YOUNGER. Will the gentleman yield for one question?

Mr. Secretary, you have inferred that in some sections of the country perhaps we did not have as well qualified teachers as we might. What sections did you have in mind.

Secretary RIBICOFF. Well, let me say this: I think that every State in the Union has some weaknesses. I would say that one of the problems you have—and I do not want this to be misunderstood—in some of our Southern States, and it is no reflection on them, is that, because of their low income, they have not been able to pay teachers the salaries and have had some educational problems; and this is one of the reasons for the equalization formula of your educational bill, so that we are giving larger sums by way of grants to these communities to have them catch up with some of the richer States.

In my own State of Connecticut, Congressman Sibal comes from a very, very rich part of this country, not only of the State of Connecticut, where the teachers in many of the communities in his congressional district receive salaries and have programs that are way above the nationwide average and above other sections in our mutual State.

Your State of California, I am sure, has similar experiences where I know that the salaries that you pay are higher than the national average and consequently teachers from all over the United States are funneling into California because of the salary attraction that they receive and the dedication that some communities have.

I would say that I know of no place in the United States where education cannot be improved, but I think in certain sections of the country it has to be improved more than in other sections of the country.

Mr. YOUNGER. I will ask you one other question. In which State in the Union do you think the primary and secondary teachers have the highest quality of educational training.

Secretary RIBICOFF. Let me say this. I do not think you can ever generalize. There are communities in every State that have excellent teachers and excellent schools systems and they vary from town to town, community to community, in every State. This is from my own personal experience. Certain areas of the country where there is a deep interest in education, where the people care, where the officials care, where the teachers care, may have a better school system than others.

I would say that there are sections in your State that have outstanding educational experiences. There are sections in the State of Connecticut that have outstanding school systems, in the State of New York, in Illinois, in Massachusetts. You have unique school systems in some areas of the country and I would gather that I could probably, and so could you, point out a school system in every State in the Union that is an outstanding school system.

Mr. YOUNGER. That is not the question. Surveys have been made by the National Education Association as to the educational background of the teachers in the secondary and primary schools of every State, and a comparison has been made. I ask you, just as a guess, which State in the Union has the teachers that are best qualified from an educational standpoint?

Secretary RIBICOFF. I do not know.

Mr. YOUNGER. Just make a guess.

Secretary RIBICOFF. California.

Mr. YOUNGER. No, and you could not guess. It is Oklahoma. Do you know also that, of the first 10 States of the Union from an educational standpoint, 6 of the States are in the South, California, which pays the highest salary of any State in the Union, is way down the list?

Two years ago they were eighth on that list and this last year they were not even in the list. They did not even put in their information to the NEA to get in the list. Six of the first ten are in the South. In Oklahoma, 99.7 percent of the teachers in the secondary and primary grades have 4 years of college education.

So that, when you talk about the qualified teachers in this country, you cannot say it is because they pay higher salaries. You can say for the South, that 6 of the first 10 States of the Union on a comparison of educational background for its teachers are in the South.

Mr. MOSS. Will the gentleman yield?

Mr. YOUNGER. Yes.

Mr. MOSS. Is it not true that you cannot look at, we will say, the academic attainments of a teacher and say that that makes a good teacher? You might have a person highly qualified with their degrees, we will say, to the point where they had their Ph.D., and on paper they look ideal and in the classroom they are miserable failures; and you might have someone else who just barely qualifies or might even be marginal who is a great teacher. There are great teachers. The chairman was just observing over here a moment ago on the qualifications of Thomas Edison. My comment was that he could not qualify on a civil service examination today for any of these scientific posts with the Government. Yet here was a great scientist, a great inventor. So that, you cannot take and equate the academic background with the ability to teach. There are excellent teachers

in every poor school system, and for classroom instruction you actually have to go on a teacher-by-teacher basis.

I have found as a parent that some teachers are able to stimulate a great interest in my youngsters and others fail to do anything of the kind.

Secretary RIBICOFF. Now, Congressman Younger, do not misunderstand me. I am not casting any reflections on your statement. However, if there are such statistics around, I want to try to look for them and find them and put them in the record here.

Mr. YOUNGER. The NEA puts out a survey each year and they make 64 comparisons between the States. Surely your Department has that. It is furnished to us every year. There are 64 different comparisons as to salary, as to educational qualifications, as to number of students, 64 different comparisons between the States.

I am quoting from the 1961 edition which we have. They sent it to all the Congressmen and certainly you have it and you can ask almost anyone you want to in the educational field who has not seen that report as to which State leads from an educational standpoint of its teachers.

I am not arguing as to the quality of teaching. We all agree with what Mr. Moss said. I am just talking about one standard. That is the educational background. I doubt if anyone of whom you ask that question will say that Oklahoma is the first State in the Union.

Mr. SIBAL. I notice that there is no indication of any idea that any State should receive a different amount of money from another State. Despite the disparity in educational facilities and suggested disparity in quality which you suggest.

Why do you favor each State receiving an identical amount?

Secretary RIBICOFF. They do not. In other words, each State will be able to get a sum for the projects that they approve. Now, basically, if the average television installation costs \$250,000, each project then would average \$125,000. On that basis, one State like the State of Connecticut, which you and I know might only need two or three television stations might care for only that number. That would be a total where the maximum they would get would be \$375,000. Yet a State like California would have many more and they might have enough projects approved to exceed \$1 million. So that, it would vary. The size of the State and population and geography would have something to do with what they would receive.

Mr. SIBAL. The ceiling would remain the same.

Secretary RIBICOFF. There would be no State ceiling under the modifications we propose, but like everything else, sir, there is a limit. There are a lot of good things but there is a limit to how much you can spend.

Mr. SIBAL. I thoroughly agree with that.

I have just one more question. To get back to this statement that we are behind, do I understand that by that you mean that we are behind the status that we would like to be at and should be at?

Secretary RIBICOFF. That is right.

Mr. SIBAL. Rather than being behind any particular system or country. You are not referring to that kind of thing?

Secretary RIBICOFF. No. I think we are behind. I think there is a feeling that in the field of many of the sciences we are behind the Soviet Union. I do not particularly subscribe to that because I think

the difference comes in in that the Soviet Union concentrates a scientist for its objective ends. In a free society we do not concentrate our scientist toward an objective end. It is my feeling that, if we concentrate our scientists the way the Soviet Union does for the objectives purely interesting to the State, we could exceed them; but we do not tell the scientist, "You must go into missiles." A scientist might go into the manufacturing of automobiles or lipsticks or television sets. This is the scientific knowledge.

The Soviet Union tells the scientists where they are going and pours them into one thing.

My feeling is that our scientists are more superior and and we have more of them but, in our type of society, we scatter them around. I would not sit here and say we are doing what we can in education. I think there has been a lot of sloppiness in our system of education. I think our kids can learn more. I do not think we have pushed our kids to the limit of their capacity and what they can do.

I think this is what we have to do as a Nation in every community and every State to make sure that we give our children the education that they can really absorb and learn and make better students and scholars in the entire student body of our country.

Mr. SIBAL. We have not heard from Connecticut yet.

Secretary RIBICOFF. No, Connecticut has not replied one way or the other.

Mr. SIBAL. Thank you.

Secretary RIBICOFF. Although I think there are a number of movements at the present time in Connecticut. There is a voluntary group that are seeking to go ahead in educational television. I think the University of Connecticut has talked about a closed circuit television programing and I would say something can be worked out. Yet, from a regional standpoint, I could very well see that the lower part of Westchester County and the upper part of Fairfield County might find it to their advantage to combine for a regional. As you realize, on a UHF channel Hartford could not reach for Washington or Stamford. Yet you could probably get something in Stamford that could work with White Plains into New York. Or you might find in the State of Connecticut that we know that the Stonington-New London area could work with the Providence, R.I., area much more conveniently than they could with Bridgeport-New Haven or Hartford, so that those of us who know our respective States realize that there are certain sections of our States that could be better served geographically from another area.

Mr. MOULDER. Mr. Secretary, I hesitate to bring up this question again about the State which has the best teachers.

As I recall your statement originally on that subject, when you were mentioning it, it was in connection with the theory that there are many sections of our country that have outstanding educational authorities in different fields; that every State may have such an authority who excels in his particular field who can be utilized in the general educational television program. That is the way I understood your statement and not that this State or that State had better teachers.

Secretary RIBICOFF. That is right. There are no reflections at all. I think that there is inspiration even at the high school level. Every State at their State university or some private university might have

a man so outstanding that he could stimulate and inspire high school students by lecturing from his own State university.

Mr. MOULDER. I have one question. What is the basis for the estimate of \$250,000 as the average cost?

Secretary RIBICOFF. I would say this is a survey made in our Department of what it would cost the average television station.

Mr. MOULDER. Could that information be furnished to the committee?

Secretary RIBICOFF. Yes, we will give you the details, sir.
(The information referred to follows:)

THE FINANCING OF EDUCATIONAL TELEVISION

By Lyle M. Nelson

No one will be surprised with the statement that financial support remains educational television's greatest single problem. From community ETV stations to closed-circuit installations, the story has been the same. Inadequate financing has made it necessary to cut corners in operation, to eliminate everything except bare essentials and even to compromise with program quality.

Yet the record is an impressive one. Even to those accustomed to measuring success by the balance sheet, the evidence is daily mounting that educational television is a valuable national asset. A dollar and cents value can be placed on it, and this value is increasing with every inventory.

As of the moment of this writing, there are 53 educational television broadcasting stations on the air.¹ By the time this report is printed, the number undoubtedly will be larger because such is the growth of the medium. What is even more significant, however, only one station (KTUE, Los Angeles UHF) has failed since the first station, KUHT of Houston, went on the air in 1953. A record of 53 successes and one failure is a fairly good one by most standards.

ETV BROADCASTING STATIONS

While precise figures are almost impossible to obtain, there is at least some raw data on the total value of educational television installations presently operating. The National Educational Television and Radio Center as recently as March 1961 attempted to obtain a reliable inventory of the Nation's ETV assets.²

From this survey, and from cross checks made by the author, a conservative estimate would place the capital value of the 53 ETV stations now broadcasting at approximately \$28,500,000. On a similar basis, the annual operating budget for running these stations for the 1960 calendar year was about \$13,700,000.

Although averages are mostly meaningless, they sometimes help to make total figures more easily comprehensible. It is interesting, but perhaps not significant, that the total figures given above represent an average capital investment of \$537,736 and an average annual operating budget of \$258,491.

NETRC study gives ranges

Much more revealing is an examination of the 1960 survey³ by the NETRC covering 47 stations affiliated with that organization. It reveals the following:

1. Sixteen of the stations were community-operated.

(a) Their 1960 total capital investment ranged from \$198,000 to \$1,273,000 with the median at about \$475,000.

(b) Their 1960 operating budgets ranged from \$70,000 to \$937,000 with the median at \$275,000.

2. Seventeen of the group were college or university-owned stations.

(a) The capital investments of this group ranged from \$262,000 to \$1,184,000 with the median at \$483,000.

(b) Their 1960 operating budgets ranged from \$45,000 to \$436,000 with the median at \$169,000.

¹ Educational Television Directory, Washington: Joint Council on Educational Television, Bulletin, January 1960, with addenda issued Mar. 29, 1961.

² National Educational Television and Radio Center, 10 Columbus Circle, New York City.

³ Results from 1961 survey are incomplete; thus a breakdown of 1960 data is used instead.

3. Fourteen of this group were operated by school systems or State-supported agencies other than colleges.

(a) The total capital investment of these stations ranged from \$124,260 to \$823,000 with the median at about \$360,000.

(b) Their 1960 operating budgets ranged from \$60,000 to \$823,000 with a median at about \$165,000.

It must be emphasized, however, that figures vary greatly from station to station. Obtaining some basis of comparability has been almost an impossibility. Thus, direct comparisons can be only partially accurate and can lead to unwarranted conclusions if not carefully made. Especially is this true of operating budgets. Whereas some stations, particularly those independently budgeted, such as community stations, include generally all administrative and maintenance charges, in university- or school-system operated stations, such charges are sometimes absorbed by the parent institution.

Ranges on the other hand do provide some guide to communities and educational groups contemplating establishment of similar operations. In this connection it is perhaps significant to note the lowest and highest budget figures for each of the three groups of stations for both capital expenditure and operations.

Type of station	Capital investment		Operating budget	
	Low	High	Low	High
Community operated (16).....	\$198,000	\$1,273,000	\$70,000	\$937,000
College-university operated (17).....	262,000	1,184,000	45,000	430,000
School system operated (14).....	124,260	823,000	60,000	165,000

It should be added that the extremes at either end of the ETV station price range have not necessarily been reached. The prospect of an ETV station in New York City, for example, runs into considerable money. An offer to buy out a commercial station for \$5 million already has been made. Jack Gould, television writer for the New York Times, has estimated the annual operating cost of such a station at "conceivably more than \$1 million a year."⁴

At the other extreme, the possibility of a low-cost UHF station which would operate with much less power than any presently on the air has been advanced by the National Educational Television & Radio Center. In a book, "ETV and the Schools,"⁵ NETRC points out that capital outlays of \$50,000 are within the realm of possibility and that two current applicants estimate their overall operating budgets at \$30,000 and \$35,000.

Suggested budgets for ETV stations

Tables A through F attempt to translate some of the operating data on present ETV stations into guides for those planning similar installations. The first set of tables (A through C) set forth what is considered a realistic budget for a minimum limited operation. The second set (D through F) are based upon professional standards and operations and, as will be noted, a wider service area.

To prepare these tables certain assumptions had to be made. They are noted on each table and documented where necessary. It should be of special interest, however, that estimates are based upon a VHF station (UHF would cost slightly more for power) with, in one case, 18 kilowatts of effective radiated power and, in the other, 316 kilowatts of effective radiative power.

CLOSED-CIRCUIT SYSTEMS

If cost figures vary among ETV broadcasting stations, they do so even more in the field of closed-circuit television. To bring about any measure of comparability in the reports available would require an expert cost accountant about 10 years time. By then, of course, he would have to begin all over again with an entirely new situation.

⁴ Jack Gould, "Big Opportunity," New York Times, Feb. 26, 1961.

⁵ "ETV and the Schools," New York: National Television & Radio Center, January 1958.

There are no reliable figures on the number of closed-circuit systems now in operation. Estimates range from 135 to 350 in use for formal educational purposes. Most of these estimates do not include industrial closed-circuit installations, even when these are used for training. However, they do include installations operated by the Armed Forces.

The most reliable data on closed-circuit systems in educational institutions is contained in a report by the Joint Council on Educational Broadcasting. Entitled "Current Developments in Educational Television" and issued in February 1961, the joint council report lists the following closed-circuit systems:⁶

Year	Institutions having closed-circuit TV systems	Number of closed-circuit TV systems in these institutions	Number of military closed-circuit TV systems used for training purposes
1956.....	64	70	7
1958.....	119	133	21
1960 (July).....	185	200	24

Figures for 1956 and 1958 are based on questionnaires returned in surveys. Those for 1960 are based upon a count of additional CCTV installations reported in newspapers and magazines and in direct correspondence with the Joint Council. None of these figures include CCTV systems currently in use for medical diagnosis, scientific research, and other purposes not strictly instructional in nature.

Thus, based upon these data, a conservative estimate would place the total number of CCTV installations in use for educational purposes at between 250 and 300 as of April 1961. These systems, it should be added, vary from a single camera connected to a few receivers to well-equipped studios with cable links to elementary and secondary schools in different parts of a county.

Value of CCTV installations

On the basis of these data, and a careful study of the equipment listed for the 133 CCTV systems included in the 1958 study of the Joint Council, a total capital value of approximately \$10,750,000 can be placed on the 250 (using the low estimate) CCTV systems now in operation in educational institutions. The annual operating costs probably run in the neighborhood of \$4,250,000.

Again, however, ranges perhaps are more important than totals or averages. Some of the systems list capital costs at under \$8,000, whereas others, such as Hagerstown and the new University of Texas system, run to as high as \$250,000. Annual operating budgets likewise vary from \$6,000 to \$215,000.

At the risk of oversimplification, there appears in tables G and H the author's estimate of the minimum capital and operating budgets for professional quality closed-circuit television systems. It will immediately be claimed, especially by manufacturers of certain lines of inexpensive equipment, that these figures are on the high side and that excellent, efficient systems can be installed and operated for much less than the figures given.⁷

Perhaps so. On the other hand, the selection of CCTV equipment depends entirely upon the function it is to serve. Excellent low-cost equipment to serve simple demonstration-type functions only can be purchased for around \$4,000 to \$5,000. On the other hand, this equipment is extremely limited in application and offers virtually no possibility of recording, supplementary demonstrations, etc.

The estimates given are realistic ones based upon the recommendation of competent engineers and the experience of CCTV systems currently operating. It will be noted too that the costs are presented in such a way that some items, the question-and-answer system, for example, can be omitted and added later if necessary.

The basic fact remains that to install a closed-circuit system for general instructional purpose (as against simple demonstration-type functions) and to

⁶ "Current Developments in Educational Television," Washington: Joint Council on Educational Broadcasting, February 1961.

⁷ One manufacturer now advertises "less than \$1,260 buys you a complete CCTV system."

insure reasonable professional results and minimum maintenance over a period of years, requires an expenditure of around \$40,000 for equipment. Likewise, a realistic operating budget, including all relevant costs, will run somewhere in the neighborhood of \$25,000 annually.⁸

Others will claim less, but the school board or university seriously interested in closed-circuit television as a long-range investment and concerned with achieving some measure of professional quality in the final results would be wise to budget a little more at the outset and not run the risk of disappointment in result and a more expensive investment later.

NETWORKING COSTS AND PROBLEMS

Aside from the production of educational materials for closed-circuit use and the broadcasting of programs from an ETV station, there arises the question of how to get the most value from a program by recording it in some fashion and making the film or tape available for other purposes. Obviously it would be economical, as well as desirable from a program point of view, if programs could be used in more than one geographical area.

The NETRC service

To meet this need, the National Educational Television and Radio Center was organized in 1953. It continues today to serve this function, providing a minimum of 10 hours a week of program material to the Nation's educational television stations. On a national scale it is the only organization which provides such networking service.

Because the center's budget is a matter of public record the cost of this service is relatively easy to obtain.⁹ For the year ending December 31, 1960, the center spent \$3,632,235 for national program production and distribution.

At present, the center's program distribution is by means of video tape and film. A "live" network would greatly increase distribution costs, but would provide many advantages not possible under the present distribution system.

It should be noted, too, that the center's budget is a modest one, especially when compared with commercial network productions. So-called commercial spectaculars have run as high as \$1 million, almost one-third of the center's yearly budget for some 1,500 programs.

Finally, it is important to considerations of long-range financing to note that of the center's total expenditures for 1960, only about 10 percent, or \$362,442, came from station affiliation fees. The remainder came from foundation grants, special production contracts, and related sources.

Midwest airborne experiment

Most adventurous in the way of regional network plans is the Midwest Program on Airborne Television Instruction (MPATI). The budget for MPATI published in the fall of 1960 lists a total expense of \$7,750,000 to cover all capital and operating expenses through May 1962.

It is not a well-kept secret, however, that Airborne probably will go over its budget by a considerable amount. In addition, the capital costs given above do not include the purchase and equipping of two DC-6 planes from which Airborne's programs will be beamed.

⁸ One of the best studies of equipment needs, facilities, operation, etc., is "Design for ETV," published by the Educational Facilities Laboratories, 477 Madison Ave., New York 22, N.Y., 1960.

⁹ National Educational Television & Radio Center, financial statements for the year ended Dec. 31, 1960.

The published budget for this project is broken down into 10 items listed below.

1. Aircraft and transmitting equipment, modifications and engineering.....	\$3,850,000
2. Preparation of 28 courses of instruction.....	2,410,000
3. Professional and technical assistance to schools and colleges receiving the programs.....	470,000
4. Public information.....	110,000
5. Program evaluation.....	80,000
6. Physical facilities, overhead.....	125,000
7. Administrative costs.....	380,000
8. Consultants and professional services.....	110,000
9. Special conferences and workshops.....	25,000
10. Contingency.....	190,000
Total.....	7,750,000

It might also be mentioned here that the rationale behind the MPATI project is based upon the assumption that using the aircraft is less expensive than covering the same territory with ground-based facilities. It has been estimated that it would take 14 ground-based transmitters to cover the same geographical area. Comparative estimates of the two systems follow:

	Airborne facility	Equivalent ground-based facilities
Capital costs.....	1 \$3,463,000	\$10,229,000
Annual costs with 5-year amortization period:		
Operating.....	776,000	809,000
Amortization: Principal and interest.....	806,200	2,381,300
Total.....	1,582,200	3,190,300

¹ Including plane.

As for future plans, Dr. John E. Ivey, president of MPATI, recently discussed three levels of operation in a speech on this subject.¹⁰ The first level would be a rock-bottom minimum operation costing approximately \$2 million a year. The second level would require about \$5 million, and the "Cadillac" level about \$10 million annually.

Other regional networks

In recent months, considerable interest has been shown in statewide or regional networks of educational television stations. If Federal support of some kind is provided for the expansion of educational television broadcasting facilities, it is almost certain that regional networks will take on even greater importance.

In terms of program potential and possible economies of operation, this development is beginning to emerge as one of the most significant since the early days of ETV. There are at the present time at least a dozen local networks in operation or in planning stages.¹¹

Many of these "networks" consist of little more than relay stations between existing and proposed broadcasting units. Nevertheless they involve a considerable investment of money and hold real promise for providing an effective exchange of programs at a reasonably low cost.

From the standpoint of effective program utilization at minimum cost, perhaps the most interesting experiment now being conducted is the Texas State ETV network. Serving 11 institutions of higher education, it is expected to provide 40 hours of programs in the first year.

¹⁰ John E. Ivey, president, Midwest Council on Airborne Television, in an address at Lafayette, Ind., Mar. 10, 1961.

¹¹ The Feasibility and Role of State and Regional Networks in Educational Broadcasting, Washington, National Association of Educational Broadcasters, Dupont Plaza Building, 1960.

The Texas system is being built at a total capital outlay for microwave towers and facilities of \$285,000. This, of course, is exclusive of broadcasting and production facilities. The system will have four points of origin and will operate on an annual budget of approximately \$20,000, again exclusive of programing.

One of the objectives of the Texas project is to study cost factors and possible savings to be accomplished by a cooperative effort of this kind. It is an experiment which is well worth watching by all who are interested in education by television.

On a more limited scale, the Oregon State System of Higher Education's experiment with a two-station, two-studio network demonstrates the economies to be gained from operations of this kind. The Oregon system was built at a capital cost of under \$200,000 for two transmitters, microwave units, and equipment for each of two studios. It operates 26 hours a week on a budget of around \$120,000 exclusive of costs for NETRC service.

A typical day's schedule for the two Oregon stations includes 3 hours of telecourses produced in studios at the University of Oregon and Oregon State University plus 4 hours of adult education programs, most of them from NETRC. The inexpensive operation of the Oregon stations, together with the high quality of programing, indicates that efforts of this kind will play a significant part in the future of educational broadcasting.

TABLE A.—*Capital costs—minimum operation, VHF ETV station*

Estimated coverage for station with 18 kilowatts ERP:	
10-mile radius, class A.	
18-mile radius, class B.	
Equipment excluding land, utilities, or grounds improvement:	
Transmitter (1 kilowatt) and allied equipment.....	\$50,000
Tower (300-foot).....	15,000
Antenna and transmission lines.....	23,000
Transmitter and studio building (partially air continued).....	100,000
Studio equipment:	
Two cameras.....	\$32,000
Switcher.....	6,000
Film chain, projectors, and 1 slide projector.....	20,000
Audio.....	4,500
Master control and test.....	10,000
	72,500
Lighting and studio draperies.....	7,000
Equipment for film, staging, graphics, engineering workshops.....	6,000
Office furniture for six offices, typewriters, and duplicating machine....	4,000
	277,500

NOTE.—No film production or program recording equipment.

TABLE B.—*Operating costs—minimum operation, VHF ETV station*

Net affiliation (population below 200,000).....	\$7,200
Program services: Music and sound effects, records, pictures, graphic supplies, staging supplies, properties, trucking, lamps for lighting, etc.	4,500
Engineering supplies, minor parts, audio tapes, replacement parts, tubes, tower maintenance, etc.....	11,000
Power.....	3,000
Telephone, telegraph, and postage.....	2,000
Administrative costs, office supplies, travel, books, professional memberships in broadcasting associations, etc.....	3,000
	30,700

NOTES

(a) Does not include stipends for teachers or other talent appearing as part of regular assignment.

(b) Does not include following:
 Building maintenance or heat.
 Rent.
 Depreciation on equipment.
 Legal or engineering consultative services.

(c) An additional saving can be made if administrative costs can be assumed as part of a regular on-going program.

TABLE C.—*Personnel requirements—Minimum operation, VHF-ETV station*

Manager—program director.....	\$9,000
Chief engineer.....	8,500
1 Producer-director-switcher.....	5,500
1 Part-time director.....	2,000
1 In-school coordinator—producer-writer.....	6,500
3 Engineers.....	15,000
3 Part-time engineers.....	7,000
1 Office manager-bookkeeper.....	4,500
2 Part-time office clerks and receptionist.....	3,000
1 Traffic—Continuity writer.....	4,800
2 Cameramen (also help in programing such as music librarian, announcer, artist, etc.).....	8,000
1 Floor manager—staging assistant.....	3,600
1 Staging and lighting director-cameraman.....	5,200
1 Film traffic, editor, librarian.....	4,500
3 Production assistants.....	5,500
Total.....	92,600

Table D.—*Capital costs—professional standards of operation VHF ETV station*

Estimated coverage for station with 316 kilowatts effective radiated power:	
35-mile radius, class A.	
52-mile radius, class B.	
Equipment excluding land, utilities or grounds improvement:	
Transmitter (50 kilowatts) and allied equipment.....	\$250,000
Tower (500 feet).....	30,000
Antenna and transmission lines.....	54,000
Microwave link, studio-transmitter.....	12,000
Transmitter building.....	30,000
Studio building.....	500,000
Studio equipment:	
3 4-inch image orthicon cameras.....	\$60,000
2 3-inch image orthicon cameras (also used for remote).....	32,000
Remote truck.....	8,000
Switcher, studio and field.....	11,000
Film (2 chains, 3 motion picture projectors, 2 slide projectors).....	34,000
Master control and test.....	20,000
Audio.....	12,000
Special effects amplifier.....	12,000
Lighting (2 studios and remote-studio draperies).....	189,000
Kinescope recorder (double system sound).....	30,000
Video tape recorder.....	¹ 35,000
Remote microwave gear.....	55,000
Film unit (motion picture cameras, still cameras, tripods, lenses, magnetic tape recorder).....	10,000
Film unit furnishings (splicers, projectors, editing tables, etc.).....	6,000
Film processing equipment (news and documentary footage).....	2,500
Office equipment and furnishing (10 offices).....	8,000
Graphics equipment.....	6,000
Staging equipment.....	2,000
Engineering workshop equipment and VTR storage.....	2,500
Total.....	1,224,500

¹ Optional.

TABLE E.—*Operating costs—Professional operations VHF ETV station*

Net affiliation (population 500,000 to 1,500,000).....	\$10,700
Program services: Music and sound effects, film rental, royalties, pictures, graphics, staging and production supplies, properties, costumes, lumber, trucking, lamps, etc.....	12,500
Engineering supplies, minor parts, remote truck upkeep, replacement parts, tubes, tower maintenance, etc.....	12,000
Image orthicon tube replacement.....	15,000
Power.....	8,000
Film: Raw stock, chemicals, printing materials, still processing, travel of film crew, etc.....	4,000
Video tape supply.....	20,000
Magnetic tapes.....	1,000
News wire service.....	1,300
Telephone, telegraph, postage.....	6,000
Remote lines.....	1,500
Administrative and office expenses, travel, membership in professional associations, books, etc.....	8,000
Promotional—program schedules, printing, mailing.....	4,000
Total.....	104,000

NOTES

- (a) Does not include stipends for teachers or other talent.
 (b) Does not include the following: Building maintenance or heat, rent, depreciation, legal or engineering consultative services.
 (c) Administrative expenses variable depending upon charges against other activities.

TABLE F.—*Personnel requirements—professional operations VHF ETV station*

1 station manager.....	\$15,000
1 program director.....	12,000
1 chief engineer.....	12,000
2 writer-producers.....	16,000
1 director-producer.....	7,500
2 directors.....	12,000
1 continuity writer.....	5,200
7 engineers.....	39,375
1 in-school coordinator.....	8,000
4 cameramen at \$4,500.....	18,000
2 floor managers.....	8,500
2 staging and lighting.....	12,000
1 graphic artist.....	7,000
1 research assistant and music librarian.....	4,250
1 promotion community-school relations.....	7,200
4 production crew at \$3,600.....	14,400
1 announcer-newscaster.....	6,000
1 business manager-bookkeeper.....	8,000
4 secretaries—traffic at \$3,500.....	21,000
10 part-time help: crew, projectionist, film, staging, art, engineers, office.....	18,000
1 film supervisor-photographer.....	8,500
1 film editor.....	8,000
1 film librarian.....	5,000
Total.....	272,925

TABLE G.—*Estimated equipment costs, closed-circuit television system*

2 vidicon cameras, professional type.....	\$20,000
1 camera switcher.....	4,000
1 film chain (1 16 mm. projector, 1 2x2 projector).....	12,000
1 sync generator and test.....	4,000
Audio-control room.....	2,500
Lighting.....	1,500
Staging equipment, draperies, easels.....	1,000
Film equipment—viewers, editing, storage rack.....	500
Distribution system within one building feeding 10 classrooms:	
20 receivers at \$160.....	3,200
20 stands at \$25.....	500
Cable and amplifiers.....	2,000
Question and answer system.....	2,000
Off-the-air receiver and antenna.....	500
Total.....	53,000

NOTES

(a) Difficult to estimate without specific study are costs for studio remodeling and air conditioning, conduit installation from control room to viewing rooms, remodeling of viewing rooms and draperies.

(b) Less expensive vidicon cameras and film chain could reduce cost by \$10,000.

Mr. MOULDER. Mr. Rostenkowski?

Mr. ROSTENKOWSKI. I have no questions.

Mr. MOULDER. Governor Thomson?

Mr. THOMSON. I would be interested, Mr. Secretary, in your observations as to why these reserve channels have not been activated.

Secretary RIBICOFF. I do not know. I would say it is new, that probably it is part inertia, part doubt, the uncertainty as to whether educational television is a good tool. I will be frank that in my 6 years as Governor I went slowly. I was conservative about the value of this myself: "Was this something that you wanted to do? Could you get the value for the expenditure? Do we know enough about it?" Those are all the problems that would enter into the minds of those leading a State.

I imagine you probably had those questions in mind during your governorship. Maybe you did not. I know that in the cost involved these are all factors. Maybe some of us thought that the private commercial television would do more.

Frankly, I am very disappointed that the private television industry has not done more in this field. I had always felt that they should have given more of their time to make it available to educational authorities in their States during morning and afternoon hours and they have done a lot of talking about it but they have never delivered really around the country; and all of these factors went into account. I think the concept is relatively new when you considered. It is a 7- or 8- or 9-year-old concept, but I think there is general agreement that it is a valuable tool and one that we ought to use.

Mr. THOMSON. Do you think that aid in the amount of half a million dollars to a State is really a significant stimulus to the people in those communities to activate these channels?

Secretary RIBICOFF. Well, I do not know. I think it is. There seems to be an interest of Federal participation in educational television, that they consider it worthwhile. I would say that a State would consider that this is something that they would want to take advantage of.

Mr. THOMSON. Do you have any estimates as to the relative relationship between the building of the station or the equipping of the station and the annual cost of operating?

Secretary RIBICOFF. Yes.

Mr. THOMSON. I know you said from \$30,000 to \$250,000.

Secretary RIBICOFF. The operating costs for a very, very low-powered transmission, a very small operation, would be about \$30,000 a year. The average cost per year to operate the average facility, that is facility costing \$250,000, would be \$200,000 a year. The cost of operating the large metropolitan area station, New York, Boston, Chicago, Los Angeles, would be \$1½ million a year.

Mr. THOMSON. Do you not think that those are some of the considerations that have restrained people from going into the field, and not just the acquisition of the camera?

Secretary RIBICOFF. There is no question that the upkeep and cost is a definite factor. I think, however, as we are looking at our overall educational experience and our educational problems, we do get to realize where we allocate cost, and certainly \$200,000 for a medium-sized city to use educational television I do not think would be a very high cost. Nor do I think \$1½ million dollars for New York or Chicago or Los Angeles or Milwaukee would be a large cost because I think that the advantages that you could get would more than offset the overall cost to operate one of those facilities.

Mr. THOMSON. Does that include the cost of programming?

Secretary RIBICOFF. It is the overall cost, the programming and the engineers and personnel. That is my understanding.

Mr. THOMSON. That is all.

Mr. MOULDER. Mr. Hemphill?

Mr. HEMPHILL. I would like to direct your attention, Mr. Secretary, to page 7 of your prepared statement. In the paragraph which begins with the word "Projects" you say:

The criteria for such priorities should be designed to achieve the prompt and effective use of the available channels, equitable geographical distribution of the facilities throughout the country, and the setting up of the facilities in such a way as to serve the greatest number of people and broadest uses possible.

In that connection, in those States which have already engaged in some pioneering along this line of educational television, would they have any priority by virtue of the fact that they are in business and want to expand and are able to use the funds?

Secretary RIBICOFF. Well, I would say that their situation would be this: that, having had the experience, they would probably be the first to apply, and I would guess the funds would be available, and, if you had a State that was already in the field and they wanted to expand, there is no reason why they should not be able to get the funds. There are enough funds, in our opinion, to take care of these channels.

Mr. HEMPHILL. I have one more question, please, sir. In the area of control, it is not in the contemplation of your office and administration for the purpose of this legislation to have the Federal Government control either the curriculums, the manner in which it is presented, or the schools to which it is presented?

Secretary RIBICOFF. It is not our contemplation in this or any other program we administer.

Mr. HEMPHILL. And, as I understand it, you would leave it entirely up to the States as you have done in the other programs under your Office of Education?

Secretary RIBICOFF. That is right.

Mr. HEMPHILL. In these other programs, for which I believe you have at present a budget expenditure for 1960 fiscal year of \$450 million, in all of those programs under the Office of Education, is the control left to the States?

Secretary RIBICOFF. The control is left to the States in every program that I know. This is the greatest answer ever made to Federal interference. I have never known a State or a locality or a school district to ever make a complaint to its own people, to the Federal Government, or to the State legislature that they are subject to Federal control.

Mr. HEMPHILL. I had in mind a very fine statement which I read that you made in the paper some time ago. I was delighted to see it. As I understand it, if this legislation is enacted, your Office would not try to interfere in the administration as long as it was a bona fide educational project.

Secretary RIBICOFF. We do not want to interfere; we should not interfere; and, as far as I am concerned, we cannot interfere. Education is a local problem. It is up to the State to do its job. Whenever it has to be assisted, we want to make our program and policies with as few strings as possible and make it as simple as possible, and every program that has been designed since I have been Secretary has that objective in mind.

Mr. HEMPHILL. I certainly thank you, sir.

Thank you, Mr. Chairman.

Mr. MOULDER. Mr. Flynt?

Mr. FLYNT. Mr. Chairman.

Mr. Secretary, you may have answered this while I was temporarily out of the room. As between grants and matching funds for improvement or installation of educational television facilities by the States, which method would you prefer?

Secretary RIBICOFF. I prefer matching funds because there is a definite reason. I think that, as far as the State is concerned, if it is not interested in putting up its own money it is not interested in the program. If it is not interested in the program it ought to forget about it. I do not think that the Federal Government should try to spoon feed or force down the throats of a State this type of program if they do not want it. If they are interested, we are interested, because we believe educational television is important, to give them matching grants. I would be against an absolute grant without the State playing its part.

Mr. FLYNT. I would like to say that I am in complete accord on the point you make that, if the State or State agency is not interested enough to make the necessary efforts on its own part, that the Government should not go and lead it by the hand, which brings up the next question.

A good many of the States, including, as I am sure you are aware, my own State of Georgia, have gone forward into the field of educational television both on collegiate and secondary school levels. I have, in company with other members of our committee, inspected the facilities in several States, at both college level and high school

level, and I had the pleasure of serving as sort of a cohost when other members of our committee came to Georgia to see what we are doing there, which brings me to this question. For these States which have on their own and without any Federal assistance provided to greater or lesser degrees in the field of educational television, would you favor an incentive plan by which they might receive something which would be in the nature of a reimbursement, either directly as a reimbursement for what they have already done or as an incentive to them to increase their already existing facilities?

Secretary RIBICOFF. I would not give them anything for what they have already done. They ought to be proud that they were a leader in this field.

I am sure they went in on their own and they have gotten the advantage of it and, consequently, I do not think we ought to pay them for the good judgment. They ought to be proud of it.

I would say what would usually happen is that that State out of its own experience will be interested in expanding its facilities because they already know. Let me say this. I have been on the other side of this fence as a Governor whose State spent a lot of money for roads because we were foresighted, and I have run down here as Governor in front of committee after committee trying to get some of it back. I have never gotten any of it back and I am not going to advocate that we give any of it back to you.

Mr. FLYNT. You anticipated my next question which you have substantially answered, and that would be that you would, however, encourage these States, who have already proceeded, to expend their existing facilities and you would again prefer to do that by matching funds?

Secretary RIBICOFF. That is right. Let me ask, as a question of information, are the people in Georgia happy with their educational television? Do they figure that it has been a definite plus in their educational process?

Mr. FLYNT. Normally, we ask questions and do not answer, but I understand the purpose of your question and am glad to answer: We are pleased with it.

Quite frankly, I do not think that it has had the audience reception that all of us hoped it would.

Incidentally, we have two types of educational television. One is on UHF and one is on VHF. I am sure you are familiar with that point. In addition, TV station WLW-TV devotes a portion of its daily schedule to educational television.

The audience reception has, quite frankly, not been what we had hoped it would be, but I will add this: For those who have participated in it as viewers and as what you might call students and scholars under this system, it has been very, very well received.

Secretary RIBICOFF. Thank you.

Mr. FLYNT. Thank you again, Mr. Secretary, for appearing before us today.

Mr. MOULDER. Just clarifying the one question asked by Mr. Flynt, H.R. 132 provides a 25-percent credit for facilities already constructed and available by the States.

Are you opposed to that?

Secretary RIBICOFF. Yes, we are. It is a question of where I think if you start doing it in this program you are going to have to do it in many other programs because there are so many programs where you evolve matching grants where other States have gone ahead. Basically I can understand it, but you have had the advantage of what you have done. You have had the experience. You went in on your own without anticipating the Federal Government. I know that sometimes you might feel it is unfair that some other State will be receiving these funds but it is a big country and we have problems all over. There is a shortage of money. Let us get as much as we can for the money we are going to expend from now on in.

Mr. HARRIS. Mr. Secretary, the time of course has slipped up on us, but I think it is important to ask this question.

In your statement on page 7 at the bottom of the page in the last paragraph, you say:

If State plans have been made, the grants would proceed in accordance with the State plan. If not, the grants could be made available by the Commissioner directly after the State has had a reasonable opportunity to prepare such a plan.

I wonder if you have given thought to the difficulty which might arise with that approach to it? As an example, in the bill which this committee worked out last year, we set out qualifications for the applicants. There were four categories that would be able to participate. It is on page 4 of the bill introduced by Mr. Roberts. Would you want to maintain this qualification and avoid some of the pitfalls that we would face with the direct approach without any qualifications attached? As an example, we provided that this should be:

(a) an agency or officer responsible for the supervision of public education within that State, or within a political subdivision thereof, (b) a duly constituted State educational television agency, (c) a college or university deriving its support in whole or in part from public revenues, or (d) a nonprofit community educational television organization.

Secretary RIBICOFF. I would be in favor of retaining those qualifications. I think those qualifications should remain. I think these are the groups that we contemplate should take advantage and should receive the Federal grant, and I would hope that you would retain those qualifications.

Mr. HARRIS. Thank you very much.

I want to join with other members of the committee in complimenting you for the splendid statement that you have made here today and the testimony you have given on the subject matter. We appreciate having you with us again.

Secretary RIBICOFF. Thank you very much.

Mr. MOULDER. Before adjournment, the chairman wishes to announce that tomorrow Corrigan & Associates will have a complete closed-circuit television system set up in the hearing room to demonstrate the teletest communication system now being used in San Jose.

Thank you very much, Mr. Secretary.

Secretary RIBICOFF. Thank you.

Mr. MOULDER. The subcommittee will recess to meet at 10 o'clock tomorrow morning.

(Whereupon, at 12:05 p.m., the subcommittee recessed, to reconvene at 10 a.m., Thursday, May 18, 1961.)

EDUCATIONAL TELEVISION

THURSDAY, MAY 18, 1961

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMUNICATIONS
OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m., in room 1334, New House Office Building, Hon. Oren Harris (acting subcommittee chairman) presiding.

Mr. HARRIS. The subcommittee will please come to order.

In resuming the hearings this morning on bills to provide for educational facilities in television, we are delighted to have our colleague, the Honorable Ralph J. Rivers, from the State of Alaska.

Mr. Rivers, we would be glad to have your statement at this time.

STATEMENT OF HON. RALPH J. RIVERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ALASKA

Mr. RIVERS. Thank you, Mr. Chairman.

Mr. Chairman, I appreciate the opportunity of being heard on H.R. 965 and H.R. 132, and related bills designed to help States and localities develop educational television systems. At the outset, I wish to be recorded with those who favor this legislation, as I, too, believe that educational television can make an enormous contribution to the educational development of the citizens of the United States. Indeed, only a few months ago the immense benefits that can be derived from an educational television system were clearly demonstrated to me when I had the opportunity to view a series of films on Alaska which had been prepared by the National Educational Television and Radio Center for distribution among the small number of educational television stations which are presently in operation across the country.

Since becoming Alaska's representative in the House of Representatives, it has been necessary for me to appear before various committees of the Congress considering general legislation to testify as to the various conditions peculiar to Alaska which distinguish it from other States, and to ask that Congress recognize these conditions so that the State of Alaska might share proportionately with its sister States the benefits of such general legislation. Thus, I must report to this committee that the practical application of the bills now under consideration would just about eliminate the participation of Alaska in the program.

The peculiar conditions to which I allude are the large geographic area of Alaska and the difficult financial status of the University of Alaska, its community colleges, and the Alaska Methodist University.

With regard to the size factor, I would point out that there are great distances between Alaska's population centers and that vast areas of the State are sparsely populated. If you were to superimpose an Alaskan map over the U.S. map of similar scale, it would cover from California to Florida and touch Canada in the North. Hence, if only one or two educational television stations were all that could be afforded, the one at the University of Alaska, for example, would serve only the college and Fairbanks areas, while the communities of Anchorage, Kodiak, Nome, Seward, Juneau, Ketchikan, Sitka, Wrangell, Petersburg, Haines, Skagway and many others would not be able to view the programs. On the other hand, if such station were to be built at the Alaska Methodist University at Anchorage, only the people of that community and environs would derive the benefits of the programing. Therefore, on the whole, Alaska would not benefit to any significant degree were only one or two educational television centers to be established.

The second factor to which I call your attention is the financial difficulty encountered by all of Alaska's institutions of higher learning, not the least of which is the need for the expansion of their physical plants to meet rapidly increasing enrollments. Inasmuch as all of the bills pending before the committee require that there be an assurance satisfactory to the Commissioner of Education that necessary funds will be available to operate and maintain such facilities before Federal funds may be obtained for construction, these institutions in Alaska would be virtually foreclosed at the outset from participation.

Should this committee, however, heed the administration's proposal and establish a program of Federal matching grants for the construction of the facilities, the State would then be faced with the problem of raising the matching funds not only for construction but for continuous operation. This would be difficult in view of the numerous problems now facing the State during its transitional period. Even if Congress should adopt S. 205 or its House counterpart, H.R. 965, which would provide for direct grants of \$1 million to each State for educational television, it would be difficult to justify the State's financing the cost of operation and maintenance, when one or two such facilities would benefit such a small percentage of Alaska's population.

Despite all the difficulties that would be encountered, Alaska is highly desirous of participating in an educational television program. The president of the University of Alaska, Dr. William R. Wood, informs me that in April the university applied to the Ford Foundation for assistance to develop a coordinated statewide adult education program and to establish an instructional materials production center to produce films, kinescopes, sound tapes, video tapes, slides, graphic materials, models and related articles for the extended and intensified adult education program off-campus, and for the general improvement of an on-campus instruction. It is my understanding that the Ford Foundation has indicated a strong interest in the program proposed by the university. Should the university succeed in this effort and a workable educational television program were to emerge from Congress, the State of Alaska, through the University of Alaska, would be in an excellent position to afford greatly improved educational opportunities to the people of Alaska.

I use the expression "workable educational television program" to signify a sufficient degree of flexibility to enable utilization of time for educational programs on privately operated television stations which are already established in the principal communities of Alaska from one end to the other.

Since this legislation was introduced, I have received an extensive evaluation and analysis thereof from Mr. A. G. Hiebert, president of Northern Television, Inc., with stations at Anchorage and Fairbanks and integrated programing arrangements with a station at Juneau. Basically, his approach is postulated upon utilization of the privately operated stations through their contribution of free time as a public service for telecasting educational programs, but with an adequate supply of educational films made available through public channels, and a moderate amount of implementation for tape reproduction and certain other equipment, and to reimburse for direct out-of-pocket cost from each such free broadcast.

Mr. Hiebert speaks specifically of his company's operations and willingness to contribute in the field of educational telecasting, but does so only to illustrate his point, as we all realize that other television stations in Alaska contribute time for public service purposes, and in greater or less degree would be interested in participating in an educational television movement along the lines suggested by Mr. Hiebert. It is also understood that if this legislation were amended to enable such participation by these privately operated television stations, they would no doubt join forces in the public interest by coordinating their participation for widespread coverage of Alaska. I believe that other Western States with widely scattered communities are in much the same position as Alaska, so I suggest the validity of this approach on a much broader scale than just Alaska.

Inasmuch as Mr. Hiebert has clearly and concisely stated the case for Alaska in particular, but also for all other States which are in the category of being sparsely populated, I have elected to quote from Mr. Hiebert's correspondence as follows:

Whereas Northern Television, Inc., has cooperated closely with both the community college in Anchorage and the University of Alaska in Fairbanks, and has, through programing to the best of its ability, provided educational material to our viewers, we have therefore developed a philosophy of operation and a desire to help these educational institutions, if at all possible, and propose an adaptation of the educational television bill, S. 205, to provide the following exceptions in Alaska, as well as any other of the smaller States which have the same general problems, and where the educational TV need is just as acute, if not more so, than in the large, well-financed States with wealthy educational institutions already in existence:

Mr. Hiebert emphasizes his ideas, Mr. Chairman, and illustrates how it might be necessary to use privately owned and operated TV stations in Alaska in order to reach the people up there and make a reality out of this endeavor to stimulate education through a Federal program, such as is thought of in this legislation. Further quoting Mr. Hiebert:

(1) Allow a portion of the earmarked funds to be used for production equipment which would be used at the University of Alaska for live origination of educational or informational programs, with similar reproduction equipment made available to stations in the other State cities with TV facilities to transmit these locally produced programs. As widely scattered and distant as other population centers are, and in view of the sparse settlement of population over the vast expanse of Alaska, it is obvious one educational TV center cannot

possibly begin to cover more than just a fraction of the population. Use of the one educational center at the university as the focal point, however, with cooperation by existing commercial stations on a nonprofit basis, would provide a highly practical solution to accomplishing the objectives of S. 205. Conversely, the community college cities could use this equipment at the local TV stations for production purposes pertinent to their own areas of activity and educational pursuits, for reproduction at the University of Alaska Educational Center. The specific equipment referred to, for example, is videotape equipment, or something similar which would accomplish the educational objectives throughout the majority of the State population centers. In order to further utilize these productions, another item of equipment which converts videotape recordings to 16-millimeter sound on film would mean utilization in every secondary school or closed-circuit TV station where the 16-millimeter visual aid type of projector is available. In other words, the University of Alaska's efforts could be directed to every village and school in the entire State of Alaska.

(2) Allow a portion of the funds to be used for the development of classroom facilities at the University of Alaska, to augment an academic program for the purpose of developing directors, writers, producers, cameramen, and engineers on the student level, who in turn could be absorbed by industry when they graduate from their academic life. These trainee personnel would be the backbone of the backbone of the actual educational programming production which would extend the sphere of influence of the university throughout Alaska, at the same time they are learning the respective skills and trades involved.

(3) Allow a portion of the \$1 million earmarked for educational TV to be used for the purchase of suitable ETV film or kinescope programs now available from educational centers such as Ann Arbor, provided the telecasting of these films be accomplished by existing commercial TV stations in the various State cities on a free, public service basis, giving credit to the university which acquires the programs. An alternative might be to allow limited compensation to the commercial TV station only to the extent of actual out-of-pocket expenses, such as power consumption, cost of the control room engineer, and shipping, where applicable.

Northern Television, Inc., stations do not telecast before 11:45 a.m. weekdays, and not before noon on Saturdays and Sundays. There is usually open and available additional time weekdays, as well as Saturday and Sunday afternoons. We have made a standing offer to the University of Alaska and the Anchorage Community College that we would provide 2 hours of time daily to them free if they could program this time, either with their own local production, or the film production which is available in quantity from educational TV centers.

The price quotation from Ann Arbor of \$20 per half hour plus \$14 per half hour for each additional station on the circuit, is entirely prohibitive. This would mean a cost of \$48 per half hour to cover Anchorage, Fairbanks, and Juneau, which is beyond the reach of our stations, as well as our educational institutions, no matter how much they desire to take advantage of our offer.

This carefully considered and clearly expressed outline of the situation by Mr. Hiebert has been fully endorsed by Dr. William R. Wood, president of the University of Alaska, and, in closing, I wish to go on record as being wholeheartedly in accord with this constructive and practical approach, which could go far in attaining maximum coverage and full realization of the objectives of Federal aid to education.

Mr. Chairman and members of the committee, I thank you for your consideration of my testimony.

Mr. HARRIS. Thank you, Mr. Rivers, for your statement about the problems in Alaska. How is the University of Alaska supported?

Mr. RIVERS. It is a land-grant university, but it is supported primarily by the State of Alaska.

Mr. HARRIS. Both Anchorage and the University of Alaska?

Mr. RIVERS. Its headquarters is at College, Alaska near Fairbanks, Mr. Chairman.

Anchorage has a new university, called the Methodist University, which is a privately established institution. It is starting this year

with about 250 students and its enrollment will increase year by year. As the State has grown, the University of Alaska student enrollment has gone up every year and there has been a constant race to meet classroom space and dormitory requirements.

We have three community colleges which are cooperative between the university and the local municipalities. Those are at Ketchikan, Juneau and Anchorage. However, only limited college courses are offered, and the University of Alaska is the main core of our system of higher education.

Mr. HARRIS. Mr. Sibal, do you have any questions?

Mr. SIBAL. I have no questions, Mr. Chairman.

Mr. HARRIS. Thank you very much. We are glad to have your testimony.

Mr. RIVERS. Thank you, Mr. Chairman and members of the committee.

Mr. HARRIS. The next witness is Dr. Robert E. Corrigan, president of the Corrigan Associates, Inc.

I believe you are accompanied by Mr. Love, are you not?

Dr. CORRIGAN. Pardon, sir?

Mr. HEMPHILL (acting chairman). Is Mr. Love with you?

Dr. CORRIGAN. Yes, sir.

Mr. HEMPHILL. Would you like for him to sit at the witness table with you?

Dr. CORRIGAN. Yes, sir.

Mr. HEMPHILL. I might say, Dr. Corrigan, that Mr. Younger wanted very much to be here, but was called to California last night, as you probably know, and Mr. Moss, also from your State, is engaged at another hearing and regrets that he could not be here. However, both of them want to express their appreciation for your coming.

STATEMENT OF DR. ROBERT E. CORRIGAN, PRESIDENT, CORRIGAN ASSOCIATES, INC., GARDEN GROVE, CALIF.; ACCOMPANIED BY C. ROBERT LOVE, VICE PRESIDENT, CORRIGAN ASSOCIATES, INC.

Dr. CORRIGAN. Mr. Chairman and members of the committee, my name is Dr. Robert E. Corrigan, I am a member of the faculty of the University of Southern California and president of Corrigan Associates, Inc., Garden Grove, Calif.

I very much appreciate your invitation to appear before you today. I would like to discuss the important question: How can we provide quality education for the individual student within an ever-expanding mass educational system?

I have submitted a formal statement, Mr. Chairman, and with your permisison, for the sake of brevity and conciseness, I would like to depart from it for the record and touch on the high points of the basic concept to be presented today.

Mr. HEMPHILL. Without objection, your formal statement will be included at this time, and you may proceed as you wish.

(The statement referred to follows:)

STATEMENT BY DR. ROBERT E. CORRIGAN, PRESIDENT, CORRIGAN ASSOCIATES, INC., GARDEN GROVE, CALIF.

Mr. Chairman and members of the committee, my name is Dr. Robert E. Corrigan, I am a member of the faculty of the University of Southern Cali-

fornia and president of Corrigan Associates, Inc., Garden Grove, Calif. I very much appreciate your invitation to appear before you today. I would like to discuss the important question: How can we provide quality education for the individual student within an ever-expanding mass educational system? One solution, which is before this committee, is consideration of the role of educational television.

We are naturally concerned with the destiny of our youth—their development, accomplishments and survival. As with ourselves this will depend largely on their receiving the best possible education.

The ability to provide the best or quality education depends greatly on the means or methods employed, the resources available, and efficient utilization of both.

Ours is by necessity a mass educational system. There are few qualified teachers in comparison to numbers of students to be taught. Our present national educational picture indicates that we are in the midst of an explosive expansion in student population. The prediction for this growth is staggering. In contrast, there are fewer and fewer qualified teachers available, with a very bleak future. As an example Dr. Lawrence E. Derthick, U.S. Education Commissioner, indicates we are now faced with a shortage of 195,000 qualified teachers for elementary and high schools alone. Compare this with the States shortage in 1952 of 72,000. The situation has worsened to the degree that the New York State Board of Education estimates that if we are to have enough teachers by 1970 we would require that 50 percent of college graduates between now and then (a period of 10 years) must enter the profession.

Compare this with valid statements that an estimated 43.7 million students entered our schools and colleges last September 1960. The staggering reality is that 52 million can be expected by 1965 (a period of 5 years).

METHODS

It is obvious that the key to the stated problems lies not in personnel resources. It lies in the development of new methods and techniques which can most efficiently optimize the skills of available qualified personnel. But these methods must accomplish other goals. They must provide the best or quality opportunity for each individual to learn and develop. They must further remove for the individual teacher the inherent frustrations, inabilities and sense of failure associated with teaching large groups with conventional instructional methods.

One reality of our educational system is the requirement to establish the group of class as the basic instructional unit. There is nothing wrong in teaching by groups. This has been, and will be for sometime to come a requirement for solving the logistical problems of mass education.

What is wrong, however, is the method or technique conventionally employed for large group instruction (30 or more students).

Conventional group instructional techniques are inefficient for the teacher and for the individual student. This is because of the required roles of each as imposed by the defined method of instruction. The teacher must apply by necessity the lecture method—a one-way communication process from teacher to student. The student by definition plays a passive role. His role is to listen. He is neither required to nor able to respond. The teacher prepares instructional material based on his best "guesstimate" of what is important, the order of importance, and how best it will be understood by the group. There is no provision (rather the capability) for efficient interaction between student and teacher.

If the teacher attempts to "interact" or question individual students only a small minority can be effectively involved in any one class period. The others are "passive"—waiting to be heard and to respond. The question is—"What has each learned?"

The latter statements are not to be interpreted as accusations; rather as realities of established methods of group instruction.

The group for the most part has been the focus in the preparation and presentation of instructional materials. But ours, or any educational system, is not directed primarily toward the learning of groups of individuals. Rather it is to teach each individual within the group.

MASS MEDIA OF COMMUNICATION

Over the years responsible educators have foreseen these problems. Progress has been made. Modern methods such as motion picture films, and other audio-visual aids have been developed to increase the efficiency, the problem of group instruction. The most recent is instructional television. Through this medium it is possible for one teacher to reach many classrooms at the same time. This technique can use all audio-visual materials and aids which provide richer learning experience.

Experimental research has established that current television instruction is as effective as conventional classroom instruction. But this medium is an extension of the one-way lecture system, with its inherent problems.

How to solve this paradox. The most promising and efficient solution is the application of autoinstructional principles and associated methods.

AUTOINSTRUCTIONAL CONCEPTS

The concept of "autoinstruction" refers to a method of teaching which is specifically geared to an individual's learning capabilities. It involves the use of new concepts in preparing instructional materials; in new methods of presenting this material; and in the redefinition of the role of the student to assure that each individual has mastered the subject content which he is directed to learn.

This concept embodies a new definition of "communication." Not merely transmission and reception of instructional materials—but comprehension at each step in the learning process.

THE ROLE OF THE STUDENT

Auto or self-instructional methods place equal emphasis on the teacher and the student. They provide the means for each to perform most efficiently—the teacher to instruct in the most direct and constructive manner—the student to learn most efficiently by continual active participation and interaction with the instructor in the teaching-learning process.

The goal of this method is purposive, ordered learning by the individual. The task of the student is different than that for conventional instructional methods. Here the student proceeds step by step in the learning sequence with the requirement that he actively respond at each step; that he be informed of the correctness of his response; and that he makes the correct response before proceeding to the following step.

This method, in essence, assures for student self-accomplishment. The principles of learning involved are based on proven psychological research which indicates: (1) that the individual learns by doing, (2) that he learns better by knowing how he is doing, and (3) that he learns best by first doing; by having immediate knowledge of what he has done; and by being given the correct response before proceeding to further steps in the learning sequence. It is the required self-decision-making activity at each step learning positive knowledge of accomplishment, and continual personal participation and interaction which provides the efficiency for individual learning.

METHODS OF INSTRUCTION

Efficient individual learning depends on the organization, appropriateness, and pacing of the instructional material. Autoinstructional methods require the careful shaping of subject content into its most meaningful sequence—from the most simple to the most complex. Instructional material is presented in small, ordered conceptual "blocks" which build systematically one on the other to insure for student comprehension. The size and shape of these building "blocks" are of a proper conceptual magnitude consistent with the capability of the learner.

The method of teaching is the tutor or coach-pupil technique. This method of instruction provides a 1-to-1 relationship between teacher and student with a continual two-way (back and forth) interaction process.

Applying the tutorial or coach-pupil method of instruction eliminates for the teacher the inefficiencies of conventional group instruction. It accomplishes the following:

(1) Teachers can prepare and present instructional material in the most efficient manner—in carefully ordered, logical steps. The rate of exposure of

materials and the size of conceptual steps taken can be controlled—based on expressed student understanding.

(2) Students no longer play a passive role. Each student interacts with the teacher at every step in the teaching-learning process.

(3) Each student is continuously active. At each step he is responding. He makes his responses and is given knowledge of results or "feedback" concerning the correctness of his response. Misconceptions are eliminated. Progressive understanding from step to step is assured.

(4) The teacher is provided feedback concerning the progress of the student. This information can be used to direct the learning of the student consistent with his performance. It can be used, also, to change the program of instruction to make it more efficient later for other individuals.

(5) It provides two-way interaction between teacher and student.

(6) The end goal—individual learning—is efficiently accomplished.

The comparative merits of the tutor and lecture methods of instruction can be more clearly visualized by presenting the analogy of the use of the fountain of knowledge. In the tutorial method, the student is fed knowledge drop by drop at a rate which he can readily absorb. The lecture situation, on the other hand, applies the firehose technique—lots of force, volume, and coverage. In the latter application we have no direct knowledge of student absorption—or whether he has been drowned. All we do know at the time is that the individual has been completely soaked, for better or for worse.

It is important to note that the basic principles of program construction and presentation are not new. Both the Socratic (tutoring) and Cartesian (logical ordered progression of subject material) have been for ages the basic building blocks of efficient instruction—and still are. But these methods in combination cannot be applied efficiently in conventional group instructional methods.

One thing is certain. We will continue due to necessity to teach in groups. This defines the classroom (30-40 students) as the basic instructional unit.

Another thing is certain. We must attend to the individual student by providing means and methods to insure optimal individual learning.

A recent report by Dr. J. Lloyd Trump, Director, Commission on the Experimental Study of the Utilization of the Staff in the Secondary Schools, presents a number of desirable directions in which we can move toward quality education. Emphasis is on both individual and group learning; on a redefinition of the role of the teacher employing the concept of team teaching; on scheduling problems; on organization of the curriculum; on improvement and utilization of staff, plus others. Above all is the realization of the requirement for carefully considered changes with the end goal being efficient staff utilization and improved student learning.

The distribution and types of instructional requirements for a 30-hour workweek are of significant interest. Based on a 4-year national study it is proposed by Dr. Trump et al., that—

(1) Use large-group instruction for introducing terms and concepts, explaining possible learning activities, planning resources to be used, summarizing materials and evaluating results.

(a) Vary the size of large groups with the type of instruction. Make most presentations to groups 80-120 students—using even larger groups to view television or films.

(b) Schedule students for large group instruction an average of 12 hours per week.

(2) Use small group discussion for exchanging ideas, clarifying concepts, observing student reactions, and improving personal relationships.

(a) Limit the size of small groups to 15 students.

(b) Schedule students for small group discussion 6 hours per week.

(3) Schedule students for independent study on an average of 12 hours of the usual 30-hour school week.

The stated recommendations indicate the requirement for group instruction at 60 percent (18 hours) of the average 30-hour workweek; and individual instruction at 40 percent (12 hours of the workweek). The desirability of employing autoinstruction methods for individual study during the assigned 12 hours is indicated. But it is of equal or even greater importance to provide techniques and means to insure quality instruction for groups, and optimal learning for each individual within the group.

What is required is an autoinstructional system which can apply the principles of automated teaching for groups of students but where each student within the group works independently one from the other; where the instructor

has complete control of pacing of the group; where each student independently can respond and receive immediate knowledge of results concerning the correctness of his response; and where this autoinstructional system can be extended to tie in with closed- and open-circuit television, and with motion picture films.

INSTRUCTIONAL TELEVISION

The medium of instructional television is gaining acceptance as the primary means for resolving the educational needs of our explosively expanding population.

This growing acceptance of instructional television is founded on two basic premises: (I) the realistic problems of providing a meaningful and efficient educational system for an ever-expanding student population; and, (II) the results of research projects investigating the efficiency of instructional television.

The acceptance of instructional television is based on numerous research projects. These have been either completed or are in progress in numerous qualified educational institutions in the United States. This research has proved that instructional television is as efficient as conventional methods.¹

As a result of the research, many educators already have seized upon instructional television as the answer to many present and future educational problems.

Some critical objections of conventional instructional television

The primary advantage of existing television is the ability to project the image and speech of one or more individuals into many separate locations at one time. A further distinct advantage for instructional television is the ability to use many sources of audiovisual materials to provide richer and more comprehensive instructional and learning experiences. These capabilities enable a television teacher to address any number of students simultaneously using a broad selection of audiovisual aids.

A most critical and valid objection is raised, however, concerning the teaching and/or learning efficiency of instructional television. The core of this objection is that television instruction is only a one-way communication system with the inherent disadvantages as previously discussed.

The latter objection is considered to be equally applicable for the individual television student and the television instructor alike.

The specific objection raised in behalf of the television student is his inability to participate actively and directly in the learning situation. This relates not only to his lack of interaction with the teacher but also to the impossibility of presenting questions to which the student gains immediate knowledge of the correctness of his answers. Extensive research has shown the significant contributions of immediate knowledge of results for increasing learning efficiency for the individual student.

Objections raised for the television teacher are his inability to interact with each television student; and, his further inability to monitor and control the ongoing learning and/or teaching process.

These objections are serious and valid.

Programming methods

As stated earlier, the results of research projects with instructional television have shown this method of instruction to be at least as efficient as conventional instructional methods.

Unfortunately, the format for most conventional instructional situations is similar to that conceived for instructional television; namely, the lecture situation. The emphasis in the latter method of teaching is the group versus the individual student. The lecture situation is used primarily because of the previous inability to interact with each student separately.

The optimal instructional television system

A solution to the objections raised by critics of instructional television can be summed up in one requirement: Two-way interaction must be established between the television instructor and each student. Although television instruction must be conceived as one of group participation, it is important that each student in the group perform independently from one another to insure for optimal individual learning.

¹ Dr. William Allen, report to State Department of Education, Bureau of Audiovisual Instruction, State of California.

Such a capability requires the following operations to resolve the critical objections presented:

(1) Questions or statements must be presented by the television instructor over the conventional transmission system for viewing by television student groups.

(2) Each student must be provided with means to select or construct correct or appropriate answers to questions presented by the television instructor.

(3) Each student must be informed immediately of the correctness of his responses. If his first choice is incorrect he should be allowed to select alternate responses until he obtains the correct answer.

(4) Responses by each student must be recorded immediately and independently in a form which is consistent for each student.

(5) Because of the nature of the television medium as a group instructional system the time allocated for separate questions must be under the control of the television instructor; and the means must be provided the television instructor for advancing from question to question by some system which excludes any possibility of a student modifying answers committed for previous questions.

The stated objections raised by critics of instructional television have been resolved. The solution to the objections are presented in the form of the teletest communications system designed and produced by Corrigan and Associates, Inc., Garden Grove, Calif.

Mr. HEMPHILL. You may proceed; Dr. Corrigan.

Dr. CORRIGAN. Thank you very much, Mr. Chairman.

We are naturally concerned with the destiny of our youth—their development, accomplishments, and survival. As with ourselves, this will depend largely on their receiving the best possible education.

The ability to provide the best or quality education depends greatly on the means or methods employed, the resources available, and the efficient utilization of both. The actual relationship here of the predicted staggering growth in student population versus the number of available teachers for the future, points out that the solution certainly does not lie in the area of personnel resources. So, what we must concern ourselves with are new methods and techniques which can more efficiently optimize the skills of available qualified personnel. The medium of instructional television is gaining acceptance as a primary means for resolving the educational needs of an explosively expanding population.

This growing acceptance of instructional television is founded on two basic premises (1) the realistic problems of providing a meaningful and efficient educational system for an everexpanding student population, and, (2) the results of research projects investigating the efficiency of instructional television.

The acceptance of instructional television is based on numerous research projects. These have been either completed or are in progress in numerous qualified educational institutions in the United States. This research has proved that instructional television is as efficient as conventional methods for classroom instruction.

As a result of the research, many educators already have seized upon instructional television as the answer to many present and future educational problems.

The primary advantage of existing television is the ability to project the image and speech of one or more individuals into many separate locations at one time. A further distinct advantage for instructional television is the ability to use many sources of audiovisual materials to provide richer and more comprehensive instructional and learning experiences. These capabilities enable a television teacher to address any number of students simultaneously, using a broad selection of audiovisual aids.

A most critical and valid objection is raised, however, concerning the teaching and/or learning efficiency of instructional television.

The core of this objection is that television instruction is only a one-way communication system. The specific objection is considered to be equally applicable for the individual television student and the television instructor alike.

The specific objection raised in behalf of the television student is his inability to participate actively and directly in the learning situation. This relates not only to his lack of interaction with his television teacher but also to the lack of specific methods to provide the student the ability to gain immediate knowledge of the correctness of his answers for questions presented. Extensive research has shown the significant contribution of providing the capability for immediate knowledge of results for increased learning efficiency for the individual student. Objections raised for the television teacher are his inability to interact with each television student; and, his further inability to monitor and control the ongoing learning and/or teaching process.

In terms of conventional instruction as we know it, that is teaching in groups, because of the number of students to be taught as compared with the availability of teachers, an instructor must primarily use the lecture method of instruction. This requires, by definition, a one-way communication process where students in the group, play a passive role, being neither required to nor able to respond at each individual step in the teaching process. Equally, as well, from the point of view of the teacher, he prepares instructional material based on his best "guesstimate" of what is most appropriate for the group. He must proceed accordingly, without any demonstrative on going evaluation of the quality of his instruction, measured in terms of the comprehension of each individual within the specific learning situation. A solution to this problem appears to be that postulated by exponents of the concept autoinstruction. The term "autoinstruction" does not refer particularly to devices. Rather it refers more specifically to a method of teaching and/or learning which optimizes the ability of an instructor to more efficiently carry on the teaching process and optimize the a new definition of communication—not merely transmission and reception of instructional materials, but required individual comprehension at each step in the learning process.

This method, in essence, assures for student self-accomplishment. The principles of learning involved are based on proven psychological research which indicates (1) that the individual learns by doing; (2) he learns better by knowing how he is doing; and (3) that he learns best by first doing; by having immediate knowledge of what he has done; and by being given the correct response before proceeding to further steps in the learning sequence. It is the required self-decision-making activity at each learning step, the positive knowledge of the correctness of responses, and the continual personal participation and interaction with the teacher which provides the efficiency for individual learning.

Desirably, in place of the lecture format of instruction, which is now logistically required for groups, is the substitution of the Socratic method—the most efficient method of instruction as we know it, the tutorial- or coach-pupil method of instruction. This latter method

would eliminate, for the teacher, the inefficiencies of conventional group instruction. This type of instruction has as its basis the concept of continual teacher-student interaction where questions are posed by the teacher; where individuals have the opportunity of responding and receiving the correct answer; and, where the teacher has immediate knowledge in a group situation of how well he or she is proceeding as measured by student comprehension. This method provides the teacher the ability to deviate in terms of greater or less complex material, or to go over the material to be assured that the students have understood it.

Today we are going to present for your review a system called the teletest communications system. It was designed specifically to answer some of the critical logistical problems for the teacher, where the teacher, in a real sense with this system can be a tutor; and where each student within the group, regardless of numbers of students involved, can be provided the most efficient method of learning by being given the means for an immediate measure or confirmation of his understanding of the particular instructional material. The teletest communication system provides the capability for an instructor on television to teach literally an unlimited number of students. It could be one student, or a million students, where each individual student is provided the capability to gain immediate knowledge of results for answers to questions presented to him over television.

Questions or statements would be presented by the television instructor over the conventional transmission system for viewing by television student groups.

Each student would be provided with means to select or construct correct or appropriate answers to questions presented by the television instructor.

Each student would be informed immediately of the correctness of his responses. If his first choice is incorrect he would be allowed to select alternate responses until he obtains the correct answer, and he would be required to proceed until he achieves the correct response before going on to more complex material. The teletest system provides the classroom or television instructor the opportunity to apply this most efficient method of tutorial instruction for group interaction, with or without television. But for both television and classroom alike there is provided total capability for each student to interact total participation, and also methods for recording each individual student's response for later analysis. The teletest system further allows student response information to be evaluated by the instructor to determine the quality of that instructional content, thereby providing the capability to meaningfully modify the instructional content in order that it may more efficiently reach each individual student in the great television grouping.

I would like to ask at this time that Mr. C. Robert Love, a member of the faculty of Stanford University, and an associate of mine, be permitted to give you a concise description of the principles and the basic equipment of the teletest system on display here today. This is the first production prototype system. These initial teletest systems have been sponsored by the State of California Department of Education. These systems are in the initial research stage in two schools, namely, Anaheim, Calif., and San Jose State College. A third system will be going in shortly at another university.

Mr. HEMPHILL. We would be happy to have his presentation and we apologize that we have no more Members present here. We ran into a parliamentary situation in which we finished up yesterday with the business requiring attendance of most of the Members here. However, that does not lessen our appreciation of your coming here and explaining and identifying this system for us.

Because so many people will only have the written record, if Mr. Love will identify the instrumentation that he is trying to explain, it will be helpful to the people who are not here but who have to depend on the written record to see it.

We are happy to have you.

Mr. LOVE. Thank you very much, Mr. Chairman and members of the committee. What I shall try to do is explain how we achieve what Dr. Corrigan has explained in terms of the teletest communications system.

This device (a flying spot scanner) is one that can be purchased commercially. It simulates a television studio. This is not our equipment but is used for display purposes to provide a simulated closed circuit television capability.

To explain the problem as outlined by Dr. Corrigan, let us assume that I am standing in a television studio and am appearing on camera. This might be a studio on a college campus or a station broadcasting by open circuit throughout the country. For instance, I might be in Chicago and my students might be on the west coast in San Francisco.

The equipment on this table is the studio equipment, and the equipment at the other end of the table is the classroom.

To review the problem, as Dr. Corrigan outlined it previously, I would like you to assume that I am giving an instructional program. As an instructor I want to assure myself that my students are not only watching and listening but are participating with me and, more importantly, are learning something in this exchange. I would like to be able to evaluate each student's individual performance, and, lastly I want to evaluate the effectiveness of my own performance as an instructor.

Let us now assume I have given some instruction in a particular program explaining, in this case, a trouble-shooting procedure in an electric circuit. I have explained to my students how to go through this procedure step by step, and at a specific point in my telecast I want an immediate response, not from a few of the students but from all students. To accomplish this I have prepared for them a question in a multiple-choice format.

In this case let us assume that the correct answer is answer "c". I have instructed my students before the telecast began to insert in the student console on each student's desk an IBM card. This card would have information identifying the course, the student, and other pertinent data. The students have been instructed to respond by pressing the button on their machine that corresponds to the answer that they think is correct. They have been instructed to continue responding until they achieve the correct answer. They will be informed immediately by the machine on their desk whether it is right or wrong.

We have selected the answer "c" in this example as the correct answer. When I push the button marked "c" on my instructor console, a signal is transmitted to the television set in the classroom. This is

accomplished in the following manner. I will now adjust the equipment in order for you to see some black and white spots appear on the television screen. The students would not see these during the telecast.

You will notice, Mr. Chairman, that the light configuration on black and white squares changes when I press different buttons on my machine.

When I press the "c" button on my machine in this case, I transmit this "c" signal to the television set. This information is picked off the picture tube by these photo electric cells and is passed on to each student's machine. Now each machine "knows" that "c" is the right answer. The student's task is to react, make a selection and depress a button. When he sees a red square light appear he knows he is wrong, and when he sees a round green light appear he knows he is right.

All responses made by the student on his machine are recorded on the IBM card, which can then be processed for individual scores indicating how well the student did. But more than this I am able to evaluate how valid my questions were and how I am doing as an instructor.

This device is what we call our spot code generator. It is the piece of equipment responsible for making the spots appear on the television screen. A more precise description of this equipment and how it operates has been included as an addendum to this report.

That, Mr. Chairman and members of the committee, is an encapsulated explanation of how the teletest communications system operates.

Mr. HEMPHILL. Thank you.

Dr. CORRIGAN. If I may insert one concept, it is to state that we are interested primarily in the teaching-learning process. This requires—applying the tutorial method of instruction—the preparation of materials in a new manner in that instructional materials prepared in advance of the class or TV instruction would be broken down into carefully prepared sequential learning steps. Based on this organization of materials, questions are prepared to be presented to students. This in turn would be evaluated later in terms of the group performance (student comprehension).

I wish to impress the fact that this is not saying we are only going to work with groups. It so happens, however, that the problem presented to us in our national educational system is that 60 percent of a student's time would by definition be in group instruction.

One last statement is that in view of cost requirements, size, et cetera, the system has been redesigned to bring it within a more economical range, yet continuing to meet the critical requirements of our educators and the educational system as a whole. This redesign of the teletest system is now being done and the first one of this type will be installed in Central Washington College next month.

Mr. HEMPHILL. Thank you.

Any questions, Mr. Sibal?

Mr. SIBAL. No questions.

Mr. HEMPHILL. I would like to ask the question of how much it will cost to put one of these units on each student's desk, which I assume would be a television classroom initially. How much per desk is the

cost, approximately, for the machines? Also the IBM machine which may be called the answering machine.

Dr. CORRIGAN. The new system as it is designed will cost installed, using the arbitrary number of 30 for a classroom, approximately \$2,200 to \$2,500, which means approximately \$75 per student installed. The television capability requires the purchase of one basic unit which can serve any number of classrooms, 1, 1,000, or 10,000, provided each classroom can pick up the open or closed circuit transmission, in this case. So one spot code generator could serve a broad community and this would cost about \$1,200 installed in a transmission site.

Mr. HEMPHILL. Yesterday the Secretary of HEW testified he did not want this in one particular school. He had in mind, too, a regional system of States working in cooperation. If you had a State system in which the central educational facilities of the State were at the broadcasting source and you had 15 or 16 schools—and, like everybody else, I have to think of my own district, my own State—how much would the installation in the broadcasting source station cost and how much would it cost in each of the separate classrooms of 30 students each?

Dr. CORRIGAN. I would say for such a program the minimum cost for the transmission, where the studio is and will be where the program originates from, would be approximately \$1,500 and would consist of the spot code generator and the teachers' answer console.

Mr. HEMPHILL. Plus the IBM machine?

Dr. CORRIGAN. No. The IBM machine will be in each of the classrooms. And when, of course, we get into greater quantities—here we are talking in terms of 16 schools and perhaps one classroom in every school—in greater quantities the prices will begin to drop very significantly, in mass production. We would hope in large mass production this would drop to around \$55 a student position installed. The IBM installation would not require an IBM card for every student but rather the use of only one card punch machine where one IBM card would be processed for each question pre-stated by the teacher. On this card, for a specific question, would be recorded the responses of as many as 60 students in any particular classroom.

Mr. HEMPHILL. In connection with what Dr. Love said awhile ago about checking on the quality of the teacher or the instruction, as I understand it, the IBM machine flashes back to you the number of right answers and the number of wrong answers, or the percentage, so the instructor can find out whether he is getting the message across?

Dr. CORRIGAN. As presently formed it is feasible to answer immediately back to the instructor in terms of what the group's immediate response was. We are told that in terms of present practices that a TV instructor would desire information concerning the quality of his instruction at a later time. This is because it takes on an average of 20 hours to prepare for one hour of instruction, and because it is so carefully timed there would be no deviation in instruction at the time of actual instruction. The IBM cards would be analyzed for each individual student, and the class as a whole for each individual question following the television program or class period. After a number of hours you could obtain the results of the analysis of the group responses, namely to determine the number of errors that students made for each question, thus providing the instructor a measure of

the quality of his instruction, question by question. If the instruction is most efficient in terms of individual optimum learning there would be only one response, the correct response, for each question. When you start getting a large accumulation of errors for each question, it is at this point the instructor knows he or she is not achieving total comprehension for the students and he or she can go back later and make it more explicit. This is the way it is possible to evaluate the value of the instruction.

Mr. HEMPHILL. I had in mind, I understood you to say in the event students had some question of their own, take 1,500 students throughout a group of high schools, then as I understood you if some question arises in the classroom which the instructor has not specifically covered, through no fault of his own, that would be submitted in a written form back to the instructor to have his staff prepare the answer to go back to the student?

Dr. CORRIGAN. As the questions are proceeding the IBM card recording would give the exact efficiency of that. Following the television instruction, the classroom instructor would continue to carry on the particular instruction, either amplifying it or carrying it on to further materials. If materials have not been covered, then the instructor in the classroom has, of course, the ability of not only sending the IBM material for that particular group back to the instructor, but can present to the television team the experience he or she has had to expand or make that material more efficient in terms of instruction.

Mr. HEMPHILL. One of the things that has concerned me is the fact that some of the academies to which we appoint various students frequently criticize the student's examination with the words, "lack of scholastic aptitude" or lack of ability to learn. Have you given that concept any thought in connection with educational television? I have discussed that with the heads of two academies, as have other Congressmen and Senators in my presence. That is something we are very much interested in. Two of the factors we are concerned with are the ability to learn and the ability to study.

Dr. CORRIGAN. Actually, this is the central problem for which the Teletest Communications system was designed to resolve. This system provides the most efficient instructional method from the teacher's point of view by assuming that students are actively participating at every step as the instruction proceeds. In the prevailing lecture situation students proceed along without any demonstration of performance for the teacher of how well they are doing. With conventional teaching methods the teacher's only empirical measure of the quality of her instruction is by means of delayed tests. With group instruction, we apply the firehose technique, lots of force, volume and coverage. People are sprayed and are fairly well doused. But we do not know how well they are learning. With the Teletest system we can assume that students are proceeding step by step. Where students are running into a problem expressed in terms of lack of understanding, that problem can be rectified thus assuming that students proceed at a rate consistent with their understanding, and their capability.

Mr. HEMPHILL. You mentioned the fact you use the multiple-choice manner of getting answers. More and more we find examinations for college entrance, academy entrance examinations, and even civil

service examinations are of this multiple-choice method. Has it been your experience that this is the best method of examination?

Dr. CORRIGAN. If I may take a couple moments to expand on this, let me say that the multiple-choice format can be a very valid testing method. But independently of multiple-choice questions—I did not go into this because I did not wish to take too much of the time of the committee—can be a device—an electronic writing tablet—which can be located at each student position. Here I present questions or learning items to the student where the task of the student is to write down or construct an answer prior to being given any information as to the correctness or incorrectness of his written response until after he has committed it. After committing himself by writing down the word or words which he considers to be correct he is provided the correct answer to determine if his answer is right. If he is not right he commits himself to another written response. The teletest system is so designed, however, that the student must be right before he can proceed to a new or more complex question.

The matter of the use of multiple-choice or written responses by the student concerns itself with the ideas of program construction as applied in the field of automated instruction. The teletest system provides for all methods of programming so that all forms of student response can be generated and evaluated in a common method of program analysis.

Mr. HEMPHILL. Mr. Sibal.

Mr. SIBAL. As I understand, this technique is primarily instructional rather than testing?

Dr. CORRIGAN. I conceive it primarily for teaching and learning, but it is directly usable for testing if required in that capacity.

Mr. SIBAL. How would you test other than by the multiple-choice technique?

Dr. CORRIGAN. The multiple-choice technique for testing would be used primarily for group testing. But multiple-choice test questions could be interchanged with write-in questions—with the teletest system to use either type of question, independently or in combination. The capability is there. But, frankly, I have not thought out the uses combining the two.

Mr. SIBAL. In connection with the subject matters adaptable to this multiple-choice instruction technique, what is your experience? How broad a scope can you cover?

Dr. CORRIGAN. To begin with we are talking about the tutorial method of instruction, which by definition proceeds, step by step, leading to the comprehension of some idea, principle, or fact. The tutorial method is the most efficient to reach a defined learning goal. The multiple-choice method can be varied. I can not only ask that you select an alternate choice, but I can proceed to give you the rationale or explanation of why you were right or wrong. When we depart from subject matter with a minimum of logical construction, let us say, history, I can conceive of a method where the student to make the correct response might be required to select two choices, A and C, which together, make the right choice. As an example of such a question, I may list a series of battles and a series of generals and you have to relate the proper two in combination in order to be correct.

Mr. SIBAL. How about a course in algebra? How can you develop the skill for such a course?

Dr. CORRIGAN. I could provide in algebra the most basic method for efficient individual learning by systematically defining the basic operations involved and the suboperations needed to be understood, to apply correctly, the basic principles and the application of these principles. I can break these down into small increments. In the case where the group has not indicated proper understanding of some point, I can vary the instinctual sequence by breaking it down into smaller increments until I am sure I know the students do understand.

I am certain there are certain subjects that are more applicable than others for logical tutorial methods. I would have difficulty teaching basketball with teletest. But other skills can be approached. Let us say in a medical application I have recorded a particular operative procedure. I could then have a staff of physicians or surgeons evaluate the specific subject content, and determine those specifics, their order and importance, which all surgeons should know for the particular operation in question. I could then insert specific questions into the material that individual surgeons must respond to.

So I can take a one-way communication method such as a conventional motion picture film and make it a true tutorial instrument where you are required to respond at every step and receive immediate confirmation of the correct response. The essence is being forced to reply, having confirmation of results; and being positively active at each step in the teaching process.

Mr. HEMPHILL. We have been furnished with copies of a teletest brochure. That was not made a part of your statement, was it?

Dr. CORRIGAN. No.

Mr. HEMPHILL. Would you have any objection if that were put in the record as a part of your statement, because it has some explanations in here that would answer some of the questions that I am sure will be raised?

Dr. CORRIGAN. I would be very appreciative of that.

Mr. HEMPHILL. We will include this statement headed "Automated Instruction" and consisting of 7 pages.

(The statement referred to follows:)

Teletest

COMMUNICATIONS SYSTEMS

A development by

CORRIGAN & ASSOCIATES

8701 Adah St., Garden Grove, Calif.

AUTOMATED INSTRUCTIONTHE NEED

In a press conference in San Francisco on February 21, 1961, Miss Clarice Kline, President of the National Educational Association mentioned some of the urgent problems in the educational field today: "The several thousand children on double shift programs who are crowded out of their rightful quality education, the 32% of high school students who attend schools too small to offer adequate programs, the 400,000 elementary children who go to one-room, one teacher schools for the first eight grades and all this in an era when we are casually launching satellites and firing missiles".

In an exhaustive study of this problem the Educational Facilities Laboratories of New York, a non-profit corporation established to help American schools with their physical problems, in 1960 issued a report urging the planned use of Educational Television to ease some of these logistical problems. Their report points out the following data:

By 1965 public school enrollment will be over 41 million.
 In 1959-60 there was a teacher shortage of 195,000 teachers.
 There is little likelihood that this shortage will be met.

In terms of physical facilities it has been estimated that we will have to build one classroom every six minutes in the United States for the next ten years to make up for present space deficits and to keep up with the student population explosion.

To quote the EFL report:

"As of this moment, there are more students to be educated than we can handle effectively by current techniques of teaching and administration. The pressure of sheer numbers promises to get worse, not better, in the years ahead".

WHAT IS AUTOMATED INSTRUCTION AND WHAT CAN IT DO TO EASE THIS SITUATION?

Automated instruction is a teaching/learning technique that involves two entities. (1) Information to be learned is broken down into small steps and arranged in a logical sequence progressing from the very simple to the very complex in such a manner that the learner learns faster and remembers longer. This is commonly referred to as programmed learning and the information ordered in this fashion is called the program. (2) Information to be learned is presented by a mechanical method. The machine used for this is called a "teaching machine". Teaching machines must meet most of the following criteria:¹

1. They present a small unit of curriculum to an individual student.
2. The student must actively respond (usually by answering a question).
3. The student is immediately informed as to the correctness of his response. (feedback)
4. The student is not permitted to proceed until he correctly responds or at least is informed of the correct response.
5. The curriculum material is very carefully ordered, based on try-outs with similar students.

Thus by proper use of these devices one teacher can instruct large numbers of students and yet maintain the most efficient of all teaching methods, the Socratic method in a true tutorial relationship of 1:1 using a machine simply as an extension of the teacher's capabilities.

According to Stanford Research Institute's Long Range Planning Report for November 1960, of all the recent innovations introduced into the field of education, none affords as great a chance for the improvement of learning techniques as does automated instruction.

WHAT ABOUT EDUCATIONAL TELEVISION, WHAT IS ITS ROLE?

The use of television as an instructional tool does not constitute automated instruction. Like the teaching machine, however, it is capable of extending the teacher's physical capabilities to large numbers of students and over large geographic areas. Television was first introduced in education in 1932 and has been used for formal instruction since 1953. By 1960 half a million students in the country were receiving regular instruction by television. Its growth rate is rapid and there are ample research studies to show that television instruction is at least as good as classroom instruction, and in some respects better. The principal weakness of television instruction is that the student plays a passive role in the learning process. He is not required nor is it possible for him to actively participate in the televised instruction. This weakness is not unique to television but is also prevalent in all large group instructional situations to a greater or lesser degree.

Then why not combine the advantages of television's ability to project instruction to a very large group with the teaching machine's ability to maintain a 1:1 tutorial relationship with the student and teacher?

This is precisely what TELETEST Communications does. Corrigan and Associates developed this systems concept in 1960 to provide a means wherein students learning on television could respond to questions presented on television by the television instructor. In each learning step the student would be informed immediately if he is right or wrong. He would be required to respond until he responded correctly and then he would be permitted to proceed to the next task. To permit careful analysis of both individual and group achievement all responses would be recorded on IBM cards. These cards would also serve as a feed-back method to the teacher.

DOES TELETEST WORK ONLY ON CLOSED CIRCUIT TELEVISION?

No. TELETEST works equally well on either closed circuit or open circuit broadcasting.

CAN TELETEST BE USED ONLY WITH TELEVISION?

TELETEST can be used in any group instructional situation whether it is a large class with one instructor, movies, or television.

HOW DOES TELETEST DIFFER FROM OTHER TEACHING MACHINES?

Most teaching machines require that the "program" must be contained in the machine. The student then by operating the machine is given information, tested, and allowed to proceed at his own rate. Such machines are referred to as "self pacing" machines. Each student proceeds at a rate consistent with his own ability to comprehend.

TELETEST does not require a "built-in program". The teacher presents the "program" when using TELETEST in a method consistent with the material to be presented and with whatever tools are available to make the presentation. The presentation may simply be in lecture form, asking questions verbally or employing the use of a blackboard, charts or other audio-visual devices. With TELETEST, the instructor permits the group to advance together but at the same time each student is given the opportunity to individually react and to receive the correct information before proceeding to the next step.

AREN'T SELF-PACING MACHINES EFFICIENT?

In terms of the learning process there is evidence to show that they are extremely efficient. But remember, in attempting to solve some of the problems facing us in education today, we are faced with a quantitative as well as a qualitative situation. In terms of logistics, that is to say, in saving time in instruction, data processing, program development, and in using existing personnel and facilities to their maximum, individual self-pacing machines are much less efficient than TELETEST. There are very few programs available today for self-pacing machines. TELETEST can be used by any teacher in any classroom right now.

WILL TELETEST REPLACE TEACHERS?

No. TELETEST was designed around the teacher. The teacher is the heart of the system. TELETEST simply is an extension of the teacher making it possible for him to do his job more efficiently. Dr. Frederick W. Dersheimer, M.D.,² describes human beings as follows: "They come off the production line, as hammered out by natural forces over millions of years of evolution, ready to go. They are the most complete, automatic, automotive mechanism known. And even if we were capable of designing improved models, we simply could not, in our fourscore years and ten, hope to do so and get the new models into production. We haven't time, even if we had the required knowledge and wisdom. The power plant supplied in the original model is satisfactory in all respects. The energies we designate as natural emotions are fully adequate to drive both the control apparatus we call the mind and through this the rest of the complex servo-mechanism. There is no need to make the machine over".

It was with this concept in mind that TELETEST was developed; to use the teachers we now have to the fullest of their capabilities as teachers and to relieve them of the onerous task of grading great quantities of test papers. Studies show that 30% to 60% of a teacher's routine working day is spent on clerical and housekeeping chores.

BUT HOW DOES TELETEST TAKE INTO ACCOUNT THE SLOW LEARNER AND THE FAST LEARNER?

Since all responses, both right and wrong, are recorded on the IBM cards, the teacher can readily (in some cases in a matter of minutes) determine who the fast and slow learners are. They can then be given the individual attention they need. It may be necessary to segment the group into fast learners and slow learners by the same method that we do now. Because of the logistical problems outlined in the first paragraph, it would appear that we will be committed to large group instruction for many years to come.

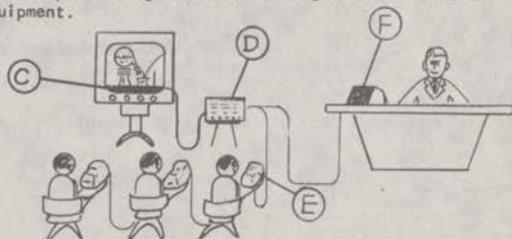
HOW DOES TELETEST WORK?

To illustrate the operation of the TELETEST system, let us first discuss its application in connection with television. Assume that the teacher is in a

down town studio and is going to broadcast a lesson to all fifth grade science classes in each school throughout the city. Each classroom where the broadcast is to be received is equipped with television and TELETEST equipment. The instructor has prepared his material carefully in small, logical sequential steps. At each step he has prepared questions in the form of multiple choice allowing as many as four choices in each question. At the appropriate moment in the broadcast he will present his questions and require that each student respond to the question and continue to respond until the question has been answered correctly.

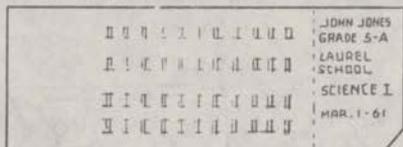


In the television station the instructor has prepared his material in advance. In the station with the instructor is (A) a TELETEST instructor/answer console and (B) a TELETEST spot code generator. This generator is installed into the transmitting equipment.



In the classroom the television receiver has been equipped with (C) a TELETEST photo-cell pick-up, connected to (D) a TELETEST power supply which supplies power to each of the (E) TELETEST Record-0-Paks on each student's desk. On the classroom teacher's desk is another instructor/answer console which may be used independently of television.

When the broadcast begins, the television instructor tells the students to insert their IBM cards into the Record-0-Pak on their desk.



In the classroom each student has been provided with an IBM bearing his name, the class, subject and date.

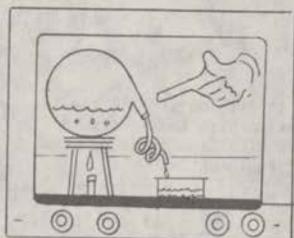
This card is designed to handle up to 30 questions with room for four responses on each question.

Under the supervision of the classroom teacher, each student inserts his card into his Record-O-Pak.

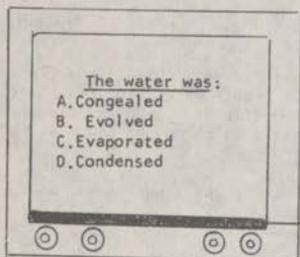


The machine takes the card automatically and the card disappears into the machine.

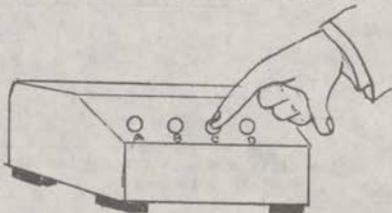
The TV instructor begins his presentation.



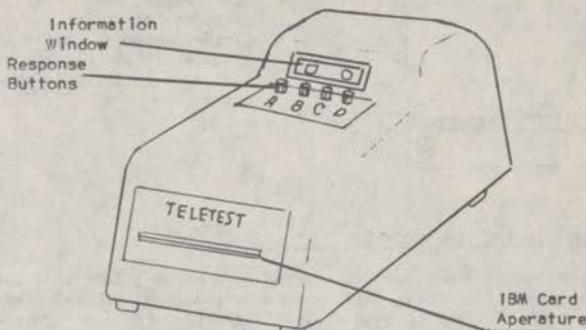
When he's ready to require a response from his television students he presents his question:



In this case, answer "C" EVAPORATED is the response the TV instructor wants. He presses the "C" button on his instructor/answer console which is on the desk before him in the studio, and asks the students to select the answer they think is correct.



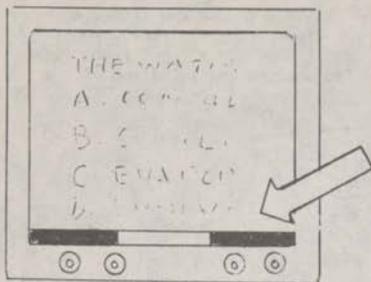
He informs them that if they are wrong, they will see a square red light in the little window on their Record-O-Pak, if they are right, they will see a round green light. They are to continue responding until they see a round green light. (The color blind student will recognize the difference in configuration of the light).



When the television instructor has allowed sufficient time for the student to respond, he advances the IBM cards in each machine simultaneously to the next question. At the completion of the presentation, the cards automatically pop out of the machine where they are collected by the classroom teacher and are ready to be analyzed. In terms of individual scores, a single response for each item would indicate a very high score and conversely, four responses to each question would indicate a very low score. Other data are also readily available. If a very large number of students score four responses on a single item, it might suggest that the instructor should enlarge on that bit of information since it was not clearly understood by a large segment of his television class.

HOW DOES THE INSTRUCTOR IN THE TELEVISION STUDIO CONTROL THE MACHINES IN THE CLASSROOM? DOESN'T THIS REQUIRE A WIRE CONNECTION BETWEEN THE TWO?

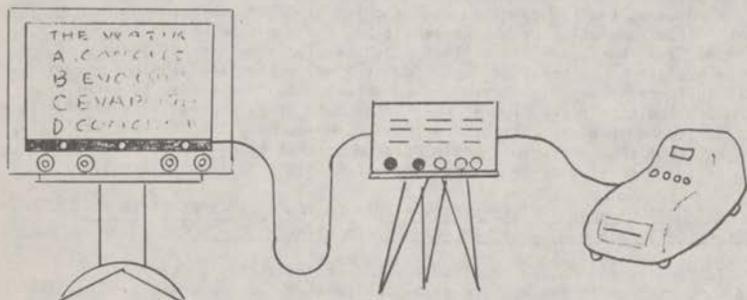
No, there is no wire connection required. When the instructor in the studio presses the "C" button in the example described earlier, he transmits a "C" signal from his answer console to the video spot generator which is an integral part of the television station's broadcasting equipment. This "C" signal is then broadcast through the air simultaneously with the TV picture. The signal is received at the school through the receiving antenna and appears on the picture tube of the TV receiving set in the classroom. This "C" signal appears at the very bottom of the TV picture in the form of black and white spots.



For example, here we see the TV picture. At the bottom of the picture appears a pattern of spots; black, white and black. This pattern indicates that "C" is the right answer.

WON'T THE STUDENTS IN THE CLASSROOM SEE THIS SIGNAL?

No. This small portion of the screen is covered by a masking tape that contains three photo-electric cells. These cells are connected to a TELETTEST power supply which transmits the "C" signal to each student's Record-O-Pak and furnishes the power to actuate each machine.



Mr. HEMPHILL. We thank you for your appearance and for taking the trouble to bring all this equipment here. I assure you your testimony has been instructive and it has a marvelous appeal in the educational field.

The reason I asked about the multiple-choice technique, I want to follow it up and ask what has been your experience with this sort of installation in either facilitating what you call the efficiency of instruction or the quality of instruction? What has been your experience?

Dr. CORRIGAN. That basic research literature independent of this system—that is, the actual research substantiating the principles of automated instruction—has indicated that quality of instruction is inherent in the quality of the program material. Quality of instruction and efficiency of instruction as measured in terms of learning by the individual student, go hand in hand. A very poor program will obviously result in poor learning. A program is good when during and following the instructional period the students not only show by their performance progressive understanding, but also that they can perform, following a specific series of instruction, the specific behavior or performance capability the instruction was designed to achieve. I would say literature over the past 25 years shows the combining of autoinstructional principles to be the most efficient method for optimum individual learning.

Mr. HEMPHILL. Then would you say it has been your experience that high school students instructed in this manner are better prepared for college, for instance?

Mr. CORRIGAN. Yes, and more than that. They learn in a significantly reduced period of time because they have been provided a more efficient method of instruction. It is designed to accomplish a very specific goal and it provides the ability to reach that goal in a more systematic manner. A major importance of the teletest system is that it allows the instructor to be the programmer and the programmer has the ability to apply the most efficient methods of instruction—the tutorial or “coach-pupil” method. In group instruction today this is impossible because of the logistics of the situation.

Mr. HEMPHILL. I want to thank you both for coming here and I am sorry we did not have more members of the committee here to hear your testimony.

Dr. CORRIGAN. Thank you very much.

Mr. HEMPHILL. The subcommittee will stand at recess until further call of the subcommittee chairman.

(The following information was submitted for the record:)

HOUSE OF REPRESENTATIVES,
Washington, D.C., March 24, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power, House Committee on
Interstate and Foreign Commerce, Washington, D.C.

DEAR COLLEAGUE: Enclosed is a copy of a letter which I received from the Twin City Area Educational Television Corp., setting forth the views of their organization in regard to proposals for aid to educational television.

I would appreciate your making the attached communication part of the hearings record of your subcommittee's consideration of H.R. 132, and related bills, to provide grants for educational television broadcast facilities.

Thank you for your kind cooperation.

Sincerely yours,

ANCHER NELSEN, Member of Congress.

KTCA-TV,
TWIN CITY AREA EDUCATIONAL TELEVISION CORP.,
Minneapolis-St. Paul, Minn., March 21, 1961.

HON. ANCHER NELSEN,

U.S. Representative from Minnesota, Washington, D.C.

DEAR REPRESENTATIVE NELSEN: The purpose of this letter is to solicit your support in committee action and in the House of Representatives on behalf of the several educational television aid measures now in the process of consideration, and to furnish you with some information that may be useful in deliberations of the committees of which you are a member and which will undertake consideration of the measures.

Last spring the Twin City Area Educational Television Corp. completed a thorough survey of the feasibility of interconnecting the existing and proposed educational noncommercial television stations in the upper Midwest for the purpose of sharing the region's educational resources. The report, a copy of which is enclosed, found it unquestionably feasible, practical and desirable to do so. Since that time a great deal of development work in this six-State region—including Minnesota—has been conducted by this organization toward eventual implementation of the results of the survey. In our own State, for example, educational and civic interests in Duluth are now well on the way toward activation of the allocated educational noncommercial channel in that vicinity, and an active citizen group in the western Minnesota area is making plans toward activation of an educational channel allocated in the general area of Appleton. Operation of these two stations, along with the Twin Cities' station, KTCA-TV, will mean that approximately 80 percent of the population of Minnesota will be within reach of educational television services. While much has been done and is being done locally, there is no question that a major setback would occur should the educational television measures now before the Congress fail to pass.

The Minnesota Senate and House of Representatives, in concurrent resolution, have indicated their interest and support for the development of educational television for the benefit of the people of Minnesota. Similar legislative resolutions of interest and support have been passed in North Dakota and South Dakota and are now in the process of consideration in Wisconsin, Iowa and Nebraska. In each of the latter States independent studies, legislative committee reports and other official committee activities have already indicated a need for educational television development to help solve the growing needs for education. Again, in each of these States, failure of the educational television aid measures before Congress would constitute, from all practical perspectives, a deprivation and long delay of the extension of these services to the people of those States.

One of the urgent reasons for the development of educational television is its obvious immediate and long-term value as an important economic factor in providing improved educational services. Dr. John C. Schwarzwalder, general manager of KTCA-TV and director of the recent six-State Network Study, thoroughly discussed this before the Senate Education Committee early this month in Washington. Bearing on this matter, it has been recently brought to our attention that various interests have suggested amendments to the bills now under consideration which would provide that leasing of common carrier interconnecting facilities be included in the terms thereof. In effect, this would mean that funds allocated to each State for educational television facilities could be spent in part or in toto for mere operation of interconnection facilities, thus tending to dissipate such funds for purposes entirely secondary to the needs for which the measures are intended.

We believe it important that the distinction between capital funds and operational funds be clearly pointed out and that such Federal funds as might be made available under the acts be strictly limited to the purchase of needed capital equipment for educational television broadcast transmission. The matter of operating costs and type of operating facilities should, from our experience, be left entirely to the wisdom of the individual States after careful and responsible study.

If we can provide any additional information or data which might be useful to you do not hesitate to call. We most urgently and respectfully request your favorable consideration of Aid to Educational Television Legislation.

Sincerely yours,

W. D. DONALDSON,
*Assistant General Manager and Project Director, Six-State Network
Development.*

HOUSE OF REPRESENTATIVES,
Washington, D.C., April 28, 1961.

HON. OREN HARRIS,
Chairman, House Interstate and Foreign Commerce
House Office Building,
Washington, D.C.

DEAR COLLEAGUE: I am very much interested in the bill which is presently pending before your committee, S. 205, which would provide up to \$1 million for any one State for the operation of educational television stations. If these funds were made available I believe they would be a great incentive to the further development of educational television in this country.

I am sure that many schools which have attempted to operate television facilities on their own have found themselves in a situation similar to that which presently exists at a small college in my State of Idaho. Idaho State College at Pocatello has set up an outstanding educational television station. Professionals in commercial television have told them that no commercial facilities outside of New York and Chicago are better equipped. However, this station now finds itself in the predicament of having the facilities but being unable to secure sufficient funds to operate them on anything but a standby basis. There is little hope that the State will be able to give much assistance since there are so many other demands made on what educational funds are available.

I wanted you to know of my support for this legislation.

Sincerely,

RALPH R. HARDING,
Member of Congress.

FEDERAL COMMUNICATIONS COMMISSION,
Washington, D.C., March 23, 1961.

HON. MORGAN M. MOULDER,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN MOULDER: Recently I had the honor to address the New York State Broadcasters Association at its legislative dinner on the subject of educational television. This function was attended by members of the legislature and other dignitaries including Governor Rockefeller and industry representatives.

As you may be aware educational television broadcasting, while progressing in some States, has received little or no attention in many others.

In view of your interest in the subject matter, I am taking the liberty of enclosing the text of my remarks.

Sincerely,

ROBERT E. LEE, Commissioner.

ADDRESS BY COMMISSIONER ROBERT E. LEE, FEDERAL COMMUNICATIONS COMMISSION, AT NEW YORK STATE BROADCASTERS ASSOCIATION LEGISLATIVE DINNER ALBANY, N.Y., MARCH 7, 1961

In my opinion, most of the States of the Union look to New York State for leadership in common problems and from where I sit it appears to me that such leadership has been singularly lacking in the field of educational television. There are many reasons that I know contribute to this and probably many other reasons that I am unaware of and this is why I emphasize that this fact is apparent to me from where I sit.

In 1952 the Federal Communications Commission wisely reserved several hundred television channel assignments for noncommercial educational television broadcasting.

I have been impressed with the importance of this decision and have virtually stumped the country in an effort to encourage the implementation of these channel assignments by educational authorities.

There are over 50 educational stations now in operation and many more being planned throughout the United States. I consider this progress encouraging, yet I had hoped for more.

There have been several barriers to educational television but I think they are being overcome.

For a time it was new and there were, and perhaps still are, skeptics as to the effectiveness of classroom teaching by television since some professional

educators considered that there was a plan afoot to substitute television teaching for the teacher himself. May I remind you that when the printing press was invented hundreds of years ago there was a great hue and cry from a significant part of the academic world to the effect that the printed word would obsolete the teacher. Funds for educational broadcasting were slow to be authorized. However, the biggest bugaboo appears to have been the fact that many important cities were not assigned VHF channels. While this proved in error, it may prove to be a blessing in disguise for now it appears that the educational use of the UHF band will save these frequencies for broadcasting since two-thirds of the educational assignments are in the UHF.

As you may be aware, commercial UHF broadcasting has done anything but flourish. There are about 70 commercial UHF stations presently on the air and I suspect the majority are not doing too well financially.

There are technical reasons for the inability of commercial UHF stations to compete with VHF stations in the same markets. I need not dwell at length on these reasons except insofar as they pertain to educational broadcasting. UHF stations do not produce usable signals as far as VHF stations and many areas do not have sets capable of receiving UHF signals.

It took many years for educators to recognize that the competitive problems that beset commercial broadcasters were not common to educational stations; that in-school television could be theirs by the expenditure of but a few more dollars for all-channel television receivers; and that the shorter range of UHF signals was not a serious handicap to their television plans. Now, educators recognize that they must have more than one channel to perform the task before them. Pittsburgh, Milwaukee, and Oklahoma City are authorized two channels each and I confidently expect there will be many more—doing the job of filling in for missing teachers and unbuilt classrooms.

Many States are now, at this moment, busily reexamining their statewide requirements in this area and are finding that the allocations available are insufficient for a statewide integrated system. Petitions are and will be coming before us for additional allocations which are only available in the UHF portion of the spectrum. I believe I can say that the Commission is sympathetic to these requests but I caution that the problem becomes almost impossible if the request comes when these channels have been granted to other users.

Of course, there is the problem of money, for it costs hundreds of thousands to build and operate stations. Some of our great foundations have made significant contributions to the furtherance of educational television and there are several bills pending before Congress which would grant States funds to help in this endeavor. There is every expectancy that a bill will be signed into law.

I don't think I need to tell New York or any other State how badly it needs more funds for education—for classrooms, for teachers and for the administrative personnel necessary. America spends \$3½ billion annually for educational facilities and we are about 200,000 classrooms short. These classrooms cost from \$25,000 to \$50,000 each and require teachers which we do not have.

Mr. Paul L. Chamberlain, an official of General Electric, recently released some interesting figures with respect to educational needs in the Empire State. He advocates incidentally, four UHF television stations for each school district. To accommodate the increased birth rate in this State, 3,700 new classrooms will shortly be needed and you now have a shortage of 9,500 classrooms. New York will need 70,000 new teachers. Where will they come from? One-half of these will be needed to accommodate new enrollments. There will be a 100-percent increase in college and university enrollment by the year 1970. I know that New York will meet this grave responsibility and also retain its very high academic standards. I suggest that you utilize educational television to make a more effective use of the educational dollar.

There are economies that will flow from educational broadcasting that a prudent administration could scarcely afford to forego. It has been estimated that only one-third of school space is devoted to the classroom proper and the remaining two-thirds to such as gymnasiums, auditoriums, cafeterias, and offices. Were these large rooms equipped with large screen receivers or a number of normal screen receivers, as many as hundreds of students could learn their science and math with only a monitor to keep order.

Another valuable project which will have its impact on education and UHF broadcasting is that which is being pursued by the University of Purdue in cooperation with educational and civic leaders in six States, with a \$4.5 million grant by the Ford Foundation. The experiment is designed to transmit simul-

taneously over 6 channels and thereby telecast 72 expertly taught programs per day. This will be a great boon to rural areas.

But education via television can take any form ranging from high-powered airborne transmitters, to low-power stations and translators which pick up signals from the air, convert their frequencies and rebroadcast to small communities. Or it can take the form of closed circuit television. I note that New York City, in addition to educational programming over a commercial VHF station, has closed circuit language programs to low-cost housing developments to overcome the language barrier between English- and Spanish-speaking peoples. This closed circuit broadcasting could, of course, be more economically achieved if New York City had their own station on the air.

However, regardless of the medium or technique, educators must provide good equipment and assure dependable pictures or else there will be losses of instruction time, high maintenance costs and losses of confidence in the system and the medium.

I mentioned earlier that the educators may some day save the UHF for broadcasting. As you perhaps know, the Commission licenses radio to many users. The television band is quite suitable to other uses and many licenses which are jammed into other bands have been seeking the use of the UHF band allocated to broadcasting. Their arguments are quite valid and difficult to resist. There are 12 VHF channels and 70 UHF channels. If the educators come forth with their plans for multichannel UHF operations at this time and act effectively to implement these channels, they can be saved for the needs of both educational and commercial broadcasting. Otherwise, it is difficult to say what the outcome will be.

I believe that television will ultimately be moved to UHF. There are very practical obstacles but the overall public interest dictates that this must be done. To make it as painless as possible, I have suggested that we permit a conversion period of perhaps 5 years during which interval the existing VHF operators would broadcast on two frequencies—the UHF and the VHF. This would minimize the cost to the public since the average television receiver is replaced within this period of time.

We have been hearing a great deal about the New Frontier these days. We are told that we are in a slack or a soft economy. I submit that the introduction of UHF broadcasting would stimulate the manufacturing industry in the expectation of building an estimated \$30 billion of receiving sets over the next 5 years. I could not begin to calculate the stimulus to the economy (in dollars) that would flow from freeing the existing VHF broadcasting space for other users. This would provide new and remarkable tools for improving the American way of life.

Centralized school districts by broadcasting with four channels, as an example, and utilizing their auditoriums and other large rooms, when not otherwise in use, can cut education costs drastically.

There are fringe benefits too. Exceptionally gifted students, as well as slow students, could receive extra training which would not disrupt the curriculum of average students.

I have suggested that multichannel broadcasting will soon be universally recognized as the only economic means by which our teacher and facility shortages can be overcome. Since the VHF spectrum is virtually saturated with stations, largely commercial, it will become necessary to implement the UHF which is ready, available, and adequate.

The only drawback to use of these channels is that in many areas, receivers are incapable of utilizing UHF signals because of scrimping by manufacturers in a highly competitive field. While this poses no problem for in-school education, it will deter adult education until overcome. We at the Commission have recommended to the Congress that we be empowered to require the manufacture of all-channel sets. It is difficult to predict whether our proposal will be enacted into law. It is safe to say that if it were, the country would have such receivers in a few years to the extent that adult education would become effective.

Adult education will undoubtedly have a profound effect upon our lives. What is more, educational programming can be attractive, fascinating, and not without entertainment value. There is no question that the whole fabric of commercial broadcasting could be enhanced. Commercial stations would find serious competition to their too frequently tasteless and unimaginative fare and would conceivably broadcast a greater portion of their programs to satisfy adult minds. These improvements will not come overnight and they won't come without cost and bold imagination. Certainly the public is cheated if they are never started.

Perhaps you have heard of the UHF tests which the Federal Communications Commission is to conduct starting this fall. This project, which is partly to obtain technical data and partly demonstrative, will furnish valuable information with respect to the feasibility of UHF television operation in large cities which are difficult, even for VHF stations, to serve with good picture quality. This project has stirred much interest in Government and industry and has prompted the city of New York to enter into discussions with us which we expect will lead to cooperation which will be mutually beneficial. At the completion of our tests, I am sure that a sale or gift of the equipment could be negotiated. This, of course, presumes that our tests will furnish satisfactory evidence that UHF broadcasting hitherto confined to much smaller cities will provide a satisfactory medium in New York City and its environs.

We expect to have this station on the air by October 1, 1961, broadcasting from the Empire State Building with about a megawatt of power. Observers will compare the signal quality with the existing services from several thousand observation points. At a later date, in the experiment, we very likely will install a second station to improve coverage in a scheme called multicasting.

We at the Commission have studied the plight of commercial UHF operation. We are firmly convinced that the UHF must become a viable medium for broadcasting. Through appropriate procedures we have made certain areas all UHF and are considering others.

Recently the Commission authorized pay television tests in Hartford, Conn., which operation will be in UHF. It is conjectural as to how the public will respond but it is apparent that if successful in this city, pay television may be authorized in others. It is principally the UHF portion of the spectrum which is feasible and available for this new use.

I emphasize the feasibility and desirability of UHF station operation with full knowledge that the Board of Regents of the State of New York was awarded construction permits in New York City, Binghamton, Buffalo, Ithaca, Albany, Rochester, and Syracuse and has an application on file for Utica. All of these contemplated operations are in UHF but to date there has not been great evidence of putting these valuable facilities to work. I know of only one educational station in operation in New York State and that was a gift from a defunct UHF operation.

I suggest that the Empire State has a great responsibility in the education of its children and that the contributions which these enlightened children will make to the Nation's welfare are far beyond my limited means to evaluate.

However, I can tell you with assurance that other States look to New York for leadership in many fields and I can assure you that educational TV is on the march and I hope the Empire State joins this big parade.

Thank you.

MARCH 27, 1961.

HON. MORGAN M. MOULDER,
*Chairman, House Committee Interstate and Foreign Commerce,
New House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN MOULDER: KCSB-TV, noncommercial educational television station, owned by the Kansas City, Mo., School District (Public Schools and Public Libraries) will begin telecasting lessons for inschool use by pupils and teachers in this area on Tuesday of next week (April 4). This opening will culminate 4 years of experimental use of television for instructional purposes carried on jointly by the school district, the local commercial stations, and the Ford Foundation television experimental program. Results in our district, as well as those reported by many of the 35 other districts in metropolitan Kansas City in which our telecasts have been widely used, more than substantiate the theoretical belief that television is a powerful instrument for educational purposes.

Our board of education has invested approximately \$350,000 in housing and equipment and has a 5-year program of purchasing sets amounting to another \$100,000.

Already there are strong indications that an increase in power of KCSB-TV will be highly desirable in order that many of the school districts, which are within range of the commercial stations and, therefore, have been able to use our programs may not be deprived of their use.

Thus, we are highly interested in the current legislation before your committee on the subject of Federal assistance to educational television.

We have studied each of the House bills and the Senate bill and would like to make the following comments or suggestions.

1. In some manner each of the bills except H.R. 132 would seem to exclude an individual school district in Missouri:

(a) S. 205, H.R. 965, and H.R. 645 exclude the local districts in Missouri by the requirement that "the operation of such facilities will be under the control of (a) the agency or officer primarily responsible for the State supervision of public elementary and secondary schools".

This could be remedied by adding the phrase from H.R. 132 "or within a political subdivision thereof".

2. Only H.R. 132 makes provision for an allowance for existing facilities.

It could not be expected that bills such as those proposed would go back and apply to all past acts, but some cognizance should be taken of expenditures made while Federal aid legislation has been in prospect.

Therefore, we would urge the inclusion of an allowance for not less than twenty-five per centum for expenditures made during the past 2 years for purposes that would qualify if they were made subsequent to the passage of the act.

Cordially,

JAMES A. HAZLETT,
Superintendent of Schools.

CBS TELEVISION NETWORK,
New York, N.Y., March 21, 1961.

HON. MORGAN M. MOULDER,
*Chairman, Subcommittee on Communications and Power,
House Interstate and Foreign Commerce Committee,
Washington, D.C.*

DEAR CHAIRMAN MOULDER: In behalf of Columbia Broadcasting System, Inc., I submit this letter, together with a copy of my statement of March 1, 1961, before the Senate Committee on Interstate and Foreign Commerce, for the attention of your subcommittee. We should appreciate this letter and its enclosure being made a part of the record of the hearings of the subcommittee on H.R. 132, H.R. 645, H.R. 965, H.R. 2910 and H.R. 5099.

Earlier this month, when I appeared before the Senate Committee, I presented the position of CBS with reference to legislation which would provide for the grant of limited Federal funds for the purpose of strengthening noncommercial educational television facilities in this country. CBS urges the enactment of a bill directed to this end.

CBS has over many years been an advocate and supporter of educational television. It has, from time to time, made gifts of television equipment and cash awards in support of educational channels, and in other ways has given evidence of its belief in educational television. As I stated in my earlier testimony:

"We, whose immediate interests are directed toward commercial television, support the growth of educational television, and have ourselves directly contributed to its range of activities. We welcome it not only as supplementary to but also as competitive with commercial television service. We believe that this competition will benefit both types of services. In that competition of ideas and formats, some elements of commercial television's format and showmanship may find their place in educational programming, to the benefit and increased viewing of educational programming; and concepts of educational programming may well be adaptable to commercial television in its endeavor to entertain and inform its large number of viewers."

Two of the bills now pending before your subcommittee (H.R. 132 and H.R. 5099) provide with some specificity as to the procedure covering the submission of applications for and the grant of Federal funds; they also provide for a matching of such funds from State or local sources. It seems to us that both features of these bills are desirable. The procedure spelled out in these bills will provide for an orderly and studied plan for use of Federal funds in the development of educational facilities within the several States. Also, a matching concept built into the law, would, we believe, trigger the investment of non-Federal funds, to which subject I adverted in my earlier testimony.

CBS appreciates the opportunity of presenting its views on this important aspect of television.

Respectfully,

JAMES T. AUBREY, Jr.

STATEMENT OF JAMES T. AUBREY, JR., PRESIDENT, CBS TELEVISION NETWORK,
MARCH 1, 1961

Mr. Chairman and members of the committee, my name is James T. Aubrey, Jr. I am president of the CBS television network. I am grateful for the opportunity to appear before this committee to present the views of CBS respecting S. 205, now pending before you.

CBS strongly supports the enactment of S. 205. We are of the view that this bill will help provide a much-needed stimulus to the expansion of our Nation's educational television facilities.

You will recall that in 1952, in its sixth report on television allocations, the Federal Communications Commission reserved 242 assignments for noncommercial educational use. By the close of the last fiscal year, the number had been increased to 267, 90 of which were on VHF channels and 177 of which were on UHF channels. In approving the reservation of these channels for non-commercial educational use, the Commission noted that the type of programs which could be televised by educators would provide a valuable complement to commercial television programming. It further recognized, as a reason for the reservation of these channels, "that it is of the utmost importance to this Nation that a reasonable opportunity be afforded educational institutions to use television as a noncommercial educational medium, and that at the same time it will generally take the educational community longer to prepare for the operation of its own television stations than it would for some commercial broadcasters."

Since the adoption of the television allocations rules in 1952, we have seen a rapid growth in the number of commercial television stations and in the number of homes serviced by commercial television. Unfortunately, in the case of non-commercial educational television, the number of stations is still relatively small, and their coverage of total homes lags far behind that of commercial television. Past experience indicates that communities have managed to raise the funds necessary to operate an educational television station once that station is on the air, but faced with the double burden of raising both the operating funds and the funds for the purchase and installation of transmission apparatus, many communities have found the task to be too much. As a result, the private funds which have been available for educational television have not been developed. In some communities the need for an educational television station is often not apparent to the general public before the fact. The public doesn't quite know what educational television is and what it can do. They are unwilling to give this unknown infant their support. When an educational channel comes on the air, however, the picture changes. A station's programming becomes its best advertisement. By attracting viewers, offering education and enlightenment, helping to meet our various school needs as well as offering programs of broad cultural interest, a station can marshal public support and raise the funds necessary for its continued operation. In short, it has always proved easier to raise money for an accomplished fact than for a dream on paper.

S. 205 provides for a grant of \$1 million for educational television broadcasting in each State, including the District of Columbia, to be granted over a period of not longer than 5 years. We believe that the funds provided for in S. 205 will act as a trigger for the investment of nonpublic funds, presently and potentially available, for educational television.

CBS believes that the expansion of educational television is much to be desired, for the experience in a number of communities has already indicated that educational television can greatly supplement the traditional tools of education. While educational television will never replace classroom education or absorb most of the major tasks of such person-to-person education, it surely can introduce, as indeed it already has, new educational techniques and effect some economies in the cost of education. In addition, educational television can be an informal teacher, stimulating the general education of many groups of adults. It can help broaden the intellectual and cultural horizons of all Americans, young and old.

We, whose immediate interests are directed toward commercial television, support the growth of educational television, and have ourselves directly contributed to its range of activities. We welcome it not only as supplementary to but also as competitive with commercial television service. We believe that this competition will benefit both types of services. In that competition of ideas and formats, some elements of commercial television's format and showmanship may find their place in educational programming, to the benefit and increased viewing

of educational programing; and concepts of educational programing may well be adaptable to commercial television in its endeavor to entertain and inform its large number of viewers.

The management of CBS has long believed in the need for strong educational television facilities in this country. It has, from time to time, made gifts of television equipment and cash awards in support of educational television. Last summer, for example, CBS presented a gift of \$75,000 in equipment and funds to enable KETC, the educational television station in St. Louis, to continue its operation. The CBS Foundation, Inc., established in 1957 1-year fellowships for eligible persons employed in the news and public affairs fields of radio and television. Regular members of the staff of noncommercial educational radio and television stations, who are engaged in news and public affairs programing, are eligible to compete for such fellowships, and to date five fellowships have been awarded to them. From time to time, programs produced by CBS are made available to the National Educational Television and Radio Center for distribution by it to educational television stations. Also, the CBS television network is announcing an experimental project in which we and our affiliates in several key communities will make the know-how of our skilled personnel available to local educational channels. Next week, in Pittsburgh, the CBS television network will join with its affiliate, KDKA-TV, in sending a key producer-director team to WQED and WQEX, that community's educational television stations.

In closing my comments on S. 205, I should like to refer specifically to section 6 of the bill. That section provides in part: "Nothing in this Act shall be deemed * * * to give the Commissioner of Education any control over television broadcasting * * *." This provision, coupled with the express limitation in other sections of the bill as to the use of the funds (i.e., for the acquisition and installation of transmission apparatus necessary for television [including closed-circuit television] broadcasting and not including the construction or repair of structures to house such apparatus) makes it clear that the Government is to have no supervision whatever over the programing carried by educational television facilities which may, in part, be financed by the moneys provided under the bill. All of us will agree, I am sure, that any grant of Federal funds in connection with programs or program content would be ill advised because of the grave danger that some degree of Government control over the program material would creep in. The bill, as I have noted, forbids the use of funds for such purpose. Television broadcasting, whether it is educational or commercial service, cannot function effectively in a free society if the shadow of Government intrusion into programing lurks in the background.

Thank you.

STATEMENT OF WESTINGHOUSE BROADCASTING CO., INC., WITH REFERENCE TO PROPOSALS FOR FEDERAL AID TO EDUCATIONAL TELEVISION

I am Donald H. McGannon, president and director of three wholly owned subsidiaries of the Westinghouse Electric Corp. These three companies are Westinghouse Broadcasting Co., Inc. (Indiana), Westinghouse Broadcasting Co., Inc. (California), and Westinghouse Broadcasting Co., Inc. (Maryland), which collectively are the licensees of the following television and radio (AM and FM) stations:

Boston: WBZ, WBZ-TV, and WBZ-FM.

Baltimore: WJZ-TV.

Pittsburgh: KDKA, KDKA-FM, and KDKA-TV.

Cleveland: KYW, KYW-FM, and KYW-TV.

Chicago: WIND.

Fort Wayne: WOWO.

San Francisco: KPIX.

Portland: KEX and KEX-FM.

These stations were either built or acquired over the past 40 years, KDKA in Pittsburgh having been the first nonexperimental broadcasting station in the country.

Educational TV facilities are operated in Boston (WGBH-TV, channel 2), Pittsburgh (WQED, channel 13, and WQEX, channel 16), and San Francisco (KQED, channel 9), markets in which WBC also maintains television stations.

I am appearing to urge this committee to give its approval to the principle of Federal assistance for educational television. In addition, I have the expectancy that, being a commercial broadcaster with absolutely no gain or

advantage to be accrued by the passage of the bill, I can reflect some viewpoints that may be helpful to the members of the committee.

Radio, over four decades, and television, for the past 12 years, have developed and demonstrated an unbelievable power to capture the attention of the great masses of the American public. In fact the advent of radio and later television changed, in a most dramatic fashion, the entertainment, purchasing and informational habits, and interests of the entire American community. No person could fail to recognize and be impressed by this power to influence. A broadcaster, however, faces not only this fact but also the consequent responsibility that devolves on him. Power in such dimensions carries the duty to use it prudently but for the broadcaster it also offers the challenge to use it for the overall betterment, well-being, and welfare of mankind.

Commercial licensees are obligated and do perform outstanding educational services. However, such frequencies, as allocated under the act, recognize a more fundamental function that even supercedes that of educational and similar public service efforts; that is, the demand of the public to be entertained and the resulting function to entertain. This obviously is not to the exclusion of informational, educational, and allied program fare but represents the principal area of challenge and fulfillment. Our audience tunes in to be entertained; the field is extremely competitive and very costly. This competition for the attention of the American people carries over into our public service efforts which, in turn, must call on every showmanly and creative device we can contrive to hold the audience and prevent the viewers from straying to the competitive stations.

When a viewer tunes in an educational television station, he does so to learn and when the talent gets into an involved and difficult subject, he can roll his sleeves up and teach. When one undertakes to teach with this intensity, the educational broadcaster all too often finds that his audience has diminished and he finds himself wishing he had some sort of an electronic truant officer at his command. Yet he can and does perform a real service to education, in outright teaching of less complex subjects and, more importantly, in motivating a desire to know more about the involved subjects.

Entertainment television makes an indirect and intangible but nevertheless real contribution to classroom television. Youngsters are accustomed to regarding television as a source of interest and importance, and so they carry over into their classroom television viewing the feeling that if what they see there is conveyed by television, it must be interesting and important.

The problem for the commercial and educational broadcaster then narrows down to one and the same—how to attract and hold audience and in this field, as distinguished from the program preparation area, they are genuinely competitive.

It's an interesting thing about educational television, that while it is in the eighth academic year and represents a multi-million-dollar investment, it has achieved the outstanding goals it has, but far more lies in the future than in the past. As I've indicated, I believe that to be true of television in general but the educational phase represents a dimension without which the medium cannot achieve its full potential or capacity. Commercial television as a medium of entertainment, information, and advertising requires the pure research and laboratory techniques and opportunities of educational television, working hand in hand to achieve the degree of fuller enlightenment every one of us in the industry feel can and even must be achieved. Much has been accomplished in less than a decade but far more need to be accomplished in this world of nuclear physics and international hypertension.

The multi-million-dollar figure that I mentioned which was invested in educational television, included close to \$50 million from the Ford Foundation and many millions more from television stations and networks and the citizenry, both corporate and individual, of many markets including Pittsburgh, Boston, and others. This dependence on industry is very significant for I feel there are few who would doubt industry's future and present dependence on education and the training of its scientists, research personnel, and management manpower. Today, as well as in the future, the local educational television station in any community will be an important, yes, even indispensable element of the educational system and its ability to reach even larger numbers of students. This is especially vital in view of the critical teacher and facility shortage which faces us each day and for the foreseeable future. Any success of an educational station depends on financing, true, but more importantly on the understanding of its functions and the public interest in its welfare.

Yet the path to this public understanding and support can only spring from performance and the clearcut demonstrating that there is a substantial benefit to accrue to the public interest as a result of the operation of such educational stations. In other more blunt words, get the educational station on the air in order that the whole evolutionary and developmental process of qualitative programing can be undertaken and perfected. The longer this is delayed, the longer these vital frequencies are left unused, the longer the American people are deprived of such educational opportunity; yes, the longer our already strained educational system and overburdened municipal finances are denied this dynamic and collateral aid. Then, too, will our ability to achieve the blessings and opportunities of the ultimate public service educational system be forestalled.

The United States must improve and increase the use of all educational means at our disposal but surely television and radio, occupying so prominent a place among the interests of our people, have a great opportunity and a still greater obligation in this regard.

It has been said before but it bears repeating here that our educational efforts today should not be focused entirely on training the scientists and engineers we need for the technical world of tomorrow. Our future as a Nation demands that we devote ourselves as well to training the statesmen, the businessmen, the teachers, the artists, the musicians, the poets of the next generation. In our concern over the technological complexities of today and tomorrow, let us not overlook the cultural and historical heritage that is ours to preserve, to perpetuate, to increase.

As President Eisenhower has put it, "We will need not only Einsteins but Washingtons and Emersons."

Within our lifetime, we have seen vast new areas of information develop. We have seen old concepts change, old "truths" replaced by new ones. All of us can remember when we were taught that the atom was the smallest particle of matter. Today, we know this is not true and that man, in the process of dividing the atom, unleashed on the world a vast new source of power for both good and evil. The mysteries of outer space grow less mysterious with each passing day.

Man's horizons of intellectual exploration and discovery have been extended dramatically, and there is ample indication that still further extension is in prospect. Yet our educational system, or at least significant segments of it, is ill-equipped to inform the public at large; to interpret the issues that divide the world; to acquaint it with the new and vital developments of yesterday and today; to prepare it for what is to come tomorrow. The task of education grows larger and more complex.

If our people are to keep pace with our fast-changing times, education must not, cannot, stop with the diploma, or be restricted to the classroom. The education of our adult population has never been more vital. It must and can be carried out by television and radio and any other media of information we can devise.

It might properly be said that these urgings are but the gratuitous comment of one who does not have a consequent obligation to pay for same beyond that of a single taxpayer. One might properly ask us to "put our money where our mouth is." It is this that we have done over a long period of time and continuing up to just a few months ago. Let me review the record, born of a conviction that the broadcasting industry needs this additional element, and failing to get it will be a poor second in the most crucial area: the need to enlighten men.

Pittsburgh, KDKA-TV

1. WBC management personnel prepared for WQED, the Pittsburgh educational television station, their application for a construction permit, installed the equipment and generally assisted in getting the station on the air.

2. WBC provided an operating location to WQED, namely the KDKA-FM transmitter building and tower for WQED's television transmitter. Later it gave WED this 500-foot tower for their television antenna and land. The present replacement value of this property is estimated at \$264,000.

3. A grant of \$10,000 was made to WQED by the Westinghouse Electric Corp. as part of a major community effort to raise funds for the operation of the station.

Pittsburgh, KDKA

1. WBC made available engineering services for the preparation of the application and the planning and supervised the construction and installation of Duquesne University's FM station, WDUQ.

2. WBC donated a 3,000-watt FM transmitter to the Carnegie Institute of Technology. This transmitter had an original valuation of approximately \$10,000 and a fair cash value at the time of the gift of \$1,500.

3. WBC gave approximately 63 acres of land and the transmitter building at Saxonburg, Pa., to the Carnegie Institute of Technology for this synchrocyclotron project. The building has approximately 6,400 square feet of area which represented a construction cost at today's prices of about \$20 per square foot. Value of the building is \$128,000.

4. KDKA presented their complete music library to the Pittsburgh College for Women, now Chatham College. The library represented \$25,000 worth of orchestrations of sheet music (fully cataloged) and the cabinets containing the sheet music.

5. WBC contributed engineering services in planning and designing studios for the Speech Department at Mount Mercy College.

Philadelphia, then KYW

In 1953 WBC gave to the Delaware Valley Educational Television Corp. a complete FM transmitter installation, installed and in working order, having an evaluation estimated at \$75,930.

Boston, WBZ-TV

WBC made a grant to the Lowell Broadcasting Foundation, the licensee of educational television station WGBH-TV in Boston, of a full powered television amplifier that permitted this station to cover a significantly increased area of metropolitan and suburban Boston. The full-powered television amplifier afforded WGBH comparable power to that which the commercial broadcasters in Boston are employing. The replacement value of this amplifier is \$76,675.

Boston, WBZ

1. WBC gave Williams College a variety of studio radio equipment valued at \$1,425.

2. WBC gave the Springfield Trade School a 1,000-watt transmitter and associated power supply valued at \$8,000.

3. WBC donated radio amplification equipment to the South Dakota School of Mines. Estimated replacement value is \$400.

California, KPIX

WBC Inc. (California) took over a chattel mortgage of KQED (the Bay Area Educational Television Association) held by a prior owner at low interest rate. A moratorium for these interest charges was later granted and finally the unpaid balance was forgiven—representing a grant of almost \$4,000.

Illinois, WIND

WBC gave to the University of Illinois six radio power rectifier tubes valued at \$180 each. Total gift, \$1,080.

Indiana, WOWO

1. WBC and Westinghouse Electric Corp. jointly gave \$100,000 to Purdue University for use in the stratovision educational television broadcasting experiment (Midwest Program on Airborne Television Instruction).

2. WBC gave Tri-State College in Angola, Ind., FM transmitter equipment at a fair cash evaluation of \$1,025.

3. WBC gave a 10,000-watt Westinghouse FM transmitter to Taylor University in Upland, Ind. The fair cash value was \$4,500.

OTHER AREAS IN WHICH WBC DOES NOT OPERATE STATIONS

New Hampshire

WBC has granted technical equipment to the University of New Hampshire educational station (channel 11) in Durham, N.H. Estimated value of this equipment is \$6,750.

Delaware

Westinghouse Electronics Division, Baltimore plant, gave to the University of Delaware approximately \$5,000 (replacement value) worth of equipment apparatus and material for use in the University's laboratory.

Texas

Among numerous gifts of equipment to various universities, the largest was a gift of a 5,000-watt television transmitter and related equipment valued in excess of \$45,000 to Texas A. & M.

CURRENT AND RECENT WBC RADIO AND TELEVISION PROGRAMS MADE AVAILABLE TO EDUCATIONAL BROADCASTING STATIONS

Contributions of programing in addition to technical and monetary grants mark the continuing support by the Westinghouse Broadcasting Co. for educational broadcasting. Based on the policy determination that public enlightenment can be achieved through showmanlike or entertaining and informative programs, WBC group and station productions in radio and television of a public service or enlightening nature, are made available to educational stations gratuitously and without cost.

Listed below are some of the programs that have been made available:

"Section Sixteen" and "The Challenge," two educational films which signalized the 100th anniversary and activity of the National Educational Association.

"Growing Pains," an educational series dramatizing the problems of youth in America and featuring the world-famous educator and psychologist Helen Parkhurst.

"Adventures in Number Plus Space," a series of nine 30-minute programs which utilized the famous Baird marionettes to stimulate the interest of junior high school students in the subject of mathematics.

"Education 57," the first television report on the current status of education.

"Spotlight On Schools," the third yearly series of a unique news program devoted wholly to news on education.

"The Big R," a radio and television documentary which supplemented and supported the President's White House Committee and Conference on Education, and dealt with the problems confronting America's educational facilities and teaching personnel.

"Of Many Things," a radio series of conversation pieces with Dr. Bergen Evans, educator and instructor of English at Northwestern University.

"Books and Voices," with John K. M. McCaffery, noted newsman, commentator and personality.

"The Rockefeller Reports," a series of six 15-minute readings at the time of the release of the special studies projects of the Rockefeller Brothers Fund.

"Mental Health Series," designed to develop broader public acceptance of effective treatment for mental illness.

"Get Out The Vote," a series of jingles intended to stimulate the American franchise to vote.

"Let Freedom Ring," a television project geared to serve important aspects of American history produced by WBC's Boston station, WBZ-TV.

"Benny in Brussels," hour long film spectacular highlighting WBC's sponsored and produced series of jazz concerts at the Brussels World's Fair for the U.S. Department of State which supported American performing arts at the fair.

"Reading Out Loud," television series featuring well-known writers, actors and other famous figures reading from the world's great literature to groups of children. This was carried on 46 educational television stations.

"Lab Thirty," series on science for the bright high school student hoping to interest him in a career of science.

"My Road to Crime," a documentary story of a delinquent with actual tapes done at various times of his life from the time he was 13 until he was 27.

"Songs for Presidents," a recreation of the great presidential campaigns of America's history emphasizing the famous issues involved in each campaign and demonstrating the use of music in America's political history.

"National Purpose," a radio version of the Life series of articles by prominent Americans speaking on the "National Purpose."

Intertel

A major international project, of an educational and public service nature, in which WBC has joined with four television broadcasters in the principal English-speaking nations, is the International Television Federation, known as Intertel in which the broadcasters of four nations have taken a step toward international television by forming a global co-production organization.

The participants are Associated Rediffusion, Ltd., of Great Britain, the Australian Broadcasting Commission, the Canadian Broadcasting Corp., and

for the United States, the Westinghouse Broadcasting Co. and the National Educational Television and Radio Center.

The new organization constitutes an international pool of technical and creative ability and knowledge which will extend the international horizons of television in all its aspects. This is the first practical step, after years of talking and hoping, toward the creation and use of international television for cultural exchange and an effective weapon for peace.

Intertel each month will produce an hour-long documentary on important world topics, inaugurating an international television production agency dedicated to the creation of programs of substance and meaning. The first program of the series, "France: In Transition" by Associated Rediffusion, will be available in May. In the United States the Intertel programs will be seen on the five WBC television stations and the 50 educational stations affiliated with NETRC.

By having observers examine topics far removed from their everyday assignments, Intertel expects to give viewers a fresh viewpoint. The founder members anticipate that by dubbing these programs in foreign languages and making them available to all nations, television companies in Europe, Asia, and South America will be interested in joining this unique project.

Public service conference

Educational station broadcasters participated among an invited 200 American broadcasters who attended the first WBC conference on public service programming held in Boston in 1957. The second conference was held in Baltimore in 1958, and the third conference, in which 400 broadcasters, including representatives of the broadcasting industries of six other nations participated, was held in San Francisco in 1959. The fourth conference is scheduled to be held in Pittsburgh in April of this year.

These conferences are designed to help the broadcaster better serve the public through the exploration, examination, and production of showmanlike programs that will educate and enlighten.

The WBC history award

Monetary incentive award which includes all commercial radio and television stations and educational stations, excluding only the WBC stations. Award designed to stimulate local stations' production of programs that explore the rich area of local and national American history.

In addition to the aforementioned radio and television group and station programs and/or series, WBC makes available to educational television stations in our markets the Encyclopedia Britannica films which, although the monetary value is not crystalized, we estimate to be worth about \$25,000.

One of educational television's most perplexing problems in getting into action and securing a public image is investment capital. Beyond this, of course, are a multitude of other obstacles such as operating funds, need for manpower, programming and that endless competitive battle for the public attention with the other elements of the art. But these cannot be dealt with, or even get beyond the drawing-board stage, unless the station can be physically and electronically activated. The success to date has been outstanding. From this point forward lies an even tougher job—this arises from the lessening of certain foundation grants, such as the Fund for Adult Education. With certain exception, the markets are smaller and so are the finances of these people and industry while the costs remain virtually the same, and the scarcity of talented people becomes increasingly aggravated.

The solution to this primary public problem rests on the developing and enlarging of current sources of such funds, plus substantial Federal assistance. Legislative action is necessary to achieve a breaking of the logjam that is thwarting the forward progress and expansion of educational television. The Westinghouse Broadcasting Co. strongly urges the committee to support legislation providing for assistance to educational television with Federal funds, and the enactment of such legislation by the Congress.

BALL STATE TEACHERS COLLEGE,
Muncie, Ind., April 29, 1961.

HON. OREN HARRIS,
House of Representatives,
Washington, D.C.

DEAR MR. HARRIS: Your office was most kind to me when I was in Washington on April 17. I was interested in knowing the progress of legislation providing funds for educational television. Miss Collins provided me with most of the answers; however, I did visit with Mr. Kurt Borchardt, counsel for your committee. He informed me that questionnaires have been sent to Governors. I have checked with our Governor Welsh's office and have been told that the questionnaire has been returned explaining the Indiana situation. The enclosed statements describe our plans for using educational television in our instructional program.

Ball State Teachers College is one of four State colleges and universities in Indiana. The enrollments for the autumn quarters, 1958, 1959, and 1960 were 6,046, 6,527, and 7,292. Last year there were over 1,000 bachelor's degrees and over 400 master's degrees awarded. Between 60 and 70 percent of our graduates enter the teaching profession annually. In addition to our teacher education program we award degrees in liberal arts, business administration, and medical technology. Our graduate program has grown with even greater proportions than our undergraduate program.

Your support for this important educational legislation will be appreciated.

Sincerely yours,

OLIVER C. BUMB,
Coordinator of Public Affairs and College Development.

EDUCATIONAL TELEVISION FACILITIES, BALL STATE TEACHERS COLLEGE

The television facilities at Ball State Teachers College, to be completed the summer of 1961, are planned to meet the needs of a closed-circuit and broadcast operation. They are a part of the communications center for journalism, radio, and television. The television facilities include a spacious studio 33 feet wide, 65 feet long, and 18 feet high for effective lighting and props, and also control rooms, equipment room, rack room, a visual preparation room, and an observation classroom. Also nearby are facilities planned to accommodate theater and television such as dressing rooms, makeup rooms, and prop construction areas. Adjacent to it are standard size classrooms, a large classroom for 200 students, and faculty offices.

The large classroom and two standard classrooms are specifically designed for originating and receiving closed-circuit television programs. Next to the radio, television, and journalism area are theater facilities and a large music rehearsal area which have several locations for originating programs. An expanded metal trench is provided in the ceilings of the corridors of this complex so that coaxial cable can be run easily to connect the various areas.

In addition to the previously mentioned facilities the total building complex also includes an English classroom building, a music classroom building, and a large auditorium. The English and music classroom units have 35 classrooms with other special laboratories for teaching and learning.

I. CURRENT USES IN THE ACADEMIC PROGRAM

A. *Continental classroom*

The college has participated in 2 successive years with the "continental classroom" and offered credit courses in connection with these telecasts.

B. *Locally produced classes*

Televised classes in the areas of English and social science have been taught over the broadcast facilities of WLBC-TV Muncie, Ind., commercial station.

C. *Midwest project on airborne television instruction*

The college serves as one of the participating colleges in the MPATI and is currently working with a number of cooperating schools and individual teachers in the project. A week-long workshop was conducted in July 1960 in connection with this project.

D. Growing college responsibility

The college has been sensitive to a growing responsibility for preparing teachers who will be able to work effectively in school programs making use of television instruction. This responsibility will increase not only with the development of MPATI but also with the expanded programs in the localities such as Evansville, New Albany, Indianapolis, and other areas which are now engaging in such programs or considering them.

E. Presenting Ball State

In its program "Presenting Ball State" the college has had an opportunity to interpret selected aspects of its academic program as well as other developments in the college through television over station WLBC-TV.

II. FUTURE USES OF CLOSED-CIRCUIT AND OTHER TELEVISION BROADCASTS IN THE ACADEMIC PROGRAM

A. General studies

The college has experimented to a limited degree with large class instruction and anticipates additional programs in this area in the future. Certain courses required as part of the general education program may lend themselves to instruction by television. Courses for which large numbers of sections are scheduled include, general psychology, English composition and literature, and world civilization. During the 1960-61 academic year sections in general psychology range from 15 to 17 each quarter generating the possibility of large sections of 600 to 700. Thirty-nine sections of the beginning course in English were scheduled in the autumn quarter, 31 sections of the second course in freshman English are scheduled for the winter quarter, and 31 sections of the third course of required English have been scheduled for the spring quarter. In the basic courses in world civilization, the number of sections ranges from 15 to 18 throughout the year. Class limits in each of these sections vary roughly from 30 to 45 thereby providing each quarter a possibility of relatively large sections. Courses in English vary considerably in the degree to which the purposes and content are appropriate for television instruction.

B. Teacher education

The use of instruction by television in teacher education can be viewed from at least three areas.

1. The use of televised classrooms in the laboratory school would expand tremendously the potential of the school for meeting the need for professional observation. The use of television is particularly adaptable to special methods classes and also for use in the course, "Principles of Teaching and Classroom Management." Proposals have been made to the Cooperative Research Agency of the U.S. Office of Education in respect to using educational television for observational purposes. By superimposing or presenting side by side on a split screen, certain aspects of teaching can be related in a way that is quite difficult in a regular observational setting. Any proposed use of educational television with methods courses should offer the opportunity of collecting a useful file of kinescopes or video tapes.

2. With the expanded use of television in the public schools, institutions preparing teachers will need to give increasing attention to the competencies required for effective teaching in the new situation. With closed-circuit facilities it would be possible to develop these skills in the context of the broad program of teacher education and in a variety of classes. The use of such facilities in courses in the area of audiovisual education are fairly obvious.

3. In current patterns of educational television considerable emphasis is placed upon the master television teacher. It seems reasonable to assume that special attention may be given in the future to the graduate preparation of such teachers. Hence, this college may be in a position to contribute materially to this educational need.

C. Vocational instruction in fields related to radio and television

With facilities supporting the wider program of instruction on the campus it would be possible to provide necessary laboratory experience for those students seeking technical careers in this medium.

D. Adult education

As the scope of the college's activities in the area of adult education expands, with the continued development of evening and Saturday classes, additional avenues for television instruction will be opened.

STATEMENT ON EDUCATION TELEVISION BY DR. ERLING S. JORGENSEN, DIRECTOR,
MONTANA ETV PROJECT, MONTANA STATE UNIVERSITY, MISSOULA, MONT.

As project director for the Montana ETV project, I am charged with studying the potential uses of television in Montana's schools and colleges, planning for the future use of this vital new medium, and acting as a source of information for school people and the public. A Ford Foundation grant has made it possible for me to devote full time to research and development of a State plan for the use of TV in lower, higher, and adult education in the State. I have visited, in the course of my study this year, 45 locations in all parts of the country in which TV is being used for instructional purposes.

It is my belief that educational television offers the State of Montana a singularly unusual opportunity to economically and effectively solve many of the problems which face the schools of Montana. The passage of a measure which would provide a Federal grant to partially cover the cost of establishing the physical facilities for television transmission would be of inestimable value to the schools and youth of Montana. It would make possible a breakthrough in education in our State which would be the most significant development in the history of our schools.

Montana is a huge State and has a small population. Its area is greater than the combined area of the New England States, New York, New Jersey, and Delaware. Yet Montana's population is only 674,767 persons, less than the population of Washington, D.C., about the same as Pittsburgh or New Orleans.

Montana's schools vary greatly in size and educational opportunity. While the five largest cities have one-third of the total elementary and high school enrollment, the remaining two-thirds of the school population is accommodated in our hundreds of small and isolated schools. There are 851 one- or two-room schools in Montana. Seven hundred of these are one-room, one-teacher schools. Forty-five of the State's 192 public and private high schools have enrollments of fewer than 50 students. These small schools, underequipped and understaffed, are unable to offer rural and smalltown students the educational opportunity which schools of larger enrollment offer.

Montana is faced with growing enrollments, teacher shortages, and demands for improved curriculums. Our State will find it increasingly difficult to improve its school facilities. Educational television, with its ability to reach large numbers in widely scattered schools, coupled with its advantages in bringing vitality and clarity to educational presentations, can prove itself of tremendous assistance to the schools of Montana in solving their problems economically.

Your committee's previous hearings and investigations into ETV's school uses have proven the effectiveness of this medium. My visits to ETV installations have furnished me with dramatic evidence in substantiation of your findings.

We are not without some experience with ETV in Montana. While far behind other States in the development of this means for instruction, we have made a few steps forward. For several years the College of Great Falls has broadcast adult courses for credit over station KFBB-TV. That station and stations KMSO-TV in Missoula, KXLF-TV in Butte, KXCJ-TV in Helena, and KGHL-TV in Billings have carried "Continental Classroom." They and stations KOOK-TV, Billings; KXGN-TV, Glendive; and KRTV, Great Falls, have broadcast other programs aimed at the adult education needs of their audiences. I believe that the cooperation of the commercial broadcasters of Montana will continue to be important to the schools and colleges in reaching the general adult population. However, I also believe it will be unfair to expect that commercial broadcasters will be able to supply the amount of time necessary to do the job in the classrooms of our schools. Education will ultimately have to do this job itself.

Finally, allow me to indicate my position on the manner in which Federal grants should be made available to the States. I am happy to see that each bill specifically excludes any control of what will be broadcast over any facilities built with Federal funds. Control of programing should be kept exclusively at the local and State level.

I am opposed, however, to the provision of H.R. 132 which makes it necessary that matching funds be supplied by the States. Such a provision would penalize such States as Montana where the area to be covered is vast and the population so small. I believe that such a provision would handicap Montana in securing the funds necessary to staff and maintain the ETV facilities we need. In effect, we would have to doubly match Federal funds by providing matching funds for transmission facilities in addition to operating funds. The result

would be that the Federal grants would assist the more populous and wealthy States without assisting those States which in reality need the assistance more and in which the benefits of ETV can be more dramatic.

For these reasons, I recommend the passage of H.R. 695. Its passage can be a striking accomplishment of this session of Congress, one which proves this country believes that education is important to our national survival and worthy of the support of all of us.

STATE OF MICHIGAN TELEVISION STUDY,
MICHIGAN STATE UNIVERSITY,
East Lansing, April 12, 1961.

HON. MORGAN MOULDER,
Chairman, Subcommittee on Communications and Power,
House of Representatives, Washington, D.C.

SIR: The Working Committee on Educational Television appointed by Dr. Lynn Bartlett, superintendent of public instruction for the State of Michigan, has been meeting regularly for the past 3 years. This committee was charged with the responsibility for studying educational television in relation to an adequate program of education for Michigan students. The committee has spent its time examining the educational import and technical feasibility of television.

As a result of its labors, this committee is convinced there are educational values to be gained in the use of television. Further, television does have a unique contribution to make toward the improvement of the educational programs available to the citizens of our State.

Therefore, the Working Committee on Educational Television for the State of Michigan recommends:

(1) That full support be given to the principles of Federal-State cooperation for the improvement of educational television through a program of matching funds.

(2) To further this goal, specific support to the principles which underlie S. 205, the Magnuson bill, and H.R. 132, the Roberts bill.

(3) While we support the above-mentioned bills as a significant first step in Federal assistance, we respectfully recommend the extension of such assistance to such areas as training facilities, recording facilities, and closed-circuit equipment to broaden the scope and utilization of the potentials of educational uses for television.

Sincerely,

JAMES B. TINTERA, *Director.*

MOHAWK-HUDSON COUNCIL ON EDUCATIONAL TELEVISION,
Schenectady, N.Y., May 11, 1961.

HON. SAMUEL S. STRATTON,
House Office Building, Washington, D.C.

DEAR SAM: I gather from our phone conversation today that the congressional committee looking into Federal aid to educational television may reconvene momentarily. Since I have no idea how long the committee will be in session when it does reconvene and whether or not there will be an opportunity for additional witnesses to be heard, I thought I ought to send you this letter which you may use for the record.

It is our contention that open-circuit educational television facilities should take precedence in any educational television plans in areas not now served by an educational television station unless because of terrain or widely scattered population such open-circuit facilities seem not feasible.

Open-circuit facilities not only serve one school, they serve all the schools. They can thus provide a service for the parochial and private schools without any question of this aid being unconstitutional. Parents can see the kind of education that is being given their youngsters via television by watching their own sets at home and can judge for themselves the value of the effort. The station broadcasts programs during after-school and evening hours making the return of the investment much greater than a closed-circuit system that is used only during school hours. The value of college credit courses and high school courses and programs of education and information to adult audiences can have an untold beneficial effect upon our citizens. And finally, there are no costly cables to buy or rent as in the case of closed-circuit television when it is extended beyond the walls of a single school.

This is not to say that closed-circuit television does not have a place. But it should not be considered to have priority over open-circuit television. For once the benefits of educational television have been realized by people throughout an area if there is desire for the more specialized uses of closed-circuit television by individual schools or school systems, ways will be found to finance these systems.

As you know, there have been pressures in this State for the use of closed-circuit television for instructional purposes in preference to open circuit. I feel that if Federal funds are to be made available to the States there needs to be some means of insuring a freedom of choice on the part of each locality within the State as to whether open or closed circuit will better serve that locality. I hope that the bill can be written in such a way that this local determination can be made and that it does not become a matter of either State or Federal decision.

I think that the Magnuson-Schoeppel bill (S. 205) deserves your support. If there is anything I would like to see changed in the bill it is only the reference to closed-circuit television. In New York State it might mean that these funds would be used for closed-circuit television exclusively.

I would hate to see the Magnuson-Schoeppel bill bypassed in favor of the Roberts bill (H.R. 143) because I think that it would be less effective and only slow up the development of educational television throughout the country. We have been planned to death in this field. In New York State we have had four or five master plans for educational television already, dating back to 1952. I would estimate that close to \$50,000 has already been spent for these plans and that money could have gone far to putting at least one educational television station on the air.

We are very conscious of the need to attract industry to Schenectady. We are anxious to help Schenectady become a vigorous, growing community once again. Although an educational television station is not a panacea for the ills of Schenectady, it can become a 20th century center of education, a town-hall in an electronic age, and a place where people whose jobs have been wiped out because of automation can be retrained in part at very low cost.

We have worked hard to bring this facility into being because we can see its tremendous potential in cities across the country where educational television stations are doing a job never before believed possible. We have almost succeeded on our own but we need help desperately. We will be very grateful for your help, Sam.

Sincerely yours,

DONALD E. SCHEIN, *Manager.*

AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS,
Washington, D.C., April 19, 1961.

HON. MORGAN M. MOULDER,
*Chairman, Subcommittee on Communications and Power,
House of Representatives, Washington, D.C.*

DEAR CONGRESSMAN MOULDER: The American Association of School Administrators is a member of the Joint Committee on Educational Broadcasting. You have had testimony from that committee by Mr. Stewart. I believe other members of that committee likewise appeared before your subcommittee.

As I read the testimony submitted by Mr. Stewart on April 3, I find a disagreement with one viewpoint. The American Association of School Administrators does not concur in his observations that "Such a body, while its exact constituency may vary from State to State, might include the State Department or Commission on Education, public and private schools, colleges and universities, as well as community groups, corporations, and foundations organized for the purpose of providing educational television service." In my opinion, and I believe I am supported by the great majority of the school administrators of the Nation, school administrators would be opposed to such a broad grant of television authority. Rather we would support the Keating amendment to the Senate bill. We believe this amendment should be made a part of the bill because it limits quite properly the type of agency which should be responsible for reporting the use of the funds and for serving all of the people.

In our judgment, this in no way will limit the scope of services returned in a given State or region. Furthermore, the Keating amendment would provide a coordinating agency which could in fact serve all.

Sincerely,

FINIS E. ENGLEMAN, *Executive Secretary.*

NATIONAL COUNCIL ON THE ARTS AND GOVERNMENT,
New York, N.Y., April 15, 1961.

HON. OREN HARRIS,
Chairman, Interstate and Foreign Commerce,
House Office Building, Washington, D.C.

DEAR MR. HARRIS: We have been informed that S. 205, sponsored by Senator Magnuson and others, has passed the Senate and is presently before your committee.

The National Council on the Arts and Government believes that the 87th Congress will perform a very essential service for adults as well as students if it stimulates in the manner proposed the establishment of a far larger number of educational TV programs, particularly for the less-populated areas of the country.

This legislation provides no opportunities for Government control over whatever may be programed by stations that may be activated by the proposed Federal grants and is thereby consonant with our country's educational principles.

Current teacher and classroom shortages emphasize the urgency for action. It is fervently hoped that your committee will give favorable and the earliest possible attention to S. 205 so that this session of Congress may approve appropriations in time for some of the educational TV equipment purchased thereby to be in use during the coming school and college year.

It is respectfully requested that this letter be brought to the attention of the members of your committee and that it be made a part of the committee record on this legislation.

Sincerely,

HAROLD WESTON, *Chairman.*

RUTGERS, THE STATE UNIVERSITY,
Camden, N.J., April 19, 1961.

CONGRESSMAN MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power,
New House Office Building, Washington, D.C.

DEAR CONGRESSMAN MOULDER: I work as a member of the board of trustees of educational radio and television station WHYI in Philadelphia. I have worked in this capacity for a little over a year. It has taken a substantial part of that time to understand the problems and the tremendous opportunities which lie in educational television.

It is now my firm conviction that this splendid medium for public education should be supported and expanded at every opportunity. Certainly, legislation to provide Federal aid to educational television is not only justified but may actually be almost necessary, if we are to take advantage of the too few opportunities which exist to establish the much needed noncommercial stations and afford the programing which makes them effective.

The public is not well informed on these problems. In my opinion, those of us who see the importance of establishing ETV on a sound footing have a special obligation to do all we can to promote its welfare. Please know that some of us are vitally concerned and support your efforts in this matter.

Yours very truly,

W. LAYTON HALL,
Dean of the College of South Jersey.

STATE OF ALASKA,
OFFICE OF THE GOVERNOR,
Juneau, June 8, 1961.

HON. OREN HARRIS,
Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.

DEAR CHAIRMAN HARRIS: On April 6 I informed you that the State commissioner of education and the State board of education were being consulted regarding your request for information on Alaska's plans for and interest in educational television.

The State board of education, at a meeting held in Nome, Alaska, May 11, 12, and 23, authorized the commissioner to investigate the possibility of using existing television facilities for educational purposes.

This move, which met with unanimous board approval, is now being implemented by Commissioner Theo Norby. He informs me that he is assigning a member of his staff to make an extensive study of the possible educational use of television in the State of Alaska. A preliminary survey indicates that there now exists some open time which could be available at a minimum cost.

Sincerely,

WILLIAM A. EGAN, *Governor.*

STATE OF CONNECTICUT,
EXECUTIVE CHAMBERS,
Hartford, June 20, 1961.

HON. OREN HARRIS,
House of Representatives,
Washington, D.C.

DEAR REPRESENTATIVE HARRIS: Since your Committee on Interstate and Foreign Commerce, through its Subcommittee on Communications and Power, is concerned with the expansion and improvement of noncommercial educational television, you may be interested to learn that the Connecticut General Assembly has appropriated \$200,000 to the Connecticut Educational Television Corp., for the coming biennium. This is a private, nonprofit corporation organized to provide noncommercial educational television services and facilities to serve the educational needs of the Connecticut community.

As far as elementary and secondary schools are concerned, the corporation serves as the instrument of transmission for programs. The schools themselves, in cooperation with the State department of education, are responsible for the establishment of the areas, grade levels, and content of the programs.

The corporation also admits colleges and universities to membership, and I have been informed by the president of the corporation that many have enrolled already. These colleges and universities may cooperatively develop college level educational television courses for credit and noncredit.

Sincerely,

JOHN DEMPSEY, *Governor.*

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., April 11, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power, House Committee on
Interstate and Foreign Commerce, Washington, D.C.

DEAR COLLEAGUE: Recently the 1961 session of the Minnesota Legislature adopted the resolution encouraging the establishment of a six-State educational television network.

I am enclosing a copy of that resolution which was forwarded to me by Mr. John C. Schwarzwald, general manager of the Twin City Area Educational Television Corp. of Minneapolis and St. Paul. I would appreciate your making Mr. Schwarzwald's letter and the resolution of the Minnesota Legislature a part of your subcommittee's hearings record in connection with H.R. 132 and related bills to provide grants for educational television broadcast facilities.

Thank you for your kind cooperation.

Sincerely yours,

ANCHER NELSEN, *Member of Congress.*

TWIN CITY AREA EDUCATIONAL TELEVISION CORP.,
St. Paul, Minn., April 5, 1961.

HON. ANCHER NELSEN,
Representative from Minnesota, House Office Building,
Washington, D.C.

DEAR REPRESENTATIVE NELSEN: As I am sure you know KTCA-TV, under terms of a grant to its board of trustees from the Hill Foundation, has pioneered in the development of a six-State educational television network. Such a network will be of inestimable benefit to the children of Minnesota and the entire area but will probably be impossible without the provision of Federal aid to educational television.

I enclose a copy of a house concurrent resolution adopted March 14 by the Minnesota Legislature which encourages the establishment of the six-State network. Similar resolutions have been passed in North Dakota and South Dakota. Similar legislation is now under consideration by the legislatures of Iowa, Nebraska, and Wisconsin. Under these circumstances may I respectfully urge you to support such legislation which, I understand, is now before the Interstate and Foreign Commerce Committee of the House of Representatives.

Very truly yours,

JOHN C. SCHWARZWALDER, *General Manager.*

STATE OF MINNESOTA LEGISLATURE

A house concurrent resolution pledging legislative interest in a six-State educational television network

Whereas the Legislature of the State of Minnesota recognizes the ever increasing value and importance of education for all the people of Minnesota; and

Whereas the Legislature of the State of Minnesota recognizes the need for increased educational resources and the need to make those resources available to all the people of Minnesota; and

Whereas the Legislature of the State of Minnesota recognizes that the use of new media such as television in education will become an important economic factor in extending educational opportunities to all Minnesotans: Now, therefore, be it

Resolved by the House of Representatives (the Senate concurring therein), That the use of educational television broadcasting should be encouraged, and, to the end that increased educational benefits may accrue to the people of the State of Minnesota, the use of educational television broadcasting should be expanded as rapidly and as fully as possible; and be it further

Resolved by the House of Representatives (the Senate concurring therein), That since it is desirable that educational opportunities at all levels be extended to all the people of Minnesota, a thorough study of the means by which sufficient additional educational television facilities could be employed to accomplish these objectives is encouraged; and be it further

Resolved by the House of Representatives (the Senate concurring therein), That in recognition of the educational benefits available to Minnesota through the further sharing of the educational resources so richly prevalent in the entire upper Midwest, the Legislature of the State of Minnesota pledges its interest and cooperation in the planning of the proposed upper Midwest six-State educational television network.

Adopted February 21, 1961.

E. J. CHILGREN,
Speaker of the House of Representatives.
G. H. LEAHY,
Chief Clerk, House of Representatives.

Adopted March 14, 1961.

KARL F. ROLVAAG,
President of the Senate.
H. Y. TORREY,
Secretary of the Senate.

JOINT COUNCIL ON EDUCATIONAL BROADCASTING,
Washington, D.C., April 3, 1961.

HON. MORGAN M. MOULDER,
Chairman, Subcommittee on Communications and Power,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN MOULDER: At its meeting on March 28, 1961, the Joint Council on Educational Broadcasting reviewed the legislation which would provide Federal assistance for the construction of educational television facilities now pending before the Subcommittee on Communications and Power of the House Committee on Interstate and Foreign Commerce.

As you know, the JCEB had the privilege of presenting testimony before your subcommittee on March 22, 1961. There are two points which we feel were not adequately covered in this testimony and we would appreciate the opportunity of having our thoughts on these subjects made a part of the record as a supplement to our previous testimony.

The first matter upon which we wish to comment concerns the advisability of using any portion of the funds which may be appropriated in this legislation for the purpose of leasing facilities. The JCEB is strongly opposed to any provision in the proposed legislation which would permit the recipients of Federal funds to use such funds for leasing facilities. We feel that to use these funds for recurring expenses in connection with a leasing arrangement would violate a most important basic principle of this legislation; namely, that none of the funds provided are to be used for operating expenses.

In taking this position, we wish to make it clear that we have played an active role in encouraging the use of closed circuit television for educational purposes. The JCEB has provided technical and informational assistance to many of these educational agencies now operating these installations. There are over 200 closed circuit installations in public schools, colleges, and universities throughout the country. Our experience in this field clearly demonstrates that they are generally small systems, usually within an institutional framework; and that they have not leased cable facilities from common carriers often due to prohibitive costs.

It is our understanding that the funds now provided in the various educational television bills which have been introduced in the Congress are to be used to stimulate educational television activities through the purchase of transmitting equipment, thus providing an incentive for State and local groups to muster the financial resources necessary for operation. We believe this is a positive and valid approach to the process of development. Conversely, we believe that to provide funds which might be used for recurring expenses would represent a serious erosion of the basic principle underlying the pending legislation.

With regard to the second matter, JCEB wishes to clarify its position with respect to the manner in which funds provided in this legislation are disbursed, and in particular the mechanism for receiving and disbursing such funds at the State level. It is our contention that emphasis must be placed upon intelligent planning for the most effective use of the funds at the State level prior to disbursement by the Federal Government.

In order to arrive at a plan which will prove responsive to the needs of various educational elements within the States, the agency which draws such a plan must of necessity be a broadly representative body. Such a body, while its exact constituency may vary from State to State, might include the State department or commission of education, public and private schools, colleges and universities, as well as community groups, corporations, and foundations organized for the purpose of providing educational television service.

To urge broad representation at the State level in connection with planning as well as the final disbursement of funds for educational television construction is altogether consistent with the broad purposes of the proposed legislation.

We would greatly appreciate it if this letter could be made a part of the record of the subcommittee's current hearings on this subject.

I am enclosing herein a list of the constituent members of the JCEB.

Sincerely yours,

DAVID C. STEWART, *Secretary.*

JOINT COUNCIL ON EDUCATIONAL BROADCASTING CONSTITUENT MEMBERS

American Association of Land-Grant Colleges and State Universities
 American Association of School Administrators
 American Council on Education
 Council of Chief State School Officers
 National Association of Educational Broadcasters
 National Education Association of the United States
 National Educational Television and Radio Center
 State Universities Association

STEPHENS COLLEGE,
 Columbia, Mo., April 6, 1961.

HON. MORGAN M. MOULDER,
 House of Representatives,
 Washington, D.C.

DEAR MORGAN: I have been following with interest the work of the Subcommittee on Communications and Power of the House Interstate and Foreign Commerce Committee as you have been conducting hearings in connection with

the consideration of legislation to provide Federal aid to educational television. I was especially pleased that you called upon Ed Lambert of the University of Missouri to testify as a witness before you.

May I add my support to this legislation which you are considering. We know that television is a powerful medium of communication. We know that this medium can be used effectively in education. We know, too, that educators will not be able to take full advantage of the medium for educational purposes unless Federal aid is forthcoming.

Television, as an aid to education, can only be justified if it improves education or makes education more readily available to greater numbers of our citizens at less cost than other methods. It is difficult for any one institution to justify the initial outlay for television equipment. However, a Federal grant would enable a more unified effort on the part of educators in the use of the medium. It is important that educators spend their efforts in utilization of the medium rather than in attempting to obtain equipment.

I hope that your committee will continue to work closely with the National Association of Educational Broadcasters, an organization which represents, I think, the best cross section of thinking today by educators who are aware of the problems associated with educational television broadcasting.

Best wishes to you.

Sincerely,

NEAL BALANOFF,

Chairman, Television, Radio and Film Department, and Director, Audio-visual Services.

(Thereupon, at 11:30 a.m., the hearing was adjourned.)



