

Senate - Interstate & Foreign Commerce
1961
In 8/3
4974
7/23/4

EDUCATIONAL TELEVISION

GOVERNMENT

Storage

Y4
.In 8/3
T 237/4/
961

HEARINGS

BEFORE THE
COMMUNICATIONS SUBCOMMITTEE
OF THE
COMMITTEE ON
INTERSTATE AND FOREIGN COMMERCE
UNITED STATES SENATE
EIGHTY-SEVENTH CONGRESS

FIRST SESSION

ON

S. 205

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

MARCH 1 AND 2, 1961

Printed for the use of the Committee on Interstate and Foreign Commerce

KSU LIBRARIES



111900 805694



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1961

EDUCATIONAL TELEVISION

AY
In 8/3
T 530/4
100

HEARINGS

COMUNICATIONS SUBCOMMITTEE

OF THE

COMMITTEE ON

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

WARREN G. MAGNUSON, Washington, *Chairman*

- | | |
|--------------------------------|--------------------------------|
| JOHN O. PASTORE, Rhode Island | ANDREW F. SCHOEPEL, Kansas |
| A. S. MIKE MONRONEY, Oklahoma | JOHN MARSHALL BUTLER, Maryland |
| GEORGE A. SMATHERS, Florida | NORRIS COTTON, New Hampshire |
| STROM THURMOND, South Carolina | CLIFFORD P. CASE, New Jersey |
| FRANK J. LAUSCHE, Ohio | THRUSTON B. MORTON, Kentucky |
| RALPH YARBOROUGH, Texas | HUGH SCOTT, Pennsylvania |
| CLAIR ENGLE, California | |
| E. L. BARTLETT, Alaska | |
| VANCE HARTKE, Indiana | |
| GALE W. MCGEE, Wyoming | |

EDWARD JARRETT, *Chief Clerk*

JOHN M. MCEHOY, *Assistant Chief Clerk*

HAROLD I. BAYNTON, *Chief Counsel*

NICHOLAS ZAPPE, *Staff Counsel*

A BILL TO REPEAL THE PROVISIONS OF TITLE 47 OF THE UNITED STATES CODE RELATIVE TO THE TRANSMISSION OF TELEVISION SIGNALS BY WIRELESS ELECTRICITY IN PUBLIC SCHOOLS AND COLLEGES AND IN ADULT EDUCATION PROGRAMS

SUBCOMMITTEE ON COMMUNICATIONS

JOHN O. PASTORE, Rhode Island, *Chairman*

- | | |
|--------------------------------|------------------------------|
| A. S. MIKE MONRONEY, Oklahoma | CLIFFORD P. CASE, New Jersey |
| STROM THURMOND, South Carolina | NORRIS COTTON, New Hampshire |
| GALE W. MCGEE, Wyoming | HUGH SCOTT, Pennsylvania |
| VANCE HARTKE, Indiana | |

Printed for the use of the Committee on Interstate and Foreign Commerce



CONTENTS

Statement of—

Aubrey, James T., Jr., president, CBS-TV network, 485 Madison Avenue, New York, N.Y.-----	Page 18
Baudino, Joseph, vice president, Westinghouse Broadcasting Co., 1625 K Street NW., Washington, D.C.-----	142
Boehm, Charles H., superintendent of public instruction, Commonwealth of Pennsylvania, Harrisburg, Pa.-----	32
Burns, John L., president, Radio Corp. of America, 30 Rockefeller Plaza, New York, N.Y.-----	77
Campbell, Edmund D., Greater Washington Educational TV Association, Raleigh Hotel, Washington, D.C.-----	125
Cooper, Hon. John Sherman, a U.S. Senator from the State of Kentucky, Senate Office Building, Washington, D.C.-----	123
Everett, Dr. J. Bernard, assistant superintendent of schools, Newton, Mass. (accompanied by Hartford N. Gunn, Jr., general manager, WGBH-TV)-----	135
Ford, Hon. Frederick W., Commissioner, Federal Communications Commission, Washington, D.C. (accompanied by Commissioners Rosel H. Hyde; John S. Cross; Dee W. Pincock, assistant general counsel; and Mr. Goldin)-----	105
Harley, William, president, National Association of Educational Broadcasters, Dupont Circle Building, Washington, D.C.-----	4
Hornung, Mrs. Robert, Greater Cleveland Television Education Association, Cleveland, Ohio.-----	83
Jorgensen, Dr. Erling, director of the Montana educational television project, Montana State University, Missoula, Mont.-----	24
Metcalf, Hon. Lee, a U.S. Senator from the State of Montana, Senate Office Building, Washington, D.C.-----	22
Robertson, James, National Educational Television & Radio Center, 10 Columbus Circle, New York, N.Y.-----	147
Schwarzwalder, John, manager, KTCA-TV, St. Paul, Minn.-----	14
Stone, Loren B., KCTS-TV, University of Washington, Seattle, Wash.-----	93
Zimmerman, Mort, president, Electron Corp., Post Office Box 5570, Dallas, Tex.-----	150
Statement submitted by—	
Dennis, Lawrence E., vice president for academic affairs, Pennsylvania State University, and chairman of the Joint Council on Educational Broadcasting, 1785 Massachusetts Avenue NW., Washington, D.C.-----	63
Fuller, Dr. Edgar, executive secretary, Council of Chief State School Officers, 1201 16th Street NW., Washington, D.C.-----	157
Hurlbert, Raymond D., general manager, Alabama Educational Television Commission, 807 Protective Life Building, Birmingham, Ala.-----	41
Jones, Laurin W., chairman, senate committee on education, State of Kansas, Topeka, Kans.-----	155
Wigren, Harold E., educational television consultant, National Education Association of the United States, 1201 16th Street NW., Washington, D.C.-----	39
Letters submitted by—	
Berry, Hardy, secretary, Montana educational television committee, Montana State University, Missoula, Mont.-----	23
Chadeayne, Henry F., executive director, St. Louis Educational Television Committee, 6996 Millbrook Boulevard, St. Louis, Mo.-----	153
Fawcett, Novice G., president, Ohio State University, Columbus, Ohio.-----	162

	Page
Letters submitted by—Continued	
Gemmill, James, president, Clarion State College, Clarion, Pa.....	161
Johnson, Howard L., executive director, Council for Educational Television Channel 6, Inc., 414 14th Street, Denver, Colo.....	44
Miles, Clarence R., manager, legislative department, Chamber of Commerce of the United States, 1615 H Street NW., Washington, D.C.....	155
Minow, Hon. Newton N., Chairman, Federal Communications Commission, Washington, D.C.....	154
Newburn, H.K., president, Montana State University, Missoula, Mont.....	23
Philpott, Harry M., vice president, University of Florida, Gainesville, Fla.....	45
Purcell, Claude, State superintendent of schools, State department of education, State office building, Atlanta, Ga.....	153
White, John F., president, National Educational Television & Radio Center, 10 Columbus Circle, New York, N.Y.....	148
Wigren, Harold E., educational television consultant, National Education Association of the United States, 1201 16th Street NW., Washington, D.C.....	38
Zimmerman, Mort, president, Electron Corp., Post Office Box 5570, Dallas, Tex.....	62
Reports from Government agencies:	
General Accounting Office, dated February 7, 1961.....	63
Department of Health, Education, and Welfare, dated March 17, 1961.....	164
Federal Communications Commission, dated March 3, 1961.....	165

EDUCATIONAL TELEVISION

WEDNESDAY MARCH 1, 1961

U.S. SENATE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The committee met, pursuant to notice, at 10:45 a.m., in room 5110, New Senate Office Building, Hon. Warren G. Magnuson, chairman of the committee, presiding.

The CHAIRMAN. The committee will come to order.

We have before us a bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs.

(The bill follows:)

[S. 205, 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 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 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.

NOTE.—Staff counsel assigned to this hearing, Nicholas Zapple.

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.

The CHAIRMAN, The distinguished senior Senator from Kansas, Andrew F. Schoepel, who is the ranking minority member of this committee, has joined several other colleagues and myself in introducing S. 205, a simple proposal designed to help activate many of the idle television channels reserved by the Federal Communications Commission for noncommercial educational purposes.

This legislation is intended to expedite and accelerate the use of television in our schools, colleges, and training programs in each of the several States and the District of Columbia. This bill passed the Senate in the 85th and 86th Congresses, but died in the House. It would allocate \$1 million to each State and the District of Columbia for the purpose of establishing or improving television broadcasting for educational purposes providing the State agrees to make available the land, buildings, and the costs of operating and maintaining the television facilities placed into operation. The money is to be used exclusively for the equipment in making available facilities acquired in educational television projects. The Federal Government intervention ends at that point.

There are two types of broadcasting encompassed in this legislation. First, the so-called open-circuit broadcasting in which the signal is sent out from a transmitter and covers a wide area; and second, the closed-circuit broadcasting in which the signal is carried by coaxial cable such as that in the Hagerstown, Md., experiment.

On April 14, 1952, the FCC set aside 242 channels for noncommercial educational stations. Now that number has been increased by the FCC to 268. Of this total, less than 55 stations are on the air today. During the same period, what has happened in other fields? Both Russia and America have placed satellites in orbit, made supersonic missiles operational, and adapted atomic propulsion to water navigation. Our travelers have become accustomed to crossing the continent in less than 4 hours and the Atlantic Ocean during daylight hours. But, much of our student population has progressed eight grades without having educational television available to them.

Experience has demonstrated that once a television station has been built, State legislatures, local educational systems, and local communities at large, have raised funds to produce the programs for the stations. Unless the Federal Government takes the initiative by contributing to construction costs, thereby forcing a breakthrough in this field, I am afraid a great educational potential, that is available through the use of the television channels, will be lost.

We have heard many times about the existing and growing problem of education. We know that there is a serious shortage of teachers and buildings and that each of these shortages grow with each passing day. Only recently in a publication entitled "Report From the Ford Foundation and the Fund for the Advancement of Education," it was said:

* * * Coupled with the rapid rise in enrollments has been an acute shortage of able teachers. Since the end of the war, the number of new college graduates entering teaching has not kept pace with the number of teachers leaving the profession, and the number of poorly qualified teachers hired each year has remained distressingly high. This shortage of well-qualified teachers has now edged its way up to the college level, where the number of new faculty members with a Ph. D is declining steadily while the number of new faculty members with less than a master's degree is rising at a corresponding rate.

The combination of a growing number of students and a shortage of able teachers has spurred many thoughtful educators to seek new ways of multiplying the effectiveness of the good teachers that are available at the school and college level lest a whole generation of young Americans be shortchanged in their education and, in turn, shortchange future generations when they themselves become teachers.

* * * One of the most promising tools for attacking many of these problems has been television, the most powerful medium of communication yet devised by man. Commercial television burst upon the American scene shortly after the end of the war, and its growth since then has been nothing less than phenomenal. Ten years ago, there were only a few thousand receiving sets in American homes. Today there are more than 50 million. Commercial television has done more to influence American culture in the past decade than any other medium of communication. For better or for worse, it has also had a tremendous impact on the education of American children.

Today the question is no longer whether television can play an important role in education. That question has been answered quite strongly in the various experiments that have been conducted thus far. The real question is how are we going to put this medium to fuller and more effective use in education.

We all know that television is a powerful means of communications. Current research and experimentation, as well as local and regional planning, reveal unlimited potentials in the future in educational television. This bill is intended to launch our country generally upon the path of bringing into our educational system the tremendous advantage and opportunity afforded by the television medium.

In these hearings the committee intends to develop a complete record. I am hopeful that every Member of Congress, and the public at large will examine the record carefully. Once they do, I am confident that we will find additional support for this legislation. We need it. We cannot afford to be too little, too late. Let us move ahead while there is time.

Most of you in the room and most of the witnesses are quite familiar with the legislative history of this proposal. The bill which was reintroduced this year, which passed the Senate unanimously last year and the year before, and subsequently died in the House, is about exactly the same in wording as we had in the last 2 years.

The committee members are quite familiar with the bill, having passed it out twice, and considered the problem quite a simple one.

This year the Senator from Kansas and myself reintroduced it with two or three sponsors. We could have had many more if we had wanted to hold the bill on the desk a while, but we wanted to

get it started this time so it could get over to the House, so the question of time won't jeopardize its passage.

Our first witness is Mr. Harley. Mr. Harley, as all of you know, is president of the National Association of Educational Broadcasters, here in Washington.

We will be glad to hear from you.

STATEMENT OF WILLIAM HARLEY, PRESIDENT, NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS, WASHINGTON, D.C.

Mr. HARLEY. Thank you, Senator.

My appearance this morning is merely to introduce for inclusion in the record two letters—two letters which I submit indicating that the support of educational television is not a partisan matter.

In preparation for our national convention last October I solicited comments from both candidates concerning their views on educational aid to television development. Both sent affirmative statements which reflect the recognition of a need of legislation of the sort which is being considered here.

I should like to read both letters.

The CHAIRMAN. I want to call to the attention of the committee that the Vice President's letter is dated October 10, 1960; Mr. Kennedy's letter is dated October 14, 1960.

Mr. HARLEY. The letter from Mr. Kennedy is as follows:

OCTOBER 14, 1960.

Mr. WILLIAM HARLEY,
*President, National Association of Educational Broadcasters,
Dupont Circle Building, 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 United States, 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.

JOHN F. KENNEDY.

The CHAIRMAN. I might say also that Mr. Kennedy voted twice for the bill in the U.S. Senate. And the Vice President of the United States has always been very helpful in suggesting that the bill be passed by word of mouth, not having a vote.

Mr. HARLEY. Now I would like to read Mr. Nixon's letter.

Mr. Nixon's letter is as follows:

OFFICE OF THE VICE PRESIDENT,
Washington, October 10, 1960.

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 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.

The letter is signed "Richard Nixon."

I submit, gentlemen, that as statements from the leaders of both political parties, these statements indicate the needs for the establishment of educational TV for the public benefit, which is recognized by leaders of both parties as an important force in the strengthening of American education and the survival of our society.

I would also like to submit a statement from our association for the record.

The CHAIRMAN. It will be received for the record.

(The statement follows:)

STATEMENT OF WILLIAM G. HARLEY, PRESIDENT, THE NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS

On S. 205, A bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs

The National Association of Educational Broadcasters reaffirms its previous statements in support of this bill, and the testimony of its president, William G. Harley, before this committee of the 86th Congress.

The need for the provisions of this bill has become more acute since it was last considered, and in further support of this proposed legislation this association herewith reemphasizes certain statements and presents additional information for the consideration of this committee in support of this bill.

The National Association of Educational Broadcasters is the senior organization in the field of educational television and radio. It is a nationwide association of universities, colleges and school systems, that use television and radio for instructional and informational purposes. In this respect and to this extent it represents American education. For 35 years this association has pioneered in the use of the broadcast media in education, and in that time has been instrumental in creating collateral organizations to meet specialized needs in the field. It was through the efforts of the N.A.E.B. that the Joint Council on Educational Television was organized to help safeguard the television channels allocated to education, and to assist in their activation. The National Educational Television and Radio Center was created at the suggestion of this association, and its educational television network services follows the pattern long established by the N.A.E.B. in educational radio. The activities of these newer service organizations are closely interlocked with those of this association.

It is with this background in the development of broadcast media for the progress and extension of education that the N.A.E.B. urges serious consideration of the educational needs which this proposed legislation would help meet.

As a Nation, we are committed to equal educational opportunity for all. Yet today in hundreds of rural areas there are no teachers qualified to teach physics, modern languages, art, music and many other urgently needed disciplines. Many paraplegics and many who are aged or infirm, or even simply ashamed to go "back to school," perhaps with their children or grandchildren, are left unserved. The millions of illiterates we have, and refugees who need to learn our language and our traditions, are unrealized resources of our Nation. The need is here. A tool is here, a powerful tool, to help solve these problems.

The crisis confronting education in this country regarding the appalling lack of facilities and teachers to cope with ever-mounting enrollments has been too well documented to need repeating here, but to cite but one such statistic: At the present rate of training teachers it appears that there will be a shortage, at least of well-trained teachers, of some quarter of a million by 1963. By increasing the productivity of good teachers, and making adjustments possible in teacher loads and functions, educational television can greatly assist with this

problem as well. However, it should be made clear that the N.A.E.B. does not promote television—or radio which it also deems important in education—as a replacement for teachers—or for space or other facilities. We need better education—not cheaper education. Television is not offered merely as a temporary expedient—regardless of how useful and efficient it is—for helping to solve the logistics problems of too many students, too little space, or too few teachers. Television is offered principally, to improve the quality and amount of good instruction which our Nation needs in so many subject areas. Television can extend the influence of good teachers. But more importantly it can contribute to the effectiveness of the teaching of all teachers and the learning of all students. As a teacher training instrument as well as for informing the citizens of America of what their schools are doing, by opening a window on the classroom through which all who will can see, television offers an additional, and promising, new dimension for education.

Educational television also stands for a type of general public 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 community. It expands the public service potential of State and Federal agencies, helping to bring the Government and its elected officials closer to the people, and the people closer to their Government. The N.A.E.B. believes the hundreds of hours of this sort of programing on the educational stations of the Nation in this regard, are eloquent testimony to the social, educational, and general public service responsibility of educational television as it is emerging in these United States. It is attracting to positions of management some of the finest educators and community leaders and adult educators of our Nation—men who see here a facility with great promise for arousing our people to intellectual and community activity—arousing the honest curiosity and eagerness to learn which has too often been forgotten in recent years, in our belief that people want only whip cream and meringue. It is a matter of record that people, common everyday people, hungry for solid "nutritional" fare of an intellectual nature, respond and are grateful, and tell their friends about this "new kind of television." Thus, the value systems implicit in commercial television in the United States find a counterbalance in the thoughtful and thought-provoking programing which characterize educational television's growing adult services.

The effectiveness of television as an instrument of education has been proved over and over again. Its economy, in comparison with out-dated approaches, is increasingly recognized. It stands ready as a tool, or geni, awaiting the support which can project it into the full usefulness of which it is capable.

There are now 52 educational television stations in the United States. Most of these are not adequately financed. But where they exist, their usefulness and economy and courage are each year building more stable support for them.

The record of educational television's contributions to education at all levels is an impressive one—wherever it exists, either on a broadcast or closed circuit basis. But it exists in all too few spots to provide the national assistance our educational effort requires now.

Two-thirds of the population of the United States has no access to educational television. All but some 25 of the great universities of the United States have no television station to help them meet their regular and adult education responsibilities. All but some 200 out of the many thousands of school systems of the Nation are years away from access to this electronic miracle unless Federal assistance is provided. Unless Federal support is provided there will be no more than some 50 to 60 educational television stations in the Nation for many years, while over 200 other frequencies, allocated for education, lie fallow. With three or four exceptions, potential State, regional and national networks will only remain unrealized dreams unless and until Federal funds are made available to construct stations to fill the gaps—the hundreds of miles which separate these pioneer islands of educational television—these lighthouse stations—from each other. Whether or not such aid is forthcoming can mean the difference between leadership for the United States and second-rate status for our Nation in education. Absence of such help can mean delay of a generation—and that may be too long. It is not necessary to remind this committee how precarious is the position of the channels allocated for educational television. Commercial broadcasters, various industries, the armed services, and a multitude of other perfectly deserving organizations remind the Federal Communications Commission periodically of the "unused resource"

contained in these channels for which funds have not been available to erect stations. They are under pressure. This pressure is daily increasing as the competition for more room in the spectrum intensifies. This bill, if approved, would give great impetus to station activation, and would announce this Nation's resolve not only to preserve but to use them for America's most critical need—for education. In many States, the use of State or 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 this bill, though not sufficient to solve this problem fully, would break this deadlock, by making State systems, capable of serving, in most cases, the majority of the population and the schools of the State, a more realizable objective.

Once such vistas are opened, with pump-priming funds made available to make a start possible, live regional networks will not be long in forming—and a live national educational network can begin to be developed. Then, at last, this Nation will have a real alternative service to the entertainment-centered and commercial-based services which are the only ones we now have in most of the country.

Events of the first half of the 20th century, marked by two World Wars, discovery of "the bomb," and culminating in space conquest, have shocked traditional education into an awareness that its problems do not and cannot end with halls of ivy and yesterday's print-based curriculums. The classroom has become the community, the Nation, the world. Schools, colleges, and universities, in an effort to preserve tomorrow's world, and make it better for our children, are trying to use every facility available to extend their area of service and their potential for usefulness.

The little band of individuals in the NAEB who, years ago, had dreams about the great usefulness of these electronic instruments for education, and fought for frequencies for education first in standard AM radio (unsuccessfully), and later in FM radio and television (the latter two successfully) offer you this tool. Not as a replacement of teachers—or of space—or of higher salaries for teachers—but in support of, and as assistance to, all the other tools and resources we can muster. And with it, is offered a growing body of dedicated members of this association also, who have learned and are daily learning to use this tool in new ways—for the good of American education. Dean Gordon Sabine of Michigan State University, said, "The educational needs of the United States have so far outstripped the educational capabilities of the Nation that we must have educational television to help us win the fight to educate a whole people. Without it, we surely are defeated."

In the past year, since the provisions of this bill were last considered, the progressive educational forces in the various localities have made substantial 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. In the United States today there are a dozen communities which are now operating an educational television station that have an urgent need for an additional channel to meet the basic needs of organized instruction. These additional channels cannot be provided without Federal assistance.

There are approximately 40 localities in the United States that have advanced plans for activating an educational television channel to meet their demonstrated and documented needs, but which cannot proceed until some additional funds are made available. There are at least 10 States which have basic plans for a statewide network of educational television stations. In every case these developments are severely inhibited or completely stalled because of the inability to pull funds away from educational operations to finance capital equipment.

The NAEB study indicates that the passage of S. 205 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 NAEB feels that approval of this bill will also be a step toward something which for many years has been close to our hearts: the development of a sound national communications policy to the end that all the broadcast media, no matter in whose hands they rest, are employed for the greatest good of the Nation and the world.

Therefore, in view of the educational needs of our Nation and of our educational system for more modern instruments of instruction; and of the potential of television as an instrument available to help solve our national educational needs now, the NAEB most earnestly urges passage of this legislation.

The CHAIRMAN. Mr. Harley, when we first approached this matter 2 years ago, how many channels had been set aside by the FCC for educational purposes?

Originally there were 242.

Mr. HARLEY. Yes, sir. And they added a few more.

The CHAIRMAN. Since that time there has been set aside 268, of which only 54 as of today are being used.

Mr. HARLEY. That is correct.

The CHAIRMAN. Two years ago, about 37 were being used. So that the percentage over the 2 years has increased hardly at all in the use of these channels, and therefore the need to do something about it seems to be much more imperative now because we have made little or no progress in the use of it.

Is that a fair statement?

Mr. HARLEY. I think it is. We have the records here before us now.

The CHAIRMAN. I think my figures are probably correct. They may be off one or two. What has been done, generally, with the 54 channels that are being used? What has been the experience of their use?

Mr. HARLEY. Once we got the stations on the air, they have become a tremendously important asset in the communities and the localities in which they have been established.

The CHAIRMAN. It has been my experience, from what you point out here, that once you get them on the air, you don't find anyone who wants to take them off.

Mr. HARLEY. This is true.

The CHAIRMAN. The value has become an established thing. The problem has been to get them on the air.

Wouldn't you say that is the whole meat of this situation?

Mr. HARLEY. Exactly. Once they can acquire the facilities to get the stations so they can operate, funds become available, the importance of this communication instrument in the community becomes manifest to a great increasing audience, and they become a tremendously vital force in that community.

So that once they get the facilities I think there is no question but what operating costs and maintenance costs will fall. But we need to get them on the air so that they can demonstrate their importance.

The CHAIRMAN. The bill provides on page 2, line 9, that before the grant could be made the State must say that they have the necessary funds to operate and maintain, as a condition precedent.

Mr. HARLEY. Yes, sir.

The CHAIRMAN. Maybe you can't answer this, but the allocation of 268 channels is spread throughout the Nation?

Mr. HARLEY. Yes, sir.

The CHAIRMAN. It is a reasonable spread. I am thinking in terms of getting this going as it should be going, with a full utilization of the valuable channels. In my opinion some day we will have the fourth network, and that will be an educational TV network. Then it will have some real value to the States, and to the Federal Government.

We were talking here one day about programs—we are all programmers—how good they are and how bad they are. Everybody has an opinion.

I believe that when you have an educational TV network as a going concern, the programing made available by such a system will have the best effect upon the other networks and lead to improvement of programs, more than anything we could do legislatively, generally speaking. That is why I asked if the allocations were pretty widespread.

Educational TV programs that are now on the air are not dull, and they are making them better. They are realizing bigger and bigger audiences all the time. That is why I am glad to see that the networks endorse this bill. Maybe they are doing it for their own self-protection.

Senator MCGEE. Will the chairman yield?

The CHAIRMAN. Yes.

Senator MCGEE. I would only want the record to show my hope expressed here, that when the fourth network comes, that this not be in lieu of professors. [Laughter.]

The CHAIRMAN. Oh, no. We will have a clause in there to protect them. We will have a labor clause to protect the professors.

Senator COTTON. Mr. Chairman, then it will be unnecessary by that time, because all the professors will be in the U.S. Senate. [Laughter.]

The CHAIRMAN. Off the record.

(Discussion off the record.)

Mr. HARLEY. May I say as an educational broadcaster that it is not our intention that our programs be merely a representation of professors on the air. As far as Federal support is envisioned here, we think it is entirely possible that we will be able to develop a national educational television network which will be not only a vital force in our society but will provide a tremendously interesting, entertaining appealing and worthwhile supplement to the fine national commercial networks.

The CHAIRMAN. And, of course, we realize it takes a lot of doing. It may be a long way off. I think it is coming. I think we need to use this medium for that, as both the leaders of the two parties suggested.

Do you have any further questions of Mr. Harley?

We discussed a lot of this on other occasions before the committee. He is very active in this work.

Senator COTTON. Just one question.

What consideration have you and your associates given to the means of popularizing the reception of educational television by the public? It has seemed to me that what the chairman said is completely correct, that the programs are not only informative but they are not dull, and that many of the people who are listening to what in the opinion of many would be termed a good deal of trash over the radio can well be converted into listeners for educational television.

I think the very term "educational television" unfortunately causes some people not to even listen to it. They visualize that it is going to be something dry and dull and they don't want to be educated.

Have you given any thought to means—once you get them listening, I think they will stay—but is there some other more attractive name for the package, a sugar coating for the pill? I am serious. It does sound humorous but it is a real thing.

MR. HARLEY. We have. This is frequently debated among educational broadcasters, as to whether some better title, less negative to some people, might be employed, such as "informational broadcasting," something of this kind.

On the other hand, many of us feel that there is widespread interest in education. Anti-intellectualism is not so strong as it was at one time. A great many people in this country are strongly motivated to acquire information and education, to take advantage of the educational opportunities that are provided by the instruments of mass communication.

We always come back to using education. But there is no question, as you say, Senator, that we need to make more people aware of the opportunity that is available to add to their information, to be entertained in a worthwhile way by means of educational television.

We are deficient in our promotion of our own activities. But the greatest way, of course, is the one that would be aided by a bill such as is now being considered here, to get stations on the air so people can see them. One of our great handicaps has been that in some of the major cities of the country we do not have a station which would showcase the products of educational television so that the people could see them and hear about them, and that this would become widespread among the Nation, and that people everywhere would like to have a similar opportunity to enjoy the benefits of educational television.

The CHAIRMAN. The Senator from Kentucky?

Senator MORTON. Perhaps you, Mr. Chairman, may have the answer to this question. It is a technical thing. How many of these channels are UHF, and how many VHF?

The CHAIRMAN. We have the list right here. Noncommercial educational reservations for VHF, 90; UHF, 178. That makes the total 268, as compared to the commercial VHF channels, 679; UHF, 1,545; 2,222 total.

So the percentage of VHF stations is 13.2, and UHF 11.5, of the total available.

Senator MONRONEY. There is a very significant vacuum in "VHF." If you look at the map where the VHF are shown, I think I am correct, from memory, you will see that from the Mississippi River, the quadrant from the Mississippi River to the Ohio River, east of the Atlantic Ocean, you have only about two or three VHF channels allocated. This is the most populous part of the country; it is an area where adult education is most necessary, and yet if you have only the UHF stations the people you are trying to reach, no matter how good your educational TV is, will not be able to receive these programs. That is one reason I think this committee should try to encourage the Finance Committee to put a waiver on the television tax for all-wave sets where the set would be purchased for educational purposes. If we would do that we would be able to make use of this vast fund of UHF channels that we have in this area. We must eventually work into receivers reception of UHF so that the marvelous educational TV which is getting better all the time can be received.

I see no reason why we should not do it. The difference in the tax if it were waived on all-wave sets which were bought for educational television use, would cause, I think, the cost of the new set to be almost the same as a VHF set which these large manufacturers seem so determined to produce. We have had this problem before us for years and years, but I don't think we have ever explored it on the basis of a waiver of tax if the person purchasing it says he is buying it for the purpose of not only entertainment but educational TV as well.

The CHAIRMAN. Some 5 years ago, you will recall, we called in all the manufacturers to a very informal meeting and asked them what they thought we could do about the problem. Of course their first answer was to take the tax off all-channel sets.

Senator MONRONEY. This I think would be one way of getting at it, where the purchaser will say that he is buying it for educational purposes, and in that event it would be waived. There is precedent for it in our special mail rates for textbooks and various other material in our postal laws. It seems to me that this might offer an avenue where refusing to give a complete exemption for all-wave sets, which the Finance Committee has declined to do, that in this type of operation you would be able to encourage a greater number of educational availabilities under your UHF stations which today are just going to waste.

Senator MCGEE. How much is that tax now?

Senator MONRONEY. Ten percent. It is just about the amount that is necessary to give an all-wave set at the same price. Say a \$250 set would be \$25. That \$25, as the set is made on the line, will just about pay for the all-wave equipment in the set.

The CHAIRMAN. The manufacturers, at the time they were in here, figured that the average production cost on the assembly line to make all-wave sets varied between \$13 and \$17, to make the set available for all channels. Take the case of Kentucky, where the only educational TV channel that is on the air is in Louisville, run by the Louisville Free Public Library, which is channel 15. If you bought a set in Louisville that is about all you could use it for is for education.

Senator MORTON. Yes. We don't have UHF commercial stations there. That is the point. That is why I asked the question of how many. You are not going to get anywhere otherwise.

I think Senator Monroney has a good idea. But I don't know that just by waiving the tax that you will get anywhere. I think we should get more channels in the VHF area.

Senator MONRONEY. That is very difficult. You get into a whole can of worms on that. We can spin our wheels as we have for 4 years trying to open up a third channel in some of our major markets. We have just gotten nowhere. This would get action. Actually, we are very fortunate in Oklahoma. We have two VHF channels and both of them are being used. By the same token, it has been so successful that they bought up bankrupt UHF stations and now they are giving courses in schools on the UHF channel and broadcasting on the VHF channel to the general public on educational TV.

If you had an all-wave set you would not only have access to the VHF channel but you would get courses, if you wished, that are being taught in the schools by the UHF stations which had been converted mainly because you could buy one or two UHF sets and teach classes in the schools this way. But you don't ever reach the general public.

If you had the waiver of tax for educational purposes then the whole general public would buy this type of set and would be able to tune in on the primary or secondary school courses that are going over the UHF channels as well.

Senator MCGEE. Would you yield for another question on that?

Senator MONRONEY. Yes.

Senator MCGEE. Would the effect of such a waiver be that of ultimately encouraging all of the producers to go to the all-wave sets, and abandon the half-wave?

Senator MONRONEY. I think that would be the logical conclusion. Certainly if we are going to waste so much air space that could be put to use, then we should be moving in this direction.

This would, I think, be one of the openings of doing it, and perhaps if there was a large demand for the UHF sets, because of the tax waiver, then perhaps you might find the manufacturers willing to standardize on an all-wave set and put some affirmative pressure behind it.

Today I feel in the hearings we had resistance and not cooperation from the manufacturers, most of them, some of which have heavy interest in ownership of VHF-channel stations. They are not anxious to see the UHF spectrum opened up because it diminishes the value of the VHF stations which some of the giants of television own, as well as owning substantial portions of some of our present television sets.

The CHAIRMAN. The FCC will testify tomorrow on all these figures. This is an advance copy. They also submitted a bill last year on all-channel sets and we have another one to be introduced by request, and we will have the whole matter before the committee.

Senator MCGEE. May I say to the Senator from Oklahoma that I think this is a most commendable suggestion. I don't see how you can lose on it. The very worst that can happen is that it will open up some additional channels. It isn't going to jeopardize anybody who is now in the operation in any serious way. To the extent that it could then lead the way to equalizing the opportunities for additional reception in Wyoming and Kentucky, it would, it seems to me, lead us to a better level in the coverage of our TV.

I don't think we have any way to go but up if we start moving in that area. I want to commend you for it.

Senator MORTON. And we should get the recommendation of the Treasury Department.

Senator MCGEE. I would think very frankly that this tax exemption is designed not ultimately to give an exemption but to serve as a club to bring some action on this; a club that may be called for because of reluctance for other reasons to go into the U.H.F. portion of the spectrum.

The CHAIRMAN. The tax in the beginning was a wartime tax. Televisions were then considered a luxury. I don't think you can convince the Americans today that the television set is a luxury.

We had the figures—this has been 4 years ago, and today there are many, many more sets—and they didn't amount to too much on the amount of tax that came in on the sets. As I said, that was 4 years ago. I guess there are something like 55 million sets out now. We

will approach that when the bill comes up. The FCC is quite interested in that, and this suggestion. We will have that bill specifically.

Are there any further questions?

Senator Engle?

Senator Engle. No, sir.

The CHAIRMAN. Mr. Schwarzwaldler is with Mr. Harley, manager of KTCA-TV, St. Paul.

**STATEMENT OF JOHN SCHWARZWALDER, MANAGER, KTCA-TV,
ST. PAUL, MINN.**

Mr. SCHWARZWALDER. Mr. Chairman, it is a great privilege for me to be allowed to speak to this committee. I am the general manager of a noncommercial educational television station in St. Paul. I have also been the project director for a six-State survey of the six States of Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, and Nebraska, a survey designed to determine whether it was feasible to initiate an educational television network in that area. I have also served as consultant very recently for the State of Kansas, which again wanted to know if it was feasible to establish a Statewide educational network in that State.

I would like to make two separate observations to the committee and then tie these together. The first has to do with programming.

I would like to illustrate what educational television can do by citing a program in my own station in which children at the fourth grade level are taught Spanish by a highly capable instructor. Some 30,000 children in 1,000 different classrooms are being taught Spanish. They are being taught Spanish by a master teacher. And among other points that I wish to make on this is that the preceding year in those same fourth grade classrooms only 59 students had any instruction in any foreign language whatsoever.

Here is one example of what this can do. Here is instruction being provided that is not otherwise or was not otherwise available at all. It is being provided by a master teacher at the highest quality level. And finally, sir, this is being provided at a total cost of a little bit less than a penny per child per lesson.

The CHAIRMAN. You could no more hire a thousand Spanish teachers in that area to teach in separate classrooms because you couldn't find that many, even if you had the money.

Mr. SCHWARZWALDER. That is correct. I am told you could not find that many Spanish teachers qualified to teach at the elementary level in the entire United States, even if you found the money to do that.

Senator McGEE. Another advantage, one of the objections that is sometimes raised to this kind of mass approach, is that you remove the individual touch, the variabilities of the teacher and the student, but in the language field this certainly is not the case. Here it is pretty much a standard approach. It has been too standard too long, I hasten to add. But the modern approach in teaching languages is quite different and it is very admirable.

Mr. SCHWARZWALDER. Absolutely correct.

One other point that might be made: Someone suggested that one of the problems in educational television might be to make these programs more popular. The young man who teaches the Spanish

course devotes a good deal of his time to visiting the schools. He is known to the children as "Don Miguel." When he comes into the schoolrooms, school practically lets out. They flock around; they want autographs. He is an extremely popular figure, too.

The CHAIRMAN. That is the problem we mentioned here earlier.

Senator MORTON. Sure, he will run for the Senate. [Laughter.]

Mr. SCHWARZWALDER. I believe that has been given some consideration, Senator.

Senator McGEE. If you could get Captain Kangaroo to take on one of these assignments, we would make real inroads.

Mr. SCHWARZWALDER. This is one example of these programs, Mr. Chairman.

But the second point is that in the course of developing these networks we run into a number of problems. One of the problems can be illustrated by a talk that I had about a year ago with certain officials of the University of North Dakota, which is located in Grand Forks, N. Dak. While there is an excellent reservation—I believe channel 2 is reserved for that area—the officials seem to feel that it would be difficult for them to provide a program schedule of, say, 30 hours a week, which would be worthwhile. I pointed out to these officials that if there were a network connection, that in this 6-State region they are operating educational stations in Milwaukee, Madison, the Twin Cities, Des Moines, and in Lincoln, Nebr. If only 5 or 6 hours of those programs could be put on a network, this in itself would make a 30-hour or 25-hour program week for this station in North Dakota. Then the university could add its own programs.

These officials said for the first time they began to see that it was possible and practical for them to activate this very fine channel reservation which they have up there.

The CHAIRMAN. Aren't you making a further point by indirection here; that to get this sort of thing you have got to have more educational channels to make it feasible economically?

Mr. SCHWARZWALDER. This is perfectly true.

The CHAIRMAN. I mean on the air. You have to have them on the air.

Mr. SCHWARZWALDER. Exactly.

The CHAIRMAN. If you get enough of them, the cost is spread more, and I don't see why they wouldn't all be in it. If you had every educational channel operating in the area you are talking about, your network thing from your experience would be simple.

Mr. SCHWARZWALDER. It would be very simple indeed.

I might add that this is becoming more and more widely known. For example, the Senate of the Legislature of North Dakota recently passed a bill expressing interest in joining this six-State network, and including certain monetary provisions. The education committees of both the senate and the house in the South Dakota Legislature either have reported out or are about to report out a similar resolution. The House of Representatives of the State of Minnesota has taken similar action.

Legislation will shortly be introduced into the Iowa and Wisconsin Legislatures. Certain legislation has already been introduced into the Nebraska Legislature.

I had a chat just before I came here, 2 days ago, by telephone with the legislative interim committee chairman, Senator Jones, of Kansas. They are about to introduce similar legislation in Kansas.

But, while these States generally feel they can do the operating costs, and while the number of stations, as the chairman points out, involved would make the operating costs for each station come down to a minimum, the construction money, the money to activate these networks, to get the microwave stations to connect one station with another, is desperately needed, and in my opinion based on what I know of this particular region will not be supplied by the States.

The CHAIRMAN. This is the same principle as the school construction bill. It is just using another medium.

Mr. SCHWARZWALDER. Exactly.

Senator MORTON. If we pass this, we might not have to have school construction.

Mr. SCHWARZWALDER. These are the two points I wanted to make. First the providing of education, and language was my example. I could go on about fifth grade science, which is not available at all in rural areas.

Secondly, the fact that this education can be, by means of networks and additional activation of educational stations, provided to almost all the people of these areas, and provided easily. But that in order that this might be done, there will have to be some sort of aid to the States in terms of construction facilities.

The CHAIRMAN. You, of course, know that the bill is never intended for a continuing thing. It is an attempt to stimulate the use of the unused channels because only 55 of 268 are now on the air. We have a provision in the bill limiting the granting authority to a period of 5 years. We think this will be the shot in the arm to get it off the ground, and we don't intend to go any further with it.

Don't you find that where you have opposition that you have to sort of convince those who are opposed. This is not a substitute for the classroom; it merely supplements the conventional teaching techniques. It also serves adults more so than the children in regular schools. It is not a substitute for regular classroom teaching, but merely supplements, and that once the system gets going the public will appreciate it.

Mr. SCHWARZWALDER. Perhaps the best commentary on that is that in each of these stations I have mentioned—Milwaukee, Madison, the Twin Cities, Lincoln, Des Moines—each has gone on with a relatively limited and modest number of program hours—in our own case, 20 hours a week. We are now programming 55 hours a week.

There has been continual growth and continual support once the station is on the air. It is that initial getting things on the air, it is that initial interconnection which is the difficult thing. This is where we need help.

The CHAIRMAN. I know of no case—and I have kept pretty close track of it—where a State legislature has endorsed this program, in some cases with even a small appropriation in principle, that they have ever changed their minds.

Mr. SCHWARZWALDER. I know of no such case.

Senator MONRONEY. Are you still getting a little trouble in some of the States where the private television people are trying to pirate the remaining VHF channels that have not yet been activated? We have urged the FCC to resist this pirating because once it is taken over privately you will never get another VHF channel back, unless we open up UHF channels. We will have closed and locked the door to the air schoolroom and thrown the key away.

Mr. SCHWARZWALDER. I do not know of any attempt to take away—in this area I have been talking about—a reserved channel for education.

I do know of instances, and I suspect that there will be more in the future, where education, in order to provide a statewide coverage, will probably have to get into the matter of applying for unused VHF channels which were not originally assigned. This is going to be one of the problems we are going to face in the immediate future.

I must, however, say now that in this area of which I speak, the cooperation from commercial broadcasters has been great, financially, and in every other way. For example, on March 17, this month, the two commercial channels in Duluth are preempting their national time in order that they may have local leaders—and I will go up for that myself—talk to the people of Duluth about the necessity of activating channel 8 up there. They are giving this time, both stations, in order that this may be done. I could go on with other matters of gift, money, equipment, and advice. They have been very cooperative.

Senator MONRONEY. They have in my State as well. Some of the first funds used to establish television came from one of the large television stations, the commercial station there, and made possible the city going on the air. It came from KWTX-TV. Mr. Gaylord is the head of that.

I am getting comments from stations which covered large areas of the State but are located in small cities. They have quite a great difficulty selling morning or early afternoon time. These men told me that if the basic overhead of filling the air time, the electric bill, things of that kind, could be paid, they could extend the statewide network to include the VHF stations. They have a good circulation but not being in a major market they find it difficult to have sponsored time. They would be very happy to carry over their VHF channels now and join any educational network.

I wonder if you find that true in other parts of the country, that here is some station time that would be given except for the basic cost of putting the program on broadcast to carry educational TV.

Mr. SCHWARZWALDER. This has come up in various places, Senator, and as a temporary matter I would be much in favor of it. I would expect that stations generally, commercial stations, they are in business and ought to be in business, of course, to make a profit. Eventually there will be morning time or that these stations will be able to sell to make use of, which would mean this sort of thing would be a temporary expedient. But as a temporary expedient in areas which have large scattered populations—small populations over a large area—as an expedient this is certainly a useful thing from time to time.

Senator MONRONEY. Sometimes the areas that these people serve are in the areas that would be less likely in the immediate future to have a television station or network station purely educational.

The CHAIRMAN. Surely there would be no restriction on an educational TV group or a university, or a school, in some cases paying a small amount to use a commercial station, and that had been done.

Mr. SCHWARZWALDER. This has been done.

Senator MONRONEY. There is another outlet for the network. In other words, if you can hook 8 or 10 stations in the network, as the chairman said, and as you said, it would be much less costly for each outlet.

Mr. SCHWARZWALDER. In one case on the proposed network a commercial said that if it could have access to these educational programs, which it would put on individually on tape recording and then would replay—for example, on Saturdays and Sundays—that it would be willing to pay a sum to get work for the privilege of using these educational programs at a later time over their own channels.

And this also brings out the point, Mr. Chairman, that the big cities, where VHF channels have been assigned, have activated for the most part the educational stations. It is most difficult, however, for rural areas to do this.

Here again we have in our own State of Minnesota, in the western part of the State, a fine reservation, channel 10. But the area, the largest town in the area, is a town of perhaps 4,000 or 5,000 population. That channel probably will not be activated unless a bill like the one proposed here passes through.

The CHAIRMAN. Are there any further questions?

If not, thank you very much. We appreciate your coming and testifying.

Mr. James Aubrey, president of CBS Television Network.

Mr. Aubrey has a short statement. We will be glad to hear from him.

**STATEMENT OF JAMES T. AUBREY, JR., PRESIDENT OF CBS
TELEVISION NETWORK, NEW YORK, N.Y.**

Mr. AUBREY. 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 noncommercial 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 noncommercial 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.

The CHAIRMAN. Jim, would you care to express an offhand opinion on what the general cost would be to provide the facilities for a VHF channel, a general educational channel? I mean just general. Would it be a half million dollars?

Mr. AUBREY. We would estimate, approximately, according to our engineering group, approximately a half million dollars to put the station on the air.

The CHAIRMAN. Approximately a half million dollars or more?

Mr. AUBREY. That is correct.

The CHAIRMAN. That would be the minimum?

Mr. AUBREY. Yes.

The CHAIRMAN. To have the right kind of equipment?

Mr. AUBREY. \$400,000 to \$500,000, I believe.

The CHAIRMAN. Thank you. The UHF would be somewhat cheaper?

Mr. AUBREY. I believe that is correct.

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 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.

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 programming, 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 programming 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 programming lurks in the background.

Thank you.

The CHAIRMAN. I think it is very fine, Mr. Aubrey, and the committee appreciates it. I think what you point out is so true, that this never becomes apparent to the public before the fact. It seems that after it is on the air they take well to it.

Secondly, when you mentioned the million dollars for each State, including the District of Columbia, of course in this particular case I appreciate that there may be some suggestion made that the State of Nevada won't need as much as the State of New York. But we have provided, I think, the safeguards, that whatever project they have in mind it would have to be cleared, and maybe some smaller States won't need the full amount. I would rather say that it provides a minimum of a million dollars for each State to get off the ground. Other States will have to do a lot more than a smaller State. It is also true, isn't it, that although it is needed nationally, it is most needed in the smaller States where distances are great.

I want to compliment CBS, as well as the other networks. I think you have all been very helpful in trying to help get this thing moving. You have given a lot of time, too. I am sure that you have said on many occasions, as well as the other networks, that some of the good documentaries that are produced by the networks would be available for later use on these educational TV stations; and some of them are very good.

Mr. AUBREY. Thank you, sir.

The CHAIRMAN. Are there any questions?

Senator MONRONEY. I want to join with the chairman in complimenting you not only on your statement but on the help and service that you are giving for professional guidance to some of these new stations.

On page 3 in your statement you say :

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.

This is particularly gratifying, having you suggest that even beyond the cut-and-dried educational classroom teaching and programming that you see an opportunity perhaps to put programs into an educational network that could not perhaps at the present time go on a na-

tional commercial network. Would this include such things as opera or cultural drama and things of that kind as well?

Mr. AUBREY. In our opinion it certainly would.

Senator MONRONEY. I am delighted to hear you say that. I was afraid that some of us felt that the program of educational television might need to be beefed up a mite by things of not strictly academic courses, but with a cultural appeal, would also belong eventually in this field, or at least would find some expression in this field.

I think this is an area where unusual cultural programs could be used to attract new enrollees into the classrooms of the air. They would be attracted by having been brought to the unusual program of the educational network and stay to take advantage of the other programs.

The CHAIRMAN. Are there any questions by the Senator from California?

Senator ENGLE. No, sir.

The CHAIRMAN. Thank you, Mr. Aubrey.

Senator Metcalf is here, the Senator from Montana.

We will be glad to hear from him.

I believe you have a guest with you, Mr. Jorgensen, director of the Montana educational television project at Montana State University, at Missoula; is that correct?

STATEMENT OF HON. LEE METCALF, U.S. SENATOR FROM THE STATE OF MONTANA

Senator METCALF. Yes, Mr. Chairman. I have an expert witness. The CHAIRMAN. We will be glad to hear from both of you.

Senator METCALF. Mr. Chairman, I am appearing on behalf of Senator Mansfield and myself. My statement in support of S. 205, which I cosponsored, will be brief.

I have an expert witness, Dr. Erling Jorgensen of Montana, director of the Montana educational television project. He will testify and tell how important passage of this bill is to our State and to the Nation.

Dr. Jorgensen will also be able to answer many of your questions and tell you about the problems and potential of educational television in other parts of the country.

He recently studied ETV in 43 areas of the United States, in connection with his studies, under a Ford Foundation grant, of possible future use of TV in lower, higher, and adult education.

Thanks to the planning for educational television conducted in my State by Dr. Jorgensen and his associates, Montana would be able to move quickly into this important educational field, if S. 205 becomes law.

I am afraid this would not be the case, however, if the bill were amended to require matching funds. Requirement of matching funds would effectively deny, or postpone for a considerable length of time, the benefits of this law in many States.

Mr. Chairman, I would like to include, at this place in my testimony, a letter in support of S. 205 which I have received from Dr. H. K. Newburn, president of Montana State University. He formerly was president of the Educational Television and Radio Center. It is his

opinion that passage of S. 205 would provide Montana an opportunity to make a significant breakthrough in education.

I also would like to have included in the record a letter in support of S. 205 received from Mr. Hardy Berry, secretary of the Montana ETV Committee.

The CHAIRMAN. We will put those in the record at this point.

(The letters referred to follow:)

MONTANA STATE UNIVERSITY,
Missoula, Mont., February 22, 1961.

HON. LEE METCALF,
U.S. Senate, Washington, D.C.

DEAR SENATOR METCALF: Montana University supported efforts to reserve television channels for the use of education in Montana. The university has also been active in the formation of the Montana ETV Committee which has as its purpose the study of the potential of educational television for improving the quality of education in our schools and colleges. The university has invested approximately \$35,000 in television studio facilities with the idea that these facilities can serve, in addition to the professional training of students of broadcasting, the campus generally as a center for the production of closed-circuit teaching. The university is currently exploring a cooperative plan for the introduction of televised instruction in a foreign language or the sciences in the elementary schools of Missoula.

Montana State University has experimented with this medium on a very limited basis. It has been hampered by a lack of funds to purchase the necessary equipment for distribution and reception of TV teaching in its classrooms.

The provision of Federal support for transmission facilities including closed-circuit television in Senate bill 205 of which you are a cosponsor will provide for the State of Montana an opportunity to make a significant breakthrough in education.

Television offers many possibilities for service in education. Internally, closed-circuit TV offers the university the possibility of meeting some of the problems of increased enrollment by spreading the influence of its superior instructors over larger numbers of students. The use of commercial television stations for the transmission of educational programs is another immediate possibility. Capital costs for such programs are high. The availability of Federal funds could, within the economic limitations of the university's operating budget, make possible considerable development of these possibilities.

I urge the passage of S. 205. My experience as former president of the Educational Television and Radio Center and as former president of the University of Oregon has convinced me that the promise of television for education is great indeed, particularly in qualitative improvements. I have urged educators to step up the intensity and the timing of their efforts to determine in just what way this new means can best be utilized in the service of education. People will be educated by viewing the television screen whether the educator wills it or not. Such education will be much more effective if it is the result of careful study, experience, and experimentation designed to make optimum use of the medium.

Sincerely yours,

H. K. NEWBURN, *President.*

MONTANA EDUCATIONAL TELEVISION PROJECT,
MONTANA STATE UNIVERSITY,
Missoula, Mont., February 24, 1961.

SENATOR LEE METCALF,
U.S. Senate, Washington, D.C.

DEAR SENATOR METCALF: The membership of the Montana Educational Television Committee represents higher, secondary, and elementary education in the State of Montana. Its membership includes the State superintendent of public instruction and the executive secretary of the University of Montana which consists of the six institutions of higher education in the State. Membership of the committee comes from widely scattered parts of the State.

The committee has studied the various bills before the U.S. Senate and House of Representatives proposing Federal support in the construction of educational television facilities.

The committee supports the proposals contained in Senate bill 205 of which you are cosponsor with Senators Magnuson, Schoepfel, and Cooper; and in House bill 965 sponsored by Congressman Harris.

We urge passage of these measures which will greatly speed the development of educational television in Montana to the great benefit of Montana's schools and colleges and the general public.

We believe that the matching provisions proposed in House bill 132 sponsored by Congressman Roberts would penalize such States as Montana.

We believe that educational television offers the schools and colleges of Montana an opportunity to improve the quality of education offered their students and economically to extend the benefits of enriched curriculums to the hundreds of rural schools.

We urge your support of these measures in the interest of the future of the State of Montana.

Respectfully,

HARDY BERRY, *Secretary.*

Senator METCALF. My State, the State university system, and the State board of education, have been doing spadework on ETV over a period of years. We have a lot of the necessary plans, enthusiasm and know-how. Passage of S. 205 will be a milestone in the progress of both education and television.

And now, may I present Dr. Jorgensen.

The CHAIRMAN. Doctor, we will be glad to hear from you.

STATEMENT OF DR. ERLING JORGENSEN, DIRECTOR OF THE MONTANA EDUCATIONAL TELEVISION PROJECT, MONTANA STATE UNIVERSITY, MISSOULA, MONT.

Mr. JORGENSEN. Thank you, Senator.

It is an honor to be here and to be introduced by our Senator from Montana, who has been a staunch supporter of education in many respects in the past years in the House.

The CHAIRMAN. He was a staunch supporter in the House and now in the Senate. The chairman can personally testify to that.

Senator METCALF. Thank you, Senator.

Mr. JORGENSEN. I have a statement here, which, if you concur, I would like to have go in the record, and I will extrapolate from it some of the high points.

The CHAIRMAN. Very well. It will go in the record in full.

(The statement referred to follows:)

STATEMENT OF DR. ERLING S. JORGENSEN, DIRECTOR, MONTANA ETV PROJECT, MONTANA STATE UNIVERSITY, MISSOULA, MONT.

I am Erling S. Jorgensen, director of the Montana educational television project, a project of the Montana Educational Television Committee. I am on leave from my position on the faculty of Montana State University where I am an associate professor of journalism in charge of teaching in radio and television and director of radio-television studios. I have worked in radio and television for the past 15 years. I have been associated with educational radio and television for the past 10 years at the University of Nebraska, University of Wisconsin, Michigan State University, and Montana State University. I obtained my undergraduate and graduate degree, at three institutions which have pioneered in educational radio and television, the University of Iowa, University of Minnesota, and the University of Wisconsin.

The Montana Educational Television Committee consists of the executive secretary and representatives from each of the six units of the University of Montana, the State superintendent of public instruction, and six representatives of elementary and secondary education and a lay citizen. The 15 members of

this committee are studying the potential uses of television in Montana education, planning for 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 take a leave from my teaching duties to devote full time to research and development of a plan for the future use of TV in lower, higher, and adult education in the State. The report of this year's research will be published at the end of this summer.

I believe that your committee and the Senate should act favorably on Senate bill 205 for this basic reason: Montana needs the help of the Federal Government to develop educational television as a solution to many of the problems which face its schools and which will soon become overwhelming if they are not solved.

Allow me to refresh your memories about the dimensions of the State of Montana.

Montana is vast in size and has a small population. Its area is 147,138 square miles, greater than the combined area of the New England States, New York, New Jersey, and Delaware. While it ranks fourth in size among the 50 States, Montana is exceeded in population by 40 States and the District of Columbia. The population of this huge State is only 674,767 persons, less than the population of Washington, D.C., about the same as Pittsburgh or New Orleans. The average density of population is 4.6 persons per square mile, compared with an average of almost 51 persons per square mile in the United States.

Montana's population is distributed quite unevenly, with the more rugged mountain areas in the western portion, and the plains areas in the eastern portion having the lowest concentrations of population. Population in the State tends to cluster in the valleys of the west and on the major rivers in the east.

According to the Bureau of Business and Economic Research of Montana State University, in 1960 for the first time in history, more than one-half of the State's citizens live in urban areas. The proportion of urban residents will undoubtedly continue to increase as the State's larger towns and cities absorb population from the rural areas. The four largest counties in Montana contain 36 percent of the State's population. Only two of these counties have large enough populations to be classified as metropolitan areas as defined by the U.S. Census Bureau.

Montana's schools vary greatly in size and educational opportunity. As an example, Missoula, a city of approximately 33,000 has a county high school with an enrollment of about 2,000. Students travel to and from Missoula County High School from as far away as Seeley Lake, a journey which takes 2 hours by schoolbus each way. The five largest cities have one-third of the total elementary and high school enrollment.

More typical of the State are the many very small and isolated schools. Some of the elementary schools are as small as two or three students and one teacher. There are 851 1- and 2-room schools in Montana. Seven hundred of these are one-room, one-teacher schools. High schools with fewer than 50 students are not uncommon—45 of the State's 192 public and private high schools are this small. The State's 1,209 elementary schools outside of the 5 principal cities range in enrollment from 2 to 850. High schools range from 10 to 1,280 outside of those in principal cities. The total State elementary enrollment in 1960-61 is estimated at 110,800; high school enrollment totals an estimated 36,700.

Many schools in Montana are isolated by rugged terrain and considerable distance from population centers. They are frequently understaffed and under-equipped. Their curriculums are necessarily limited. The economic base upon which these schools rest is a significant factor in the consideration of Montana's educational problems. Montana has very little industry. Large portions of the State are included within the limits of Federal forest lands. School support depends almost entirely on the limited ability of individual taxpayers. As a consequence, the number and training of teachers, laboratory facilities, and curriculums of many Montana schools are limited.

Three factors contribute to the seriousness of Montana's educational situation: Growing enrollments, decreasing numbers of teachers, and increasing growth of knowledge. We have been told by the U.S. Census Bureau to expect 32,000 more students in our private and parochial grade and high schools in the next 5 years. It is estimated by the Bureau of Educational Research at Montana State University that our public schools alone can expect 20,000 more

students by 1966. One-half of this increase will come in five or six counties having urban areas. We can expect an average of 5-percent increase in our high school enrollment each year for the next 5 years.

Compounding the coming increase in students in the declining number of teachers entering the profession. Only one-half of the teachers we train in Montana's colleges stay to teach in Montana. In 1958-59 we trained a total of 216 new elementary teachers in the State. That same year there were 349 vacancies or 133 more than the supply. What happened, of course, was that our schools hired fewer teachers than they needed, hired persons with only temporary certification and, I'm sure, retained a number of unqualified teachers.

The third great factor coming to focus in the coming years is the increasing demand being made on our schools and our teachers to teach more subject matter. Knowledge is increasing, particularly scientific knowledge, at a tremendous rate. We know more should be done in foreign language instruction which now is barely being touched by our schools. Mathematics instruction is becoming more and more important as are the social sciences and the arts. Our society demands a better educated youth. The trend is for greater demands in the future.

In the face of this three-dimensional problem, it is providential that we have at our disposal, if we but choose to use it, a medium which is regarded by many of our leaders in education as the most important single development in teaching in the past 100 years.

In the course of my research this year, I have visited about 30 cities in which ETV is being used in schools and colleges. In addition, I have studied the results of ETV experimentation reported by several dozen more institutions. I have seen a wide variety of applications of educational television ranging from uses in the primary grades to applications at the collegiate and adult education level. I have found only one instance where TV's use has been curtailed after its beginning. All the rest have increased its use based on results which have shown it to be beneficial and economical.

In very brief summary, these are some of my conclusions about television's use in education:

1. TV is an effective device for improving the quality of formal courses of instruction.
2. TV is effective in spreading the influence of good teaching over large numbers of students.
3. Adaptations of television instruction can successfully be made for all age levels, at all levels of instruction from informal to formal.
4. TV can provide resources otherwise unavailable for use in the classroom.
5. TV is an important inservice training device for teachers.
6. TV can create an effective tie between the public and the schools.
7. TV offers an effective means of bringing improved curriculum to rural and small schools.
8. TV is welcomed by classroom teachers when they are included in planning for its use and they have opportunity to feed back information from the classroom to the TV teacher.
9. Acceptance by the classroom teacher is an important influence on the attitude of students toward TV instruction.
10. Television can multiply the effect of mediocrity as well as excellence and thus demands the best teaching in order to be justified.

11. Various levels of economic efficiency are reported by users of instructional television. These range from reports of large savings in capital expenditure to reports of improved instruction at less than conventional costs.

12. Adult education and cultural programming for minority audiences are valuable parts of the programming of educational television stations to the community.

What can Federal support of ETV for the acquisition of capital equipment mean for the State of Montana and other States with similar educational problems? It can mean the removal of one of the most difficult obstacles to the development of a statewide ETV service. Montana has difficult economic problems. These are currently the subject of considerable controversy in the Legislature of Montana and they are having great impact on education in our State. There is considerable pressure to maintain current levels of expenditure while meeting the demands of increasing enrollments and improved curriculums. There are demands for the reduction of duplication among the offerings of the six units of Montana's higher educational system.

I believe that television can be an effective means for solving these problems. It is not the only solution nor the total solution, but it can contribute greatly. Should Federal funds become available, the development of ETV in Montana will be a giant step closer to being realized.

Montana has six channels reserved for educational use. Five of these are VHF and are located in Miles City, Billings, Bozeman, Butte, and Missoula. The sixth is a UHF channel and is located in Great Falls. The Montana ETV Committee is now planning to request the reservation of other channels in the State for future inclusion in a State network.

Montana State University and Montana State College have considerable investments in TV studio equipment. These are capable of originating television programs with the addition of transmission facilities.

The College of Great Falls has broadcast courses for credit over the facilities of KFBB-TV in that city for several years with such success that enrollment has had to be limited by the instructor's ability to read and correct papers written by the TV students. The passage of Senate bill 205 will give added impetus to these beginnings.

Attached as appendixes to this statement are a map and some population and cost figures. These are indicative of how a network of educational television stations combining high and low power broadcast transmitters and translators could be devised to reach 75 percent of the population of the State at a cost of roughly \$920,000. This cost would include all the capital costs necessary for production, relaying, and transmission of educational programs. Such a network would include three production studios, the two already in existence at Missoula and Bozeman plus one at Helena.

I urge the passage of Senate bill 205 as a means of assistance to States such as Montana where there are many physical and economic problems in the development of television as a means of improving education at all levels. Such assistance becomes even more important when it is realized that such States as mine need more help than do the smaller, more populous and wealthier States to the east and west of us. Without such assistance, most of Montana will be left without the benefits this medium can bring to its schools.

I am confident that this measure and its companion measure in the House, H.R. 965, will, if passed, be of tremendous significance in the development of better education for more students over the entire Nation.

APPENDIX

Location of transmitter	Population covered	Percent of State total	Cost	Power (E.R.P.)	Height in feet
Broadcast stations:					
Billings.....	87,090	12.9	\$60,000	18 kilo-watt.	500
Bozeman.....	19,274	2.8	25,000	800 watts	300
Butte.....	74,607	11.0	25,000	800 watts	800
Great Falls.....	79,976	11.9	60,000	18 kilo-watts.	500
Havre.....	12,578	1.9	25,000	800 watts	300
Helena.....	24,255	3.6	25,000	800 watts	300
Kalispell.....	20,568	3.0	40,000	5 kilo-watts.	350
Miles City.....	19,480	2.9	60,000	18 kilo-watts.	800
Missoula.....	42,946	6.4	25,000	800 watts	300
Translators:					
Broadus.....	1,284		5,000	10 watts	
Circle.....	2,219		13,000	100 watts	
Conrad-Choteau.....	8,902		13,000	100 watts	
Dillon.....	5,163		13,000	100 watts	
Ekalaka.....	1,348		5,000	10 watts	
Glasgow.....	14,003		13,000	100 watts	
Glendive.....	9,508		13,000	100 watts	
Hamilton.....	11,039		13,000	100 watts	
Lake County (2).....	12,429		18,000	100 watts and 10 watts.	
Lewistown.....	10,986		13,000	100 watts	
Livingston.....	8,605		5,000	10 watts	
Philipsburg.....	1,673		5,000	10 watts	
Red Lodge.....	3,306		5,000	10 watts	
Roundup.....	4,175		13,000	100 watts	
Shelby-Cut Bank.....	11,299		13,000	100 watts	
Sidney.....	9,952		13,000	100 watts	
Wolf Point.....	4,836		13,000	100 watts	
Totals:					
Broadcast stations.....	380,774	56.4	345,000		
Translators.....	130,722	19.3	186,000		
Microwave relay.....			239,000		
Studios.....			110,000		
Production and maintenance capital equipment.....			40,000		
Total.....	511,496	75.7	920,000		
Total State population.....	674,767				

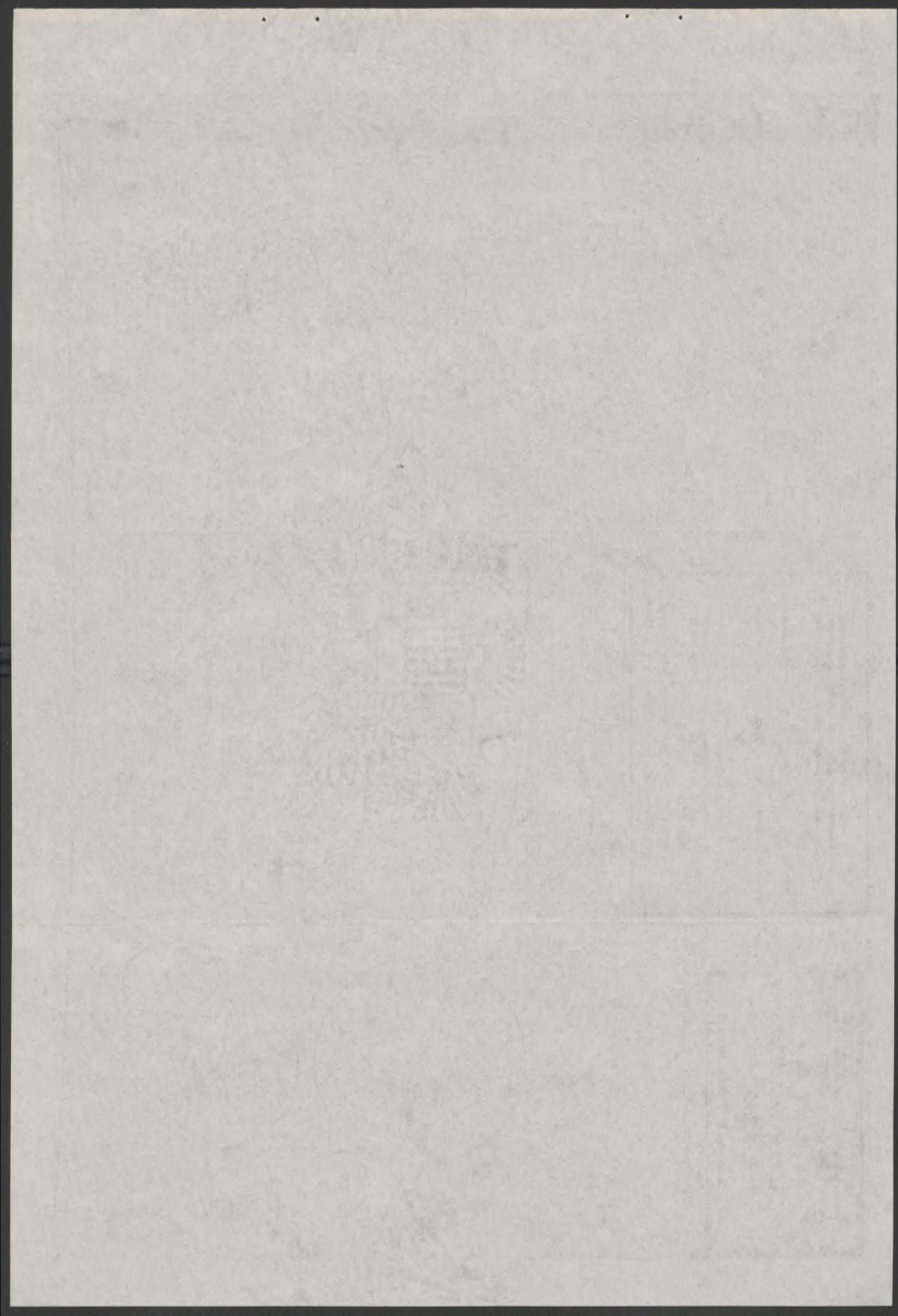
NOTE.—Population figures from 1960 final report of the Census Bureau.

Mr. JORGENSEN. The crucial point in Montana is what can S. 205 and Federal support for capital equipment do for our State at all levels of education—elementary, secondary, and higher.

It can mean the removal of one of the most difficult obstacles to the development of statewide ETV services.

Montana, I am sure you are aware, has many small schools. Seventy-two percent of the public schools in Montana have enrollment of 1 to 42 students. We have over 851 one- or two-room schools still operating in our State. This, despite the fact that there are strenuous efforts to consolidate. We are the fourth largest State in the Union, exceeded only by Alaska, Texas, and California in size, and have a total population of approximately two-thirds of a million persons, 674,000—some, to be exact.

Montana has, in addition, economic problems. They are currently the subject of considerable controversy and debate in the State legislature, and they are having great impact on education in our State. There is considerable pressure to maintain current levels of expenditure while meeting the demands of increasing enrollments and improved curriculums.



I believe that television can be an effective means for solving these problems. It is not the only solution, nor the total solution. But it can contribute greatly.

Should Federal funds become available, the development of ETC in Montana would be a joint step closer to being realized.

We have great potential in our State in the fact that there are six channels reserved for education. Five of these are VHF, located along the central line of Montana, Miles City, Billings, Bozeman, Butte, and Missoula.

The sixth is a UHF channel in Great Falls. Ironically, Great Falls is the largest city in Montana, a city that has been doing for the longest period of time educational television on a commercial station.

The Montana TV Committee is now planning to request the reservation of other channels in the State for future inclusion in the State network to give greater coverage to our population.

We have already operating at the State university and at the State college TV studios with considerable investment in TV studio equipment.

In the case of Montana State University, the investment is about \$35,000.

The CHAIRMAN. Let me ask you, to get to the meat of it, and I know this territory fairly well: You now operate the station at Missoula?

Mr. JORGENSEN. I beg your pardon. We do not have a station. We have a studio.

Senator METCALF. At the university.

Mr. JORGENSEN. We have no transmitter.

The CHAIRMAN. You have no transmitter at all? It is a closed circuit?

Mr. JORGENSEN. Yes, sir.

The CHAIRMAN. How far does that extend in area?

Mr. JORGENSEN. It extends a great distance—about 25 feet. It is currently being used for the training of students in television production.

The CHAIRMAN. If you are going to have any modicum of statewide coverage, are there sufficient channels to do so?

Mr. JORGENSEN. Not completely. But with the addition of perhaps one or two we can cover perhaps 75 percent of our State.

The CHAIRMAN. You have fairly broad coverage?

Mr. JORGENSEN. We would have, yes, with the stations.

The CHAIRMAN. That would require, of course, some kind of a State network, wouldn't it—

Mr. JORGENSEN. Yes, sir.

The CHAIRMAN (continuing). Where you could connect them up? But it would also require, in Montana's case, probably about \$2½ million to get them going, wouldn't it?

Mr. JORGENSEN. I have attached to this statement a map, and an appendix, which will give you an idea of what our engineer tells us can be done for \$920,000. This is transmission facilities only. It does not include housing them, nor does it include working the way to maintain tops, furnishing power and so on. These are transmission facilities.

The CHAIRMAN. You have an engineering problem, as we have in my State?

Mr. JORGENSEN. Yes, sir.

The CHAIRMAN. The point I am trying to make is that in discussing the details of this bill, here is a State with comparatively small population, in which the million dollars is not going to do the job at all.

Mr. JORGENSEN. We can reach, we think, about 75 percent of our population with a million dollars.

The CHAIRMAN. But it is true that here is a comparatively small State in population in which this is not a substantial amount at all.

The point I make is that there have been some skeptics about spending a million dollars, say, in small States.

These are the ones which need it the most.

Mr. JORGENSEN. This is the sort of thing which would be seed money, so to speak.

The CHAIRMAN. That is what we call it out there, a little seed money. Hoping the political weather is right so that the seed will grow.

Mr. JORGENSEN. The people in the State of Montana, even the educators, have just barely begun to learn of the potential of educational television. One of the ways that television can grow, educationally, is for there to be something for them to see in operation. And certainly the provisions of this bill would allow a demonstration of the potential.

This operation that is outlined on this map, in the final portion of the statement, does not merely include transmission stations of the normal broadcast type. We have taken into account the use of translator stations, which are very applicable in a region such as ours, where there is a sparse population.

The CHAIRMAN. Boosters.

Mr. JORGENSEN. The point is that even a million dollars will be a very substantial aid in the development of educational stations in Montana. This will include I think the cost of relay equipment, so that the State college and the State university could be linked and could almost immediately begin to originate programs since they have production facilities.

The CHAIRMAN. You have the Montana School of Mines?

Mr. JORGENSEN. At Butte, yes, sir. There are six units in the university system.

I urge the passage of S. 205 as a means of assistance to States such as Montana, where there are many physical and economic problems in the development of television as a means of improving education at all levels.

Such assistance becomes even more important when it is realized that such States as mine need more help than do the smaller and more populous and wealthier States to the east and west of us.

Without such assistance, most of Montana will be left without the benefits this medium can bring to its schools.

The CHAIRMAN. On page 5 of your statement, I think we ought to repeat this. You say that you have visited about 30 cities where ETV has been used in schools and colleges. In addition, you have studied the results of the experimentation reported by several dozen or more institutions. You say:

I have seen a wide variety of applications of educational TV, ranging from uses in the primary grades to applications at the collegiate and adult education level. I have found only one instance where TV's use has been curtailed after its beginning.

Mr. JORGENSEN. That one instance was a closed-circuit operation in a school in California, a junior college, where a most hasty action on the part of the president resulted in considerable opposition from his faculty and resulted in not only the reduction of the use of television but in his departure from that institution.

The CHAIRMAN. I think you have another serious problem in Montana. You lose a lot of your teachers.

Senator METCALF. Yes, sir.

The CHAIRMAN. I think more percentagewise than any other State.

Senator METCALF. Than any State west of the Mississippi. We are losing teachers faster than any other State. We are training them, giving them apprenticeship, and then losing them to your State, California, and to the Pacific coast.

The CHAIRMAN. Wouldn't you say that some of that is due to a schoolteacher that might have this one-room school, with, say, 40 or 50 students, that she would feel sometimes a little bit incapable of trying to teach every subject that you would like to have these children exposed to? This ought to be helpful to them.

Mr. JORGENSEN. This is exactly where we see educational television applying in our small schools. The enrichment of the curricula. We have only a handful of schools teaching foreign languages. Elementary science is virtually unknown.

I know of one small high school where science is taught one semester every other year. That particular school teaches chemistry. The teacher who teaches this course has had 1 year of biology as training for teaching chemistry.

The CHAIRMAN. It is difficult to find not only in science, but in the arts; it is pretty hard to find enough teachers in Montana, let's say, who have musical background to teach all schools.

But you could expose them to this this way. I know of a teacher who tried to teach music but she could not sing, and therefore the students could never sing.

Mr. JORGENSEN. We have many dedicated teachers and many well-trained teachers in our State as well. However, it is true, because of the economics of the State, and because of the fact that these are small schools, we do lose many teachers and find it very difficult to keep the curriculum up to par by the fact that we do not have enough well-trained teachers in all areas.

Television would supplement these teachers' efforts.

The CHAIRMAN. You have 12 very good reasons in your statement, which I will recommend to the committee. We will put the appendix in the record in full, as well as your statement.

You point out that at the first blush look at this by some people, they do not see why a small State needs so much.

Your statement explains that and you give examples of where it is even more important to a State which has a small population and large territory.

Senator METCALF. The geographical obstacle the chairman knows as well as I. It will bring in many more costly installations than in much more populous States.

We have to put those in to reach a relatively small group of schools.

The CHAIRMAN. If you have proper transmission, there may be some technological advantages which are now in process which can spread it even more than the Purdue experiment.

Mr. JORGENSEN. We are watching that with great interest.

The CHAIRMAN. Thank you very much. We appreciate your coming. You have made a good contribution.

Senator METCALF. I thank the chairman and the senior Senator from Montana, Senator Mansfield, the majority leader, who has asked to be associated with my testimony and Dr. Jorgensen's testimony.

The CHAIRMAN. I want to say to you that Senator Mansfield has always been very helpful on this bill.

(Discussion off the record.)

The CHAIRMAN. Next is the superintendent of public instruction from Pennsylvania, Mr. Boehm. We will be glad to hear from you, Mr. Boehm.

STATEMENT OF CHARLES H. BOEHM, SUPERINTENDENT OF PUBLIC INSTRUCTION, COMMONWEALTH OF PENNSYLVANIA

Mr. BOEHM. My name is Charles H. Boehm. I consider it a privilege to be permitted to testify this morning on S. 205. I would like to say on this side here that I have been very much interested in educational television for the past 5 years, having personally visited a large number of classrooms in the elementary schools, in the secondary schools, and for 4 years visited various college classes.

At the present time Pennsylvania is engaged in an expansion of closed-circuit television. If this bill is passed it hopes to make this closed-circuit television a part of a larger network.

I have naturally followed with a great deal of interest the bills introduced by Senator Magnuson in previous sessions of Congress, authorizing grants to the States for the construction of educational television facilities. In the opinion of Governor Lawrence, many of our State's leading educators, and myself, Pennsylvania's educational system would benefit greatly and directly from passage of this bill. I am sure that other States feel the same way in regard to the impact of the Magnuson bill on their educational systems.

Pennsylvania now has three television broadcasting stations which are completely committed to educational purposes. They are stations WQED and WQEX in Pittsburgh and WHYI in Philadelphia. In addition, closed-circuit television systems are operated by the Pennsylvania State University and by one of the State teachers colleges.

Our goal in Pennsylvania is the establishment of a statewide network of educational television stations which will bring educational television to every schoolchild in the State. To accomplish this objective, we propose the construction of broadcasting facilities in four other areas of Pennsylvania. Besides the existing stations in Philadelphia and Pittsburgh, facilities would be established in Erie, Harrisburg, State College, and the Wilkes-Barre-Scranton area.

We also propose and are in the process of establishing transmitting facilities at each of the 14 State colleges to service their surrounding areas and provide programs for campus instruction that could be interchanged among the 14 colleges.

Obviously the provisions of Senate bill 205 would be invaluable in helping Pennsylvania achieve this goal.

The CHAIRMAN. And the quicker you can do that, where you have them spotted, the quicker you can achieve your full goal of a statewide network.

Mr. BOEHM. Certainly. We lost 2 years already because the bill was not passed before this. Probably the most significant feature in the expansion and acceptance of instruction by television is that it has developed voluntarily, in response to recognized needs. Educational television stations WQED and WQEX in Pittsburgh and WHYY in Philadelphia all came into existence out of this recognition of the need for such service.

The first impetus for educational television in Pittsburgh came in 1951 with the formation of the mayor's committee called by then Mayor David L. Lawrence, now Governor of the Commonwealth. The committee then resolved into a nonprofit organization with a board of directors appointed by Mayor Lawrence, and a full-scale campaign was launched to raise \$300,000 for the construction of an educational television station. WQED, channel 13, went on the air in March 1954, to become the second educational TV station in the Nation, the first such community-operated station in the world.

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.

The CHAIRMAN. This gets me back to the Alabama system. Those 1,400 students who take summer high school courses, they get credits for that, do they not?

Mr. BOEHM. Yes. The city has not been operating summer schools.

It was cut out a great many years ago. This vacuum in Pittsburgh was provided for by educational television. And every year the enrollment increases. These courses are for makeup and for advanced credit.

The CHAIRMAN. These are actually students who go down to enroll and then take the summer courses and then come back?

Mr. BOEHM. Yes, sir.

The CHAIRMAN. And then come back for examination?

Mr. BOEHM. Yes, sir.

The CHAIRMAN. When you say 1,400, we have no idea how many hundred more did it without enrollment?

Mr. BOEHM. Yes, or how many adults were tuned in.

For the current school year, 1960-61, approximately \$468,000 will be needed to operate and maintain WQED and WQEX. Of this total, about \$105,000 will come from the schools using the station's offerings, \$153,000 from the community through drives and contributions, and \$17,500 from the Pittsburgh City Council. The rest

of the money will come from other sources. The stations also derive some income each year from overhead charges on special projects, such as productions for the National Educational Television Center, our department of public instruction, and the U.S. Public Health Service. Some of these programs are produced for national distribution. Corporations and industries in the area make direct grants to WQED, since many of its programs are of general interest to the people of Pittsburgh.

WQED is a nonprofit corporation run by a self-perpetuating board of directors. Members of the board represent all phases of community life and include college presidents, public school and private and parochial school officials, businessmen, lawyers, et cetera. All of the inschool programs offered by WQED are planned by a curriculum committee composed of educators from schools in the Pittsburgh area.

In connection with educational programing, the department of public instruction in 1958 asked the State's public high schools to consider including the Russian language as part of the curriculum. I think we were first in the country to do this. As a result of this recommendation, the following fall approximately 1,000 pupils enrolled in Russian language courses, one-half of whom were instructed through the television stations WQED in Pittsburgh and WHYY in Philadelphia. In each case representatives from a university presented the program. This was an immediate response.

Station WHYY in Philadelphia went on the air in 1954 as an FM radio station, 5 nights per week with programs of good music, discussions, and public affairs programs. In September 1957, WHYY began TV broadcasts on UHF channel 35 and currently broadcasts a daytime schedule of direct instruction to more than 500 schools in approximately 100 school districts in the Philadelphia area, including three States. WHYY also produces programs for the National Educational Television and Radio Center for distribution throughout the Nation, and, along with WQED, it is among some half dozen stations producing adult education programs seen all over the United States.

Like WQED, station WHYY is also a nonprofit organization governed by a board of directors consisting of members from the Philadelphia Board of Public Education, the Catholic diocese, private schools, the community at large, and representatives from neighboring New Jersey and Delaware. The station is financed by Philadelphia industries and businesses, private contributions, funds from the Philadelphia Board of Public Education, and from income from special projects and contracts.

WHYY is currently trying to obtain a license to operate on VHF channel 12, now available in that area, but two commercial stations are in competition seeking to obtain it. Future plans of WHYY include construction of studios in Wilmington, Del., and in New Jersey, which would enable it to become a truly regional station capable of serving three States from one transmitter. In connection with these plans, it would hope to broadcast 7 days of the week, over 100 hours per week, day and night.

These, then, are the three educational television stations now serving sections of Pennsylvania.

The CHAIRMAN. On your plans to include studios in Delaware and New Jersey, there is no prohibition in the bill that in that particular case the three States could not get together.

Mr. BOEHM. This would be excellent because Pennsylvania's needs are about \$3 million or \$4 million for capital equipment anyway.

The CHAIRMAN. But there is no reason why you couldn't get together and use some of this in some respect jointly, divided equitably.

Mr. BOEHM. This would be an excellent arrangement.

We hope that more will be possible in the near future and that before too long, the State will have a network capable of reaching every school child in the Commonwealth. At present, only about 225,000 pupils, or less than 10 percent of Pennsylvania's 2,405,000 public and private school children, have the benefits of instruction through open-circuit television. I am pleased at this point to acknowledge the outstanding cooperation we have received from commercial television stations in Pennsylvania in the utilization of educational programs.

For example, WGAL, of Lancaster, 3 years ago gave us the choice air in the morning on a Monday morning for programs which we prepared through National Defense Educational Act funds in science. May I say that the response that came from as far south as down in Virginia, Delaware, and Maryland, to this program, was most encouraging. It was not called educational television, it was merely a science series. And so truckdrivers and people who stayed at motels overnight filled in cards and mailed them. The first week's reception was about 6 inches high of postcards that people took the effort on their own volition to write in, in appreciation of this program on science.

The program later on did receive a national award. It was broadcast by commercial stations in Nebraska and Wisconsin, besides five other stations in our own State. That is, these are the commercial stations I am now talking about. And it is also a part of the airborne program now in the Middle West.

Furthermore, the same station came back—it is costly for us—they have offered us two programs a week on the air. This takes sometimes \$20,000 to prepare a program for a year, for a school year, on their program. But it does indicate the quality, Senator, of educational programs when it is wanted and sought by five commercial stations for morning operation in busy centers. This is not only in the rural areas. It is in the towns, also.

May I say while on this subject, in one-third of the schools covered, public and private in central Pennsylvania, no science was offered in the fifth and sixth grades. The only science for 3 years in which they have received instruction in one-third of the classes is through these programs every Monday morning.

To be more specific, I refer to the use of the elementary science film series, produced by the Department of Public Instruction and WQED, and also other films and educational programs broadcast by commercial stations in Lancaster, Altoona, Scranton, Erie, and Harrisburg.

We used the staff at Penn State and elsewhere to write the scripts. Our department has a Bureau of Mass Media, organized 2 years ago,

which was interested, among other things, in the promotion of educational television.

I should like also to emphasize at this point that through the resources of educational television facilities, the school children of Pennsylvania will enjoy the enrichment of viewing exhibits in art centers, historic sites, and museums throughout the Commonwealth. Further sources will include the 14 State colleges, each of which is establishing a cultural center relating to a specific area of the world.

I want to point this out because it is a departure in the United States in this particular respect. Each one of the 14 colleges is currently developing one of the great cultures of the world, or groups of cultures. For example, Central Africa at Cheyney, India at Shippensburg, including Western civilization. As they develop these in depth, these materials can be brought immediately to the schools of the State, much of it, by means of educational television.

Furthermore, the University of Pennsylvania has one of the finest colleges in deposits of the Mesopotamia valley in the world. The use of these materials, bringing it to them, is even denied to students a short distance away. And I should like to mention here, too, the advantages which gravitate to Pennsylvania's students from similar cultural centers in private colleges and universities throughout the Commonwealth.

In addition to the proposed statewide educational TV network which Pennsylvania envisions, I feel that it is appropriate to mention briefly, plans which have been evolved for an interstate network to serve all the Northeastern States of the United States. Last year, the Eastern Educational Network, Inc., was formed in Hartford, Conn. Its goal is the linking of all the educational TV stations in the Northeastern States, from Maine to Maryland. This network would have a reciprocal effect in that each participating station could take advantage of the cultural and educational resources of all the States involved. Accordingly, we hope to establish a network in Pennsylvania which would become a part of the larger northeastern network.

At the present moment all we are doing is interchanging programs that have been filmed. But they are very effective.

As you can imagine, the opportunities and benefits which would be made possible by the establishment of additional educational TV stations are almost unlimited. Educational television offers vast possibilities for the solution of many of our most serious education problems. Among these, I shall just mention a few, and probably reemphasize what other people have said before: the need to supply quality education to every school in the State, the widest possible use of master teachers, the stimulation of excellent teaching methods by example—and I think in each educational television not the least of its effects is what it has on general instruction by all teachers; there is a close-up vision, and contemporaneous communication such as no other mass medium affords.

Television is no longer a new teaching medium. High school and college diplomas are given and have, for several years, been given to students who have completed television courses. Only through educational television can courses given by the Nation's best teachers reach ambitious students in small communities, in the remote and sparsely populated areas of the country.

I would like to point out that the use of translators and boosters is just as important in the mountainous State like western Pennsylvania as a State which has miles of vast expanses. For example, there are schools within 40 miles of Pittsburgh, but because they are in the valleys, they cannot reach the educational programs in the area.

All we would need is a translator. We can connect both Pittsburgh and Philadelphia by an investment of a quarter million dollars, that is, both stations. We have need now for fewer stations than before because of the connection. But these translators, the cost of these, could not now be borne by any one of these groups. But immediately upon the enactment of this bill, within a year, we could begin to connect our present facilities and make them more widespread.

The CHAIRMAN. And we finally got the FCC last year, through a bill, finally, to clear up this booster and translator problem. That is clear now.

Mr. BOEHM. That is wonderful.

The CHAIRMAN. We finally had to pass a bill to do it.

Mr. BOEHM. In the future, as automation becomes more and more a social force, as the life span becomes longer, and as more leisure time becomes available to everyone, educational television will become the prime source of enrichment for citizens throughout the land.

For all of these reasons and because of the excellent results which have been derived from stations like WQED in Pittsburgh and WHYY in Philadelphia, I strongly urge favorable consideration and action by the members of this committee and of the Congress upon Senate bill 205. Thank you for extending to me this opportunity to testify on this important education measure.

The CHAIRMAN. Thank you, Dr. Boehm, for a fine statement. This is added justification for the objectives of the bill.

I want to ask you, though, because you are a well-known educator involved in State education—and of course we always have the problem of potential interference of the Federal Government in State education curricula—one thing which isn't pointed out too much here is that educational TV is not limited only to public schools. Anyone can receive it.

Mr. BOEHM. This is one of the factors that I emphasized.

The CHAIRMAN. Anyone can get that. You don't have that problem as you have in aid to education bills. We have in the bill, section 6, in which we say—

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 or requirement under the Federal Communications Act.

I want to ask you if you think that language is strong enough?

Mr. BOEHM. Yes, I do. I think it is very clear. I see no additional language necessary to amplify it.

The CHAIRMAN. Because if it is not strong enough, it is the full intention of this committee to carry out this principle, and sometimes we have some controversy over words. You people who are engaged in stated educational work, who understand this problem, if you have any suggestions to make in change of wording in that section to make it stronger, to carry out our full and honest intention, we would entertain such a suggestion.

Mr. BOEHM. Thank you. We have gone over every word of this bill and have no additional comments to make. I would like to say this, since you have raised this question a few minutes ago: by educational television, and only through educational television, may any parent at any time visit any classroom that is on the air.

The CHAIRMAN. Thank you very much for your comments. We appreciate your contribution.

We have one more witness. Mr. Robertson is here and wants to place in the record the statement of Mr. White.

Mr. ROBERTSON. It is Mr. Robertson for Mr. White. And if the committee has time I would not only like to place it in the record but call your attention to several points in it—it is a short statement—which I think are germane to some comments of the committee.

The CHAIRMAN. All right, we will be glad to hear from you.

Mr. ROBERTSON. If it is the pleasure of the Senator and the committee, I would be glad to hold my remarks until tomorrow, also.

The CHAIRMAN. If it wouldn't inconvenience you, I think we would get much more done. We will have more members of the committee here so they can hear this testimony.

I would like at this time to make the following a part of the official hearing record:

A joint statement submitted by Dr. Harold E. Wigren, educational television consultant, National Education Association, 1201 16th Street NW., Washington, D.C., in behalf of the National Education Association and its department of audio visual instruction.

A statement submitted by Mr. Raymond D. Hurlbert, general manager, Alabama Educational Television Commission, 807 Protective Life Building, Birmingham, Ala.

A letter from Mr. Howard L. Johnson, executive director, Station KRMA, 414 14th Street, Denver, Colo.

A letter from Harry M. Philpott, vice president, University of Florida, Gainesville, Fla.

A letter from Mr. Mort Zimmerman, president, Electron Corp., Post Office Box 5570, Dallas, Tex.

A letter from the Comptroller General of the United States, Washington, D.C.

Also, a statement submitted by Mr. Lawrence E. Dennis, vice president for academic affairs of the Pennsylvania State University and chairman of the Joint Council on Educational Broadcasting.

(The documents follow:)

NATIONAL EDUCATION ASSOCIATION,
Washington, D.C., February 27, 1961.

HON. WARREN G. MAGNUSON,
Chairman, Senate Committee on Interstate and Foreign Commerce, New Senate Office Building, Washington, D.C.

DEAR SENATOR MAGNUSON: I wish to file with the Senate Committee on Interstate and Foreign Commerce 50 copies of a statement prepared on behalf of the National Education Association and one of its departments, the department of audiovisual instruction, in support of the educational television bill, S. 205, on which hearings are scheduled for March 1 and 2, 1961. It is not our desire to make personal testimony before the committee but would very much appreciate your seeing that this statement is added to the hearing record.

Thank you very much.

Sincerely yours,

HAROLD E. WIGREN,
Educational Television Consultant.

NEED FOR ESTABLISHING AND IMPROVING TELEVISION FACILITIES FOR EDUCATION

A Joint Statement Prepared by the National Education Association and the Department of Audiovisual Instruction, NEA, Submitted by Dr. Harold E. Wigren, Educational Television Consultant, NEA

Mr. Chairman, and gentlemen of the committee, I am submitting this statement on behalf of the National Education Association and on behalf of the department of audiovisual instruction, one of the departments of the aforementioned association. The National Education Association has a membership of over 7 million with 1,450,000 affiliated members in its 32 departments and commissions, comprised of teachers and administrators in the elementary schools, high schools, colleges, and universities of our Nation. The NEA is the largest professional organization in the world and the only overall national professional association for teachers in the United States. The department of audiovisual instruction is one of the departments of the NEA and itself has over 5,000 members with members in each of our 50 States. Most of the members of the department of audiovisual instruction are charged with the responsibility of helping teachers to improve the quality of instruction in the institutions in which they work. One way they do this is by facilitating better uses of resources and materials of instruction of many different types, ranging from instructional motion pictures for classroom use to tape recordings, teaching machines, radio and television. The members of this department feel their work is vital and essential to effective teaching and learning in the classrooms of America. Today's classroom teacher needs and uses many instructional resources which become power tools to provide experiences and learning opportunities which he could otherwise not provide.

Chief among the power tools available to today's teacher, and perhaps the most dramatic of all the instructional aids at his disposal, is educational television. Teachers in those 50 cities where educational television stations are now in operation are quick to point up the many values which accrue from television's use in the instructional program. They list several demonstrated contributions which television makes to the instructional program and to education in general.

Television has demonstrated that it serves most effectively—

as a means of enabling the classroom presentation of many resources and demonstrations which could not otherwise be provided.

as a means of bringing the gifted teachers to many classrooms and to many students.

as a means of providing in-service education and on-the-job training for teachers in an effort to improve the quality of teaching across the board throughout our Nation.

as a means of reinforcing concepts difficult to teach and to learn.

as a means of magnifying a demonstration so that all students might have, in effect, a "front row seat."

as a means of sharing resources and resource persons with many classrooms.

as one means of raising the educational floor without imposing a "ceiling" thus bringing instruction to a new high standard in every community within range of the educational channel.

as a stimulator and motivator extraordinary of learning, creating interest, exciting curiosity and wonderment in that which is to be learned.

as a means of keeping both students and teachers abreast of new developments in the content areas and furnishing a way of keeping course content up to date.

as a means of presenting on-the-spot coverage of events for every classroom almost as quickly as the events occur.

as an unexcelled instrument for the education of adults through special courses for credit and noncredit, for cultural and informational programs, through programs by outstanding musicians, symphonies, artists, and scholars, and through providing a public forum whereby community issues and problems can be aired.

Despite its many attributes, the fact remains that many areas of our Nation still do not have access to educational television facilities. Many communities which have been allocated educational television reservations have not been

able to underwrite the initial costs of acquiring and installing transmission apparatus necessary for television (including closed-circuit television facilities). Likewise, many States have been handicapped by their financial inability to meet the initial heavy costs required to help local communities get stations on the air or to improve the minimal facilities which they have thus far been able to provide "on their own." It is in the "have not" areas of our Nation—those States which have not been able to underwrite or match the local community in the provision of television broadcasting facilities—where the need for legislation, as is provided in Senate bill 205, is most urgent. Prevailing costs of educational television stations are estimated to run roughly 10 times those of FM radio stations with similar area coverage of from 30 to 50 miles radius. Approximately \$300,000 to \$500,000 is required to construct an educational television station operating at full power, according to Dr. Phillip Lewis, director of the Department of Instruction Materials, Chicago Board of Education, and an eminent authority in television facilities and equipment. This is understandably a staggering figure for many communities to raise, especially since annual operating budgets range from \$100,000 to \$200,000 once the station has been constructed. For this reason many communities have not been able to move ahead with constructing needed facilities on the educational television channels which have been allocated them by the Federal Communications Commission.

There is still another aspect to this problem. With the extensive use and demand now being made on educational television stations in the communities having such stations on the air, it is already becoming apparent that one or even two educational stations may not be adequate to do the job required. In localities where educational television is an established facility, it does not take long before all available programing hours are scheduled and an otherwise expanding activity becomes greatly restricted. Two large American cities have already moved in this direction on their own—Pittsburgh, Pa., and Oklahoma City, Okla. Milwaukee also has an additional station under consideration. Many other communities would follow suit if adequate financing of the initial costs of transmission facilities could be obtained. These examples point up the serious and growing need to provide additional channels for educational purposes, as well as the need to provide moneys to assist the States with the establishment of such facilities.

The teachers of America are convinced of the inherent values of educational television. In a sense we consider educational television as a national resource, much as are our national parks. As such, it must be developed properly with the needs of the people in mind and must receive the same consideration by the Federal Government as other national resources receive. An educational television station does not attempt to compete with commercial stations; rather, it complements and supplements the type of programing fare which a commercial station is in a position to offer. Educational stations render a type of public service which commercial stations because of their base of operation, are unable to provide.

The people of our Nation have the right to this type of educational and cultural programing that can continue the educational process beyond the years of formal schooling and enable the average citizen to gain greater information and better understanding of both international and domestic affairs than would otherwise be possible. Such stations are in a position to lead their viewers to sources of inspiration, appreciation, and guidance in the problems of everyday living in ways which have heretofore never been thought possible. Dean Harold Lasswell of Yale has stated that "educational television stations offer a preferred source of intelligence for the communities they serve."

For these reasons, the National Education Association and the Department of Audio-Visual Instruction, NEA, strongly support legislation which will prove beneficial to educational institutions and organizations in the further development and activation of the television channels reserved for educational use. We feel that Senate bill 205 is a step in the right direction, is soundly based, and should receive the support and endorsement of your committee. In so doing, you will be enabling citizens in all parts of our Nation to benefit from the many worthwhile things which educational television is making possible in those communities where it is now in operation.

STATEMENT OF RAYMOND D. HURLBERT, GENERAL MANAGER, ALABAMA
EDUCATIONAL TELEVISION COMMISSION, BIRMINGHAM, ALA.

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 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 media 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 indicates that many lay Americans are working toward establishing EVT 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 in 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 know 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 types of instruction, as in the languages, sciences, art and music, cultural enrichment, and lectures of lessons by master teachers. Besides inschool programs there are afterschool 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; civic programs for informing the electorate, etc. These programs are filling a long-felt need in strengthening education as a continuing process.

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 complement 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.

PROGRAMED BY COUNCIL FOR EDUCATIONAL TELEVISION CHANNEL 6, INC.,
DENVER, COLO., February 14, 1961.

HON. WARREN G. MAGNUSON,
Senator, State of Washington,
Senate Office Building,
Washington, D.C.

DEAR SENATOR MAGNUSON: In my dual capacity as assistant superintendent for personnel services of the Denver public schools and executive director of KRMA-TV (noncommercial educational television station), I am very much concerned for the success of an educational television bill similar to S. 205 as proposed by you. However, in the interest of public school licensed noncommercial stations, I do wish to call your attention to one discriminating portion of your proposal.

In accordance with S. 205 on page 2, lines 7-21, as now proposed, it would not be possible for the public school licensed stations in the United States to receive grants for the establishment or improvement of noncommercial educational broadcasting. We are of the opinion that this oversight could be corrected by adding a clause referring to political subdivisions of public education. There are 11 public school licensed stations on the air or under construction at the present time with numerous prospective public school noncommercial educational television stations planned for the not too distant future.

KRMA-TV (Channel 6) is the only active noncommercial educational channel in the entire State of Colorado. We are working very closely with the State department of education, other public school systems, colleges, universities, and other educational organizations in this important phase of the educational program. I am of the opinion that exclusion of the public school grants would not assist us, inasmuch as the operation of our facilities are not under the control of the State agency or officer primarily responsible for the State supervision of public instruction.

KRMA-TV (Channel 6) is licensed by the Denver public schools (School District No. 1, city and county of Denver, State of Colorado) and programed through the Council for Educational Television, Channel 6, Inc. This council,

representing 26 educational and cultural institutions in the Denver area, determines policy for program presentation and provides programs to be telecast over KRMA-TV. However, School District No. 1 is responsible for the financial and operational management of the station.

Our most sincere appreciation to you for your consideration of this proposal. Please do not hesitate to call upon me if I may be of further assistance in supporting S. 205, with the inclusion of public school support.

Most respectfully yours,

HOWARD L. JOHNSON, *Executive Director.*

UNIVERSITY OF FLORIDA,
OFFICE OF THE PRESIDENT,
Gainesville, February 24, 1961.

HON. WARREN G. MAGNUSON,
*Chairman, Senate Committee on Interstate and Foreign Commerce,
Washington, D.C.*

DEAR SENATOR MAGNUSON: As chairman of the Committee on Television of the American Council on Education, I am writing to express interest in the hearings which are to be held March 1 and 2 in regard to S. 205, the bill which you introduced on January 6, 1961.

I have been chairman of the Council's Committee on Television since January 1960, succeeding Dr. John E. Ivey, who testified at the hearings of the Senate Committee on Interstate and Foreign Commerce which were held January 27 and 28, 1959, and again at the hearings of the House on May 12 and 13, 1959. As you may know, Dr. Ivey, then Executive Vice President of New York University, left that post to assume the presidency of Learning Resources Institute and the responsibility for administering the educational television courses known as Continental Classroom. At the present time, Dr. Ivey is serving as president of the Midwest Program on Airborne Television Instruction.

On behalf of the American Council on Education, our committee hopes that you will include in the record of the forthcoming hearings its reaffirmation of the statements made by Dr. Ivey on the two occasions cited above. Dr. Ivey's statements are a part of the record as published by the Committees on Interstate and Foreign Commerce (hearings on S. 12, 1959, pp. 21-33; and on H.R. 32, 1961, 3723, 4248, 4572, 2926, and 3043, pp. 86-89). Indeed, we feel that even greater importance should be attached to the data on the growing student enrollment in our colleges and universities which Dr. Ivey supplied and the role which television can serve in the broadcasting of credit courses.

May I also call your attention to the enclosed publication of the American Council on Education, entitled "A Proposed Program of Federal Action to Strengthen Higher Education." The recommendation of the Committee on Television is cited on pages 9 and 10. I am also enclosing a list of the members of this committee, from which you will note the representation of all levels of education.

Respectfully yours,

HARRY M. PHILPOTT, *Vice President.*

AMERICAN COUNCIL ON EDUCATION COMMITTEE ON TELEVISION

Terms expiring December 31, 1961

- Dr. Harry M. Philpott, vice president, University of Florida, Gainesville, Fla.
- Prof. Harold B. Dunkel, Department of Education, University of Chicago, Chicago, Ill.
- Dr. John F. White, president, National Educational Television and Radio Center, 10 Columbus Circle, New York, N.Y.

Terms expiring December 31, 1962

- President Hilton C. Buley, Southern Connecticut State College, New Haven, Conn.
- President William S. Carlson, University of Toledo, Toledo, Ohio
- President Henry G. Harmon, Drake University, Des Moines, Iowa
- President Albert N. Jorgensen, University of Connecticut, Storrs, Conn.

Terms expiring December 31, 1963

Dr. H. I. Willett, superintendent, Richmond Public Schools, 312 North Ninth Street, Richmond, Va.

Mr. Lawrence E. Dennis, vice president for academic affairs, Pennsylvania State University, University Park, Pa.

Sister Annette, C.S.J., executive secretary, Sister Formation Conference, National Catholic Educational Association, 1785 Massachusetts Avenue, N.W., Washington, D.C.

Ex officio

President Carroll V. Newsom, New York University, Washington Square, New York, N.Y. (alternate representative of the American Council on Education to the Joint Council on Educational Broadcasting)

A PROPOSED PROGRAM OF
Federal Action
to
Strengthen Higher Education



AMERICAN COUNCIL ON EDUCATION

JANUARY 1961

The material in this pamphlet is not copyrighted. It may be quoted and reproduced in the interest of education. Copies are available without charge from the Publications Division, American Council on Education, 1785 Massachusetts Avenue, N.W., Washington 6, D.C.

PUBLISHED JANUARY 1961

Statement of Purpose

IT SEEMS EVIDENT THAT THE AMERICAN PEOPLE HAVE AWAKENED to the crisis in higher education and that, after a decade of discussion, the time for decisive action is at hand. In recent months there have been notable reports on the relationships of higher education to the Federal Government by the Carnegie Foundation for the Advancement of Teaching and the American Assembly. During the 1960 election, members of Congress from both parties ran on platforms containing significant promises of Federal support. The new Secretary of Health, Education, and Welfare, Abraham Ribicoff, has demonstrated a sympathetic understanding for the problems of higher education, as did his predecessor, Arthur S. Flemming, who in his last months in office sponsored a definitive study of the immense predictable needs for facilities and faculty. And there have been important recommendations for aid to higher education in recent weeks from President Eisenhower's Commission on National Goals and President Kennedy's Task Force Committee on Education.

In this friendly atmosphere it seems appropriate for the colleges and universities themselves to offer, through the American Council on Education, which represents them, a statement setting forth their own proposals for congressional action. Preparation of such a document, embodying the considered recommendations of five Council committees, was suggested last November by the Committee on Relationships of Higher Education to the Federal Government, and the content was discussed in December by representatives of ten major constituent organizations, meeting as a

Seminar on Federal Relationships. The statement is presented herewith, after approval by the Committee on Relationships on January 23 and by the Executive Committee on January 27.

ARTHUR S. ADAMS, *President,*
American Council on Education

AMERICAN COUNCIL ON EDUCATION

The American Council on Education has, in its total membership of 1,209, more than 1,000 educational institutions and 144 educational organizations. It has been for forty-three years a center of cooperation and coordination for the improvement of education at all levels, with particular emphasis upon higher education. Its membership includes national associations; organizations having related interests; approved universities, colleges, teachers colleges, junior colleges, technological schools, and selected private secondary schools; state departments of education; city school systems, and private school systems; selected educational departments of business and industrial companies; voluntary associations of higher education in the states; and large public libraries.

A Proposed Program of Federal Action to Strengthen Higher Education

THE MAGNITUDE AND CHIEF CHARACTERISTICS OF THE CRISIS facing higher education in the next decade have been documented through numerous studies by Federal agencies, state planning commissions, and independent groups. There is general agreement that enrollment is in the process of doubling, with an anticipated increase of at least a million full-time students between 1958 and 1965 and another million between 1965 and 1970. There is also agreement that colleges and universities, in the next ten years, must nearly double both the number of qualified faculty members and the salaries paid them. Furthermore, it is clear that the proportion of research and instruction at advanced levels will become greater and that consequently the cost of necessary buildings and equipment will increase at a higher rate than that caused by expanding enrollment alone, with a corresponding increase in general operating expenses.

A recent comprehensive study by the U.S. Office of Education* states that by 1965 the colleges and universities of this country will have to spend \$9 billion on physical facilities, and that an additional \$10 billion will be needed between 1965 and 1970. Several leading economists have estimated that between 1959 and 1970 general expenditures, excluding those for capital outlays, will mount from \$3.7 billion to more than \$9 billion a year.

All the major studies show that after traditional sources of income, including student tuition and fees, have been stretched to the limit, there will still be a large gap that can be filled only by greater support from the Federal Government.

* U.S. Office of Education, *Ten-Year Objectives in Education: Higher Education Staffing and Physical Facilities, 1960-61 through 1969-70* (Washington: Department of Health, Education, and Welfare, 1961).

THE AMERICAN COUNCIL ON EDUCATION, IN CONSULTATION with its 1,200 institutional and organizational members, has been developing a general policy toward Federal support of higher education for many years. The situation is complicated for at least three important reasons. First, more than forty agencies of the executive branch of the Government have programs that directly affect higher education. Second, at least a dozen congressional committees have authority to act on one or more of these programs. Third, these Federal programs differ not only in magnitude and scope, but also in kind and effect.

The last point is of special significance, because many Federal programs use colleges and universities merely to provide services required by the Government. Whether provision of those services depletes or augments the resources of these institutions to perform their central function of education is of no particular concern to the Federal agency. For example, the armed services have admitted for fifteen years that ROTC programs constitute a drain on the resources of participating institutions, but have as yet offered no relief. Again, several of the programs in which colleges and universities participate under the National Defense Education Act have the purpose of strengthening secondary education rather than higher education. It seems clear that institutions of higher learning cannot continue indefinitely to undertake such service functions unless they receive additional support to strengthen their basic resources of staff, facilities, and general income.

It is the purpose of this statement to focus attention on proposed congressional actions that will strengthen the basic functions of the institutions. This approach does not imply lack of interest in other types of programs, a partial list of which appears on pages 9 and 10.

IN DETERMINING WHAT KINDS OF SUPPORT CAN APPROPRIATELY be requested from the Federal Government, the character of the existing system of higher education suggests impor-

tant limitations. More than half the colleges and universities, enrolling nearly 45 percent of the students, are privately supported. All types of institutions must be expanded and improved if the essential national goal of providing for future students is to be met. Hence the American Council on Education, representing higher education as a whole, does not ask general assistance from the Federal Government in paying faculty salaries.* Nor does it ask direct assistance from the Federal Government in meeting general operating expenses.† The basic recommendations presented below deal with assistance (1) in providing housing and academic facilities, (2) in augmenting the number and improving the quality of teachers and research workers, and (3) in offering able students with limited means the opportunity of a college education.

There are priorities even among these three major types of assistance. Additional financial aid to students is advocated only as a supplement to adequate support for new buildings and augmented staff. Helping more students to demand admission to college without at the same time supplying buildings to accommodate them and faculty to teach them would merely make more serious a problem already acute.

RECOMMENDATIONS

1. The Federal Government can and should provide greater financial assistance to approved institutions of higher learning for expansion and improvement of facilities.

* The Council considers it entirely appropriate, however, for the Federal Government to pay the full cost of the portions of faculty time devoted to federally financed programs of instruction and research and to continue the existing type of support to the land-grant institutions.

† The Council considers it entirely appropriate, however, for the Federal Government to pay that portion of general operating expenses allocable to federally financed programs of instruction and research, and to continue the existing type of support to the land-grant institutions.

1. The College Housing Loan Program, which has proved extraordinarily effective during the past ten years, not only should be continued, but also expanded on a basis that will permit institutions to plan further ahead. The funds authorized last summer will almost certainly be allocated early in 1961, and applications are being received by the Housing and Home Finance Agency at the rate of approximately \$350 million a year.
 - An additional \$150 million should be authorized as soon as possible to keep the program moving forward through June 1961.
 - A further authorization of \$1.4 billion should be made for a four-year period, beginning July 1, 1961, with equal allocations for the four fiscal years.
 - Adequate funds should be appropriated to administer the augmented program effectively and promptly.
2. A new program of federally administered assistance to institutions of higher learning, for construction of academic facilities of the kinds they require to meet their needs in improvement of quality as well as expansion of enrollment, should be established, offering each institution the following options on each separate project: (a) a grant to defray up to 50 percent of the cost of construction, or (b) a low-interest forty-year loan to finance such construction, the interest rate to be determined under the same formula approved for the College Housing Loan Program.
 - A long-range program is recommended, with initial authorization for four years and with funds supplied at the average rate of \$1 billion a year. A survey of member institutions by the American Council on Education indicates that of this annual amount approximately 70 percent should be appropriated for matching grants and 30 percent authorized for loans.
 - It is in the national interest that the building program of each institution reflect with integrity its educational

goals and objectives. This principle should determine the criteria for eligibility set by the Government.

3. The existing program of matching grants for construction of research facilities in the health fields should be continued and expanded, and similar grants to support allied teaching facilities in these fields should be authorized.
4. The National Science Foundation, the Atomic Energy Commission, the Defense Department, and other Federal agencies that sponsor and support research in colleges and universities should be authorized and encouraged to increase provision for the physical facilities and equipment required for such research; and additional appropriations should be made to them for this purpose.

II. The Federal Government can and should provide greater assistance in increasing the supply and improving the quality of college teachers.

1. Such programs as the graduate, postdoctoral, and faculty fellowship programs of the National Science Foundation should be expanded as rapidly as qualified candidates can be discovered.
2. The graduate fellowship program under the National Defense Education Act should be extended for at least four more years, with immediate provision for awarding fellowships to alternates if the original recipients withdraw. Each institution should receive a grant of \$3,000 a year for each graduate student enrolled under this program.
3. According to reliable estimates by those who have administered the present NDEA fellowship program, at least 1,500 more doctoral candidates could be accommodated in programs of instruction now offered by graduate schools. Consequently, a new fellowship program for these candidates should be established under the NDEA, in which there is no requirement that an institution have a "new or expanded program" of graduate instruction.

4. To improve faculty competence, another program should be established under the NDEA which would provide one-year fellowships for college teachers who are within one year of completing the requirements for the doctorate. An experimental program of 500 such fellowships a year would be a significant beginning.
5. There should be a substantial increase in funds appropriated for exchanges of faculty members with foreign countries and for grants to actual and prospective college teachers to study abroad. Such exchanges help American institutions to solve one of their major academic problems—broadening their instruction to include the cultures of the entire world.

III. The Federal Government can and should provide greater assistance in removing financial barriers to higher education for qualified students.

American colleges and universities have traditionally assumed, as part of their service to the people, heavy financial burdens in order to offer educational opportunities to students from families with low incomes. In addition to the very large benefits conferred by public institutions through low tuition and fees, the colleges and universities constitute the largest single source of undergraduate scholarships. This burden will obviously be greatly magnified by the needs of the additional two million students in the next decade. It is already increasing because of the necessary rise in student charges. One of the Council's own surveys shows that charges for tuition, fees, room, and board, at both public and private institutions, have risen as much in the past four years as in the preceding eight years or in the twenty before that.

Scholarships and loans offered by the institutions themselves and by other agencies have not kept pace, and the participation of the Federal Government has been declining as educational benefits under the World War II and the Korean GI bills draw to an end. The loan program under

the NDEA has helped many families in the middle-income brackets, but qualified students at the very low income levels are finding college entrance more and more difficult. The institutions need substantial assistance if equality of opportunity in the future is to be more than an abstract slogan.

1. The student loan program under the National Defense Education Act should be continued, with certain modifications (see especially item 4 on page 9), through its fourth year. At that time, funds in hand or on loan by educational institutions should be granted to them as permanent revolving loan funds. Additional appropriations should be made each year for grants to reimburse institutions for portions of loans forgiven under the law, to meet the needs of increasing enrollments, and to establish loan funds for institutions new to the program.
2. Recognizing the priorities indicated above, and assuming the continuance of the student loan program, a new program of four-year undergraduate scholarships should be established, with the objective of seeking out and assisting students of high academic promise in greatest financial need.
 - Stipends should be variable, according to need, with a maximum of \$1,000 a year.
 - The scholarships should be awarded by the institutions themselves, using funds allocated in approximately the same manner as Federal student loan funds.
 - There should be an appropriation of \$25 million for scholarships the first year, with the annual total rising to \$100 million in the fourth year. These sums would provide a minimum of 25,000 new scholarships each year.
 - Each scholarship should be accompanied by a grant to the institution which the scholarship holder attends. A reasonable amount to defray part of the educational costs beyond tuition and fees would be half the amount of the scholarship. Additional appropriations will be needed for this purpose and for the expenses of administration.
3. Funds for undergraduate and graduate student exchanges with foreign countries should be increased. More care should be taken to ensure that each foreign student has

adequate funds for his educational expenses. Furthermore, the institutions should be reimbursed by the Federal Government for an equitable portion of the costs of special services needed to make the visitors' experience fully effective. One university has estimated that it spends an average of \$200 each year on every foreign student beyond the normal expense of educating an American student—for special admissions procedures, help in finding appropriate housing, academic counseling, and, often, instruction in English.

IV. Additional approved proposals

As foreshadowed in the introduction, the program outlined above is deliberately restricted to major projects that will add to the basic strength of institutions of higher learning and that call for congressional action. These items by no means exhaust the list of Federal activities, current and proposed, in which the Council's membership is interested.

For example, 50 universities are deeply involved in institutional projects abroad under the International Cooperation Administration. They have faced serious problems, but the solutions lie primarily with ICA rather than with Congress. Similarly, even more colleges and universities have large programs of federally sponsored research. Since Federal support of "on-campus" research reached \$462 million in fiscal 1960, the amounts involved are important to the financial soundness of these institutions. But the effort to secure full payment for their services, which has been under way for more than a decade, will succeed or fail because of action by the Bureau of the Budget supported by research-financing agencies of the executive branch. The only congressional action needed is the deletion from future bills appropriating funds for the Department of Health, Education, and Welfare of the legislative rider limiting payment of indirect costs to an arbitrary 15 percent.

A partial list of additional proposals calling for congressional action is presented below. Higher education, as rep-

resented by the American Council on Education, is interested in all of them. But highest priority should be given to the basic program, which will help colleges and universities to construct needed buildings, recruit essential faculty, and serve the increasing numbers of young Americans who need and deserve higher education.

The American Council on Education is ready to provide educational representatives who will testify in support of the following additional proposals, as well as those described above, before appropriate congressional committees, when invited to do so. *This list is not complete but is meant to suggest areas of special interest.* Included are recommendations of the Commission on Education and International Affairs, the Committee on Television, the Special Committee on Urban Renewal, and the Special Committee on Sponsored Research, as well as those of the Committee on Relationships of Higher Education to the Federal Government.

1. Extend, expand, and strengthen the Counseling and Guidance Program under NDEA by including personnel from two-year and four-year colleges in the institutes, providing stipends to enrollees from private as well as from public schools, inaugurating a program of graduate fellowships, and making funds available for research.
2. Extend, expand, and strengthen the Foreign Language Development Program under NDEA by including teachers from two-year and four-year colleges, providing stipends for enrollees from private as well as from public institutions, and establishing institutes for rare languages at the undergraduate level.
3. Maintain the present level of support for research and experimentation in the use of the mass media for instruction, under title VII of the NDEA.
4. Eliminate the NDEA requirement of a disclaimer affidavit for those receiving fellowships or loans.
5. Determine a formula for reimbursing colleges and universities for some of the expenses incurred in providing facilities for and operating ROTC units.

6. Establish on a permanent basis a senior office in the U.S. Department of State to coordinate international cultural activities.
7. Pass enabling legislation to make effective the Florence agreement relating to tariffs on books, scientific apparatus, and other cultural materials.
8. Add technical amendments to the Housing Act to make it more advantageous for urban institutions to participate in the Federal Urban Renewal Program.
9. Authorize a program of grants to the several states in support of educational television.
10. Establish a permanent Council of Educational Advisers to the President of the United States to coordinate policies and procedures of the educational programs in the various Federal agencies and to plan on an over-all, long-range basis a proper role for the Government in support of education.

EXECUTIVE COMMITTEE, 1960-61

- DAVID D. HENRY, President, University of Illinois; *Chairman, ex officio*
EDMUND J. GLEAZER, JR., Secretary, American Association of Junior Colleges; *Secretary, ex officio*
O. C. ADERHOLD, President, University of Georgia
C. CLEMENT FRENCH, President, Washington State University
THOMAS H. HAMILTON, President, State University of New York
GAYLORD P. HARNWELL, President, University of Pennsylvania
ROBERT J. SLAVIN, O.P., President, Providence College
O. MEREDITH WILSON, President, University of Oregon
ARTHUR S. ADAMS, President, American Council on Education; *ex officio*

COMMITTEE ON RELATIONSHIPS OF HIGHER
EDUCATION TO THE FEDERAL GOVERNMENT

- EVERETT N. CASE, President, Colgate University; *Chairman*
JOHN T. CALDWELL, Chancellor, North Carolina State College of
Agriculture and Engineering
CALVERT N. ELLIS, President, Juniata College
FRED K. ESHLEMAN, Dean, Henry Ford Community College
VIRGIL M. HANCHER, President, University of Iowa
JOHN A. HANNAH, President, Michigan State University
WILLIAM B. HARRELL, Vice-President—Business Affairs, University of
Chicago
JAMES K. HITT, Director of Admissions and Registrar, University of
Kansas
HEROLD C. HUNT, Charles William Eliot Professor of Education,
Graduate School of Education, Harvard University
E. WILSON LYON, President, Pomona College
KATHARINE E. MCBRIDE, President, Bryn Mawr College
LAURENCE J. MCGINLEY, S.J., President, Fordham University
CARROLL V. NEWSOM, President, New York University
ROBERT W. VAN HOUTEN, President, Newark College of Engineering
J. D. WILLIAMS, Chancellor, University of Mississippi
ARTHUR S. ADAMS, President, American Council on Education; *ex*
officio

ELECTRON CORP.,
Dallas, Tex., February 9, 1961.

SENATOR WARREN MAGNUSON,
Senate Office Building,
Washington, D.C.

DEAR SENATOR MAGNUSON: We have followed with a tremendous amount of interest your aggressive efforts in behalf of educational television.

This interest has been stimulated as a result of our company's activities in both smaller community commercial and educational television station engineering, installation, and design.

Probably the most important purpose for this letter is to advise of the complete success of a new and unique type educational television station which was conceived and installed by our company for the Richardson Independent School District of Richardson, Tex. This educational television station operates on UHF channel 23 and broadcasts from a central high school building to 14 other school buildings within the district. KRET-TV has been on the air for 18 months and the results of the operation of this station have caused excellent savings to the overall per pupil cost, increased the efficiency of specialized training, and caused interest by educators from all over the United States.

This complete television broadcast station contains full facilities for live telecasting, film telecasting, and sufficient power to cover the complete school district and beyond for a total cost of \$48,950. When this price was first suggested to the school district, a great deal of skepticism existed since in relation to such companies as RCA and GE—our two major competitors—we had smashed a price barrier. The main reason for this price on a complete television broadcast station is due to the fact that a new and unique television camera was designed by this company under U.S. patent No. 2865989, the cost of which permitted economic design along with excellent quality for such type stations.

The concept of the Richardson educational television station is not that of the sophisticated high-powered television station competing for an audience against the major commercial stations. It is rather the concept of an instructional television station whose main purpose is to reach students in the classrooms through on-the-air telecasting.

The above facts are brought to your attention since undoubtedly in the previous proposed allocation of Government aid for education, the \$1 million per State matching funds had to be based on the average costs of a complete television broadcast station such as is conventionally used throughout the United States. For example, the average cost of such stations is in the neighborhood of \$200,000 which would mean that only 5 stations could be considered for a \$1 million expenditure. On the other hand, with an Electron Corp. station priced between \$40,000 and \$50,000, which is completely FCC approved and which unconditionally offers technical capability as good as any other station, more than 20 television stations could be constructed for the same \$1 million allocation. As a matter of fact, if the State were to fulfill the total matching fund requirements such an allocation would permit 40 television stations of these types per State.

In other words, through the use of new innovations and new techniques as proven by the first station of its kind now installed in Richardson, Tex., the same dollars proposed by the Federal Government for such ETV aid could be stretched into 5 times as many school districts.

This letter is not being written in an attempt to sell our products since other competitive companies could do what we are doing provided they were willing to follow the concept of the simplified rugged television broadcast station. This concept may be compared to the 250-watt combination radio station of which there are more such stations in the United States than any other kind. The proof of these stations is seen in the fact that systems are being installed or have been installed in such communities as Roswell, N. Mex.; Key West, Fla.; Douglas, Ariz.; Salina, Kans.; Alpine, Tex.; Santa Fe, N. Mex.; and many others.

In the upcoming hearings in March, we feel that the Richardson, Tex., educational television station should be highlighted as one of the lower cost methods for a successful educational television station. Any individuals associated either with this company or with the Richardson Independent School District, I am sure, would be pleased to serve as a witness at these hearings if it were desirable.

Under separate cover, we are sending you a copy of a paper given at the NAEB relative to the concept of the instructional television broadcast station. If we can be of any assistance in offering information toward the ultimate passage of bills presented by you and your senatorial associates, please do not hesitate to make such requests.

Very sincerely,

MORT ZIMMERMAN, *President.*

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, February 7, 1961.

B-131935

HON. WARREN G. MAGNUSON,
*Chairman, Committee on Interstate and Foreign Commerce,
U.S. Senate.*

DEAR MR. CHAIRMAN: Your letter of January 12, 1961, requests our comments concerning S. 205, which is entitled "A bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs."

In order to accomplish the purpose of the bill, provision is made for the making of grants to State organizations to be used in the establishment and improvement of television broadcasting facilities. While an examination of the hearings held on previous similar bills indicates that legislation such as that contained in S. 205 would further the cause of education, the question whether grants of Federal funds should be made for such purpose appears to be a matter primarily for the Congress to decide. Accordingly, we have no comments to offer concerning the merits of the bill.

However, as a protection against waste or improper use of grant funds we suggest that a section be added to the bill requiring recipients of grants under section 3 to keep records which will enable audits to be made by the Commissioner and the General Accounting Office. Such records would also enable the Commissioner to see whether recipients have complied with the requirements of the act. Under the authority of this section the Commissioner would be expected to audit the books of each recipient of assistance leaving to the General Accounting Office the right to audit as many recipients each year as determined necessary by the Comptroller General. This could be accomplished by placing language in the bill as follows:

"RECORDS AND AUDIT

"SEC.— (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."

Sincerely yours,

JOSEPH CAMPBELL.

STATEMENT OF THE JOINT COUNCIL ON EDUCATIONAL BROADCASTING

My name is Lawrence E. Dennis. I am the vice president for academic affairs of the Pennsylvania State University and chairman of the Joint Council on Educational Broadcasting. On behalf of the latter organization I greatly appreciate the opportunity of presenting testimony before this committee which is considering legislation providing for Federal financial assistance toward the cost of constructing educational television facilities in each of the separate States and the District of Columbia.

The following organizations are members of the Joint Council on Educational Broadcasting (formerly Joint Council on Educational Television, JCET):
 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 & Radio Center.
 State Universities Association.

Two of the constituent organizations of the council, which are primarily engaged in educational broadcasting, National Association of Educational Broadcasters and National Educational Television & Radio Center, will be presenting testimony in this hearing.

The council has presented testimony before this committee on two previous occasions when it considered similar legislation: the hearings on S. 12, January 27 and 28, 1959 (1st sess. of the 86th Cong.), and S. 2119 on April 24 and 25, 1958 (2d sess. of the 85th Cong.).

At each of these hearings the council has offered a brief description of the status of educational television throughout the country with the hope that such a report would serve to illustrate the degree of public interest in this dynamic educational enterprise. The accomplishments of educational television since channels were reserved by the Federal Communications Commission for non-commercial educational use in 1952 have likewise been detailed.

The attached report provides ample evidence of sustained public support for educational television activities. But more importantly, it clearly indicates that there is much to be accomplished before we realize the full benefits of the television medium as a vital contribution 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 the accomplishments of the last 8 years. The Joint Council on Educational Broadcasting supports the underlying concept of the legislation being considered by this committee.

The Joint Council on Educational Broadcasting, representing the national educational community, stands ready to provide any appropriate assistance, as a resource agency, to this committee as it considers this important legislation.

Respectfully submitted.

LAWRENCE E. DENNIS.

CURRENT DEVELOPMENTS IN EDUCATIONAL TELEVISION

Submitted 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) .. ³	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).
February 1961.	2	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.

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.	10	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.	19	Construction permit granted Mar. 24, 1960. Target date: Mar. 1, 1961.
Paterson-Upper Montclair, N.J., Bergen County Federation of Boards of Education.	14	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.	20	Petitioned FCC on Feb. 21, 1961, to reassign channel 20 to Athens and reserve it for education.
Newark, Ohio, Newark Public Schools.	28	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.	12	Granted assignment of construction permit Nov. 8, 1960.
Ogden, Utah, Ogden City Board of Education.	24	Petitioned FCC on Dec. 20, 1960, to reserve channel 24, now unreserved in Ogden.
Tacoma, Wash., Tacoma School District No. 10.	62	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

	Year	Total	VHF	UHF
Original reservations	1952	242	80	162
Current reservations (February)	1961	268	90	178

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 inschool programming.

¹The Joint Council on Educational Television (JCET) was changed in February 1961 to the Joint Council on Educational Broadcasting (JCEB).

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 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 inschool 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 UHF, with the UHF operation as an unreserved channel. The purpose of the additional station is to provide greater flexibility in scheduling the reception of inschool 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 cultural and instructional programming. 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 eighth and ninth 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 subcommittees, 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 ETV commissions have been formed by legislative action. In 20 States, financial appropriations have been made totaling between ten and twelve million dollars. 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 inschool 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 inschool 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 six 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 programing 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 programing 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 inschool 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 teachers 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, has drawn, as of its fourth year, an average semester enrollment for credit of 1,261 persons taking 2,321 courses, or nearly 2 courses per person. One-third of the credit students hope to become teachers. Noncredit enrollments averaged 3,550 individuals tak-

ing 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 interests; or by showing any aspect of a subject not convenient in other ways, such as views of microscopic plants and animals.

Preschool-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 Forty-five 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 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 the country.

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 Representative 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, was 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 Schoepfel, Democrat of Kansas, Metcalf, Democrat of Montana, and Cooper, Republican of Kentucky; H.R. 132 by Representative Roberts, Democrat of Alabama; H.R. 645 by Representative Boggs, Democrat of 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.

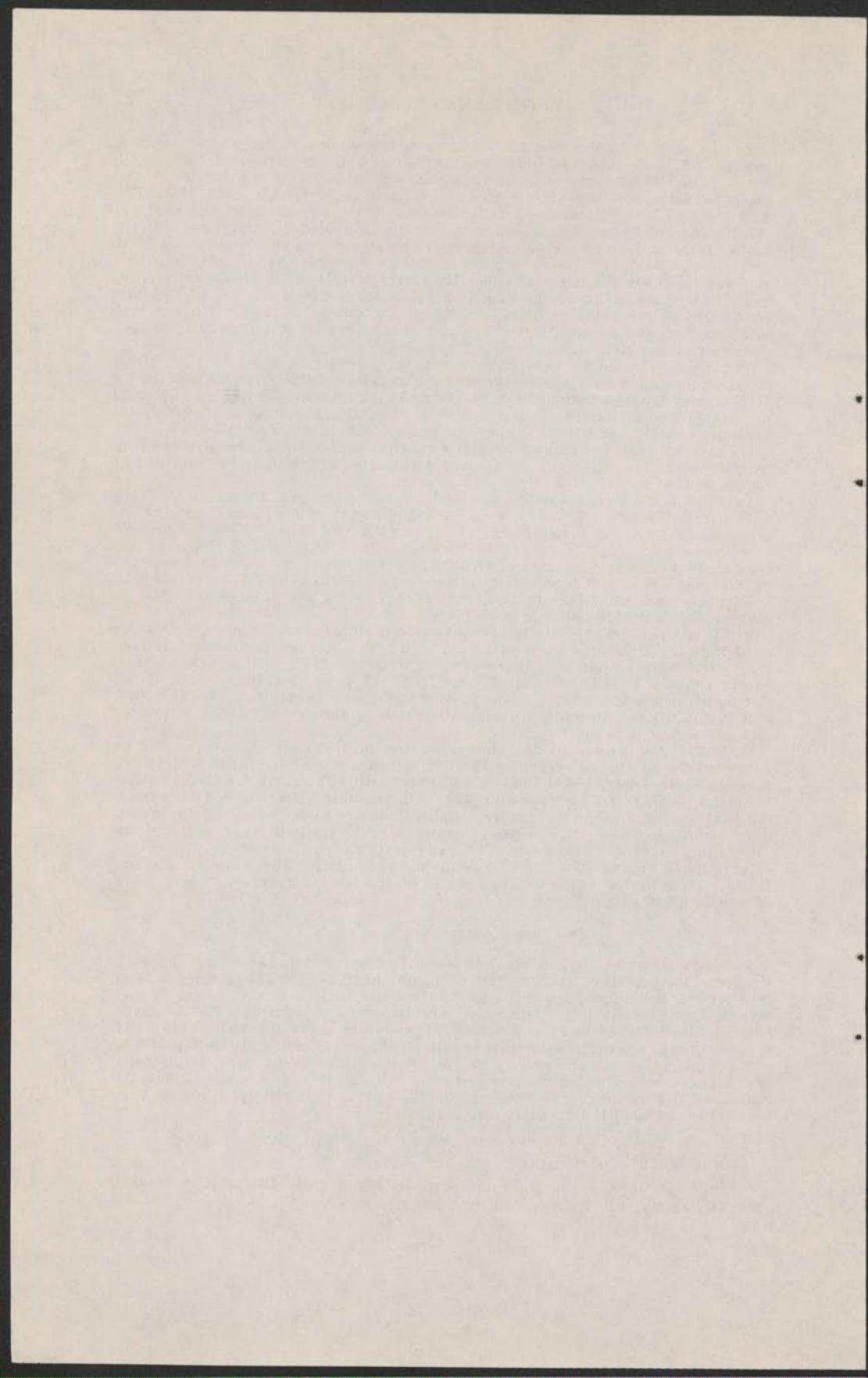
H.R. 132, also proposing amendment of the Communications Act, would be administered by the Secretary of Health, Education, and Welfare; it proposes for each State, District of Columbia, and Puerto Rico \$1 million for facilities and \$10,000 for a State ETV survey and plan, both amounts to be matched 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.

The CHAIRMAN. Then we will recess until tomorrow at 10 o'clock. Thank you all for coming.

(Thereupon, at 12:25 p.m., the committee was adjourned, to reconvene at 10 a.m., Thursday, March 2, 1960.)



EDUCATIONAL TELEVISION

THURSDAY, MARCH 2, 1961

U.S. SENATE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The committee met, pursuant to notice, at 10:10 a.m., in room 5110, New Senate Office Building, Hon. John O. Pastore presiding.

Senator PASTORE. We have quite an imposing list of witnesses this morning. I have been asked by the chairman to get the hearings underway. He is going to be detained for a while.

I don't want to deprive any witness full latitude to express himself during this hearing, but I would hope that realizing the fact that this bill has already passed the Senate twice and that all we are doing here today is to complete a record, I would respectfully ask for the cooperation of the witnesses that where they have statements and they feel this fits in their plans or could be made to fit into their plans, that they would present their statement for the record and then recapitulate and give us a résumé as to their position. That way we would accommodate all the witnesses, and we would all get out of here by 12 o'clock. And we would fulfill our responsibility. All we are doing here is to complete the record so that it will be convenient for other members of the committee to read it, and also would be available to the Members of the Congress to read it as well.

Now if that is satisfactory, we will leave it that way.

Our first witness today is Mr. John L. Burns, president, Radio Corp. of America.

Mr. Burns.

STATEMENT OF JOHN L. BURNS, PRESIDENT, RADIO CORP. OF AMERICA

Senator PASTORE. Does my suggestion fit well with you?

Mr. BURNS. Senator, I came prepared in case you said this, so it fits very well.

Senator PASTORE. All right then, without objection, we shall put this statement in the record in its entirety at this point and, Mr. Burns, you can give us a recap as to the substance.

(The statement follows:)

STATEMENT BY JOHN L. BURNS, PRESIDENT, RADIO CORP. OF AMERICA

Mr. Chairman, members of the committee, my name is John L. Burns. I am president of the Radio Corp. of America.

I deeply appreciate the opportunity of appearing before this committee which has contributed so constructively, over the years, to the progress of communications. Your current hearings interest me particularly for two reasons: first,

because the legislation you are considering is so pertinent to the major challenge of our day; second, because a good part of my life has been devoted to the areas that concern you in this legislation: communications and education.

The company I now represent is one of the Nation's many producers of television equipment, and is involved in many phases of electronic communications. Before joining RCA, I was engaged in management consulting where a principal problem—just as in education—is communications between people. Prior to entering the field of industrial management, I was a teacher—first at Harvard, later at Lehigh—and my absorption in the educational process has deepened with the years.

I believe there exists today an educational gap that is as far-reaching in its implications as any so-called gap that might confront our country. In this instance, the best way, and surely the only quick way, of closing the gap is through television.

From the scattered, yet often fruitful, experiments in educational TV which have been going on these past 8 years, one conclusion emerges with clarity: Television has the capability to spark a massive upgrading in the quality of American education, with the maximum development of individual potentialities at all levels, for a cost we as a nation can afford—a cost, in fact, which we cannot afford not to pay.

TELEVISION AND THE QUALITY OF EDUCATION

Historically, a primary goal of our educational system has been what philosopher Ralph Barton Perry called an express insistence on quality, and educational television can contribute to this in four important ways.

First, it can ease the teacher shortage and extend the influence of outstandingly gifted instructors far beyond their own classrooms.

The Ford Foundation Fund for the Advancement of Education has estimated that it would take half of all college graduates over a 10-year period to meet our need for new teachers. Only a fraction of this half has been entering the teaching field, so we must resort to inventive steps to overcome the numerical deficiency.

Through educational television, great teachers can fire the imagination and kindle the desire to excel in thousands of students simultaneously, and their thoughts can be stored permanently on television tape. The greatest minds of our time can share their knowledge with pupils all over the country, and eventually all over the world.

Visualize a high school faculty made up of the finest teachers that could be found anywhere in the United States. And, in addition, it would be possible to have occasional lectures by men like Sir Winston Churchill on government, James Conant on chemistry, Robert Frost and William Faulkner on literature, Carl Sandburg and Arnold Toynbee on history, Edward Teller on physics, and Wernher von Braun on space exploration. What an absorbing experience it would be, for your children and mine, to dip into this vast storehouse of knowledge, wisdom, and eloquence.

The second way in which educational television can contribute is by giving the teacher better tools. Through a skillful blending of the teaching, broadcasting, and graphic arts, it is possible to raise the level of presentation in every subject from algebra to zoology. Television can give students a front-row seat for important experiments. It can bring the finest laboratory facilities to remote schools which otherwise could never afford them.

Educational television's third contribution can be in easing some of the burdens that teachers now carry and affording them more time for the all-important function of personal counseling. Under the conventional pattern of instruction, the teacher's energies are often dissipated over a wide variety of chores. With television, each teacher can concentrate on the thing for which he is best suited.

One teacher may be most effective in lecturing to a large group of students. With television, he is able to focus on this exclusively, presenting a lesson to tens of thousands of students instead of a classroom of 50, and spending several hours a day in preparation. Another teacher may be equally adept at the demanding task of conducting followup classroom sessions for a handful of pupils. With television, he is able to devote his full time to individual instruction and guidance.

From my own teaching experience, I have always felt that individual guidance is the most important aspect of teaching. Yet the average elementary teacher today can spend only 1.4 percent of his school time providing personal help. With television, this can be multiplied many times.

The fourth way TV can improve educational quality is by allowing the student to develop at his own individual pace.

Too often today, students are poured into school in much the same way that water is poured into an ice tray. They are frozen solid by an inflexible curriculum and an unyielding grade schedule adjusted to the so-called average student. In actual performance, though, the same pupil who is doing third-grade arithmetic may be capable of mastering fourth-grade reading but only second-grade spelling.

With television, language laboratories, and other electronic aids, each student can move ahead at a tempo best suited to his own development. The fast learner in a particular subject can be exposed to televised lectures that challenge him to his full capacity. The average learner can be encouraged to develop the particular gifts he possesses. The slow learner can be assured of the kind of attention that will prevent his falling hopelessly behind.

This is critically important in our complex society where we must seek the fullest development of human potentialities. Woodrow Wilson wisely observed that the great strength of a democracy lies in the fact that it "releases the energies of every human being."

TELEVISION AND THE COST OF EDUCATION

Not only can electronic teaching techniques provide higher quality instruction, but they can do so at a lower cost per pupil than present methods.

This is a paramount consideration today when more public funds are going into education than into any other activity except national defense. The rising curve of public school costs—from \$192 per pupil in 1950 to \$330 today—has already posed formidable problems for many communities. And, with present instructional methods, costs are likely to continue rising in direct proportion to school enrollments. With electronic teaching, the economic ground rules can be drastically altered. For the larger the number of students viewing a program, the lower the per-pupil cost.

At Penn State, a survey of four courses showed that the cost per student-semester-hour was only \$5.44 for televised instruction, compared with \$9.48 for conventional methods. A study by the Southern Regional Education Board—covering some 300 colleges and universities in 16 States—showed that the cost of televised instruction would run about \$2.80 per student-semester-hour, compared with the present cost of \$12 to \$18 for conventional instruction.

Television also opens the way for other savings. At Hagerstown, Md., 4 teachers now provide music and art lessons that would have required 34 teachers before television. In Dade County, Fla., the use of cafeterias and auditoriums for large TV classes has permitted 30 percent more pupils to use each school building, saving \$3 million in capital construction costs alone.

I am, of course, aware of the initial investment required to get educational television started. But I feel that the prospects for long-range savings—particularly when television is used for instruction over broad geographical areas—more than justify the expenditures.

TELEVISION AND THE FUTURE OF EDUCATION

During educational television's venturesome experimental period, widely scattered beachheads of excellence have been established. Now the compelling task is to consolidate these beachheads into a continent of excellence.

It is a task calling not for timorous adaptations, but for bold thrusts. The legislation you are considering could be a significant step in the direction of widespread application of electronic techniques to the demands of education. Ultimately, it could point the way to a system of instruction which could help meet the pressing needs of the day.

As I see them, the three greatest needs are these:

1. To forge a stronger union of the teaching, broadcasting, and graphic arts, with a view toward developing techniques that will take full advantage of television's matchless ability to inform, inspire, and enlighten.
2. To establish comprehensive libraries of educational tapes and films by stand-out teachers, covering the widening spectrum of human knowledge.

3. To foster the electronic distribution of instructional material within school systems in the same city, and the exchange of such material between school systems in different localities. The technical means for accomplishing this are already at hand through closed circuits, open circuits, inexpensive television tape machines, and various combinations of these elements.

In connection with this last point, I believe that the bill now before you would offer strong encouragement to local educators to pool their resources in operating educational television facilities. By providing much-needed "seed money," it should accelerate the growth of many State and regional systems now in operation or in the planning stage. These could lead ultimately to the creation of a truly nationwide system, with each educational organization selecting the material appropriate to its own needs. Such a system could serve elementary and secondary schools, colleges and universities, and even adult education purposes. In addition to closed-circuit use, programs could be broadcast both to classrooms and to the public at large.

One of the advantages of such a nationwide system would be that the teacher's vastly increased productivity would be reflected in a considerably larger paycheck. With many school systems participating in the program and sharing the cost, the general level of teachers' pay could be raised. At the same time, the front-rank teacher could conceivably command a salary comparable to other leaders in the business and professional worlds.

Another advantage of a nationwide system would be to enable those who, for one reason or another, could not enter college, to take a full schedule of courses at home. In this way, television could bring a college degree within reach of every American citizen.

Electronics promises the first fundamental advance in instructional methods since the invention of the printing press 500 years ago. It can raise the level of teaching; it can lower the cost to the taxpayer; it can help the student achieve fuller individual development. In view of these facts, I believe it is not merely desirable; it is a national necessity.

I endorse S. 205 as an essential first step in stimulating the national growth of electronic teaching methods, and I respectfully urge that this committee and the Congress as a whole act favorably on it at this session. Thank you.

Mr. BURMS. Very good.

I believe there exists today an educational gap that is as far reaching in its implication as any so-called gap that might confront our country. In this instance the best way, and surely the only quick way, of closing the gap is through television.

Television has the capability to spark a massive upgrading in the quality of American education with the maximum development of individual potentialities at all levels, for a cost we as a Nation can afford—a cost, in fact, which we cannot afford not to pay.

Educational television can contribute in four important ways: First, it can ease the teacher shortage and extend the influence of outstandingly gifted instructors far beyond their own classrooms.

The Ford Foundation Fund for the Advancement of Education has estimated that it would take half of all college graduates over a 10-year period to meet our need for new teachers. Only a fraction of this half has been entering the teaching field, so we must resort to inventive steps to overcome the numerical deficiency.

The second way in which educational television can contribute is by giving the teacher better tools. Through a skillful blending of the teaching, broadcasting, and graphic arts it is possible to raise the level of presentation in every subject from algebra to sociology.

The third contribution can be made in easing some of the burdens that teachers now carry and according them more time for the all-important function of personal counseling. Under the conventional pattern of instruction, the teachers' energies are often dissipated over a wide variety of chores. With television, each teacher can concentrate on the thing for which he is best suited.

The fourth way TV can improve educational quality is by allowing the student to develop at his own individual pace. Too often today students are poured into school in much the same way that water is poured into an ice tray. They are frozen solid by an inflexible curriculum and an unyielding grade schedule adjusted to the so-called average student. In actual performance, though, the same pupil who is doing third grade arithmetic may be capable of mastering fourth grade reading, but only second grade spelling.

With television, language laboratories, and other electronic aids, each student can move ahead at a tempo best suited to his own development. The faster learner in a particular subject can be exposed to televised lectures that challenge him to his full capacity. The average learner can be encouraged to develop the particular gifts he possesses. The slow learner can be assured of the kind of attention that will prevent his falling hopelessly behind.

During educational television's venturesome experimental period, widely scattered beachheads of excellence have been established. Now the compelling task is to consolidate these beachheads into a continent of excellence.

The legislation you are considering could be a significant step in the direction of widespread application of electronic techniques to the demands of education. Ultimately, it could point the way to a system of instruction which could help meet the pressing needs of the day.

As I see them, the three greatest needs are: One, to forage a stronger union of teaching, broadcasting and graphic arts with a view toward developing techniques that will take full advantage of television's matchless ability to inform, inspire, and enlighten.

Two, to establish comprehensive libraries of educational tapes and films by standout teachers, covering the widening spectrum of human knowledge.

Three, to foster the electronic distribution of instructional material within school systems in the same city, and the exchange of such material between school systems in different localities. The technical means for accomplishing this are already at hand through closed circuit, open circuits, inexpensive television tape machines, and various combinations of these elements.

In connection with this last point, I believe that the bill now before you would offer strong encouragement to local educators to pool their resources in operating educational television facilities. By providing much needed seed money, it should accelerate the growth of many State and regional systems now in operation or in the planning stage. These could lead ultimately to the creation of a truly nationwide system, with each educational organization selecting the material appropriate to its own needs.

Such a system could serve elementary and secondary schools, colleges, and universities, and even adult education purposes.

One of the advantages of such a nationwide system would be that teachers' vastly increased productivity would be reflected in a considerably larger pay check.

Another advantage of a nationwide system would be to enable those who—for one reason or another—could not enter college to take a full schedule of courses at home. In this way, electronics promises the first fundamental advance in instructional methods since the invention

of the printing press 500 years ago. It can raise the level of teaching; it can lower the cost to the taxpayer; it can help the student achieve a fuller individual development. In view of these facts, I believe it is not merely desirable, it is a national necessity.

I endorse S. 205 as an essential first step in stimulating the national growth of electronic teaching methods, and I respectfully urge that this committee, and the Congress as a whole, act favorably on it at this session.

Senator PASTORE. Mr. Burns, you may be interested to know that educational TV originating from channel 2 in Boston does cover the Rhode Island area, and that I view it from time to time. I find it most interesting. I find it very, very informative. As a matter of fact, I am interested to see that even in today's paper there was a meeting between the President and Mrs. Eleanor Roosevelt, who I think has one of the programs which is televised over channel 2, which I have witnessed from time to time. She has brought on her program men of very high caliber in the educational world, experts, and scientists.

The question I should like to put to you, you have talked about the virtues of educational television, and I don't think there is a person in the United States of America that could disagree with that, but the question I would like to put to you is precisely this: Here we are providing for a Federal grant in order to assist these localities to get into this television, educational television and usually the hue and cry is, that this is another subsidy? Why do we have to have it?

I would like to direct my question precisely on this point, do you think we could bring about a rapid fruition of the advantages and opportunities of educational television unless we have the stimulus of a Federal grant?

Mr. BURNS. As I indicated, Senator Pastore, I believe that this would be a very positive step in accelerating the growth of something which has already started and without this kind of acceleration, I think we will be many years in accomplishing what we are trying to do.

Senator PASTORE. In other words, we are confronted with the practical situation that we have 268 channels allocated for educational television and only 54 of them have been taken up.

Now that raises the question, why is that so? And is it your impression that these localities cannot afford this sort of thing and will not unless they get some help?

Mr. BURNS. I am sure that money has been an important consideration in a good many of these, and we see it from a commercial standpoint as well.

I would also like to make this point, that I think a good deal of the bread and butter teaching of children in grade school and high school would ultimately be done to a large extent by closed circuit television, but that in order to arrive at that ultimate point these steps will be very useful in educating people to the use of the new art and to bring together television teaching and the graphic arts, and I think out of the marriage of these three will come the greatest force forward, and I think that much of the combination is missing at the present time.

Senator PASTORE. Most of the support for educational television, of course, has to either come from the Government body or it has to come from some foundation which is willing to invest. There is no

other medium of support outside of voluntary contributions made by viewers who feel that they want to render some kind of support in the institution of educational television.

Do you think we should allow this to drift to the other alternative that we ought to break down the barriers and allow the station to carry commercials in order to accomplish their financial stability or do you think that we ought to do everything within our power to preclude that from educational television and not confuse the two?

Do I make my position clear on that question?

Mr. BURNS. Yes, sir. My reaction is that I don't think education should be diluted with anything else. I think it is too important a subject to tie in with other things. I think we ought to keep our eye on the ball here and do the overall job in the way that this committee has started out to do it.

I think out of the stimulation that you are bringing about through this bill that we will get a real step forward in the solution of our problem.

Senator PASTORE. Do I understand you correctly, in other words, if we allow the educational television to advertise or to permit advertising, you feel that would ultimately lead to the dilution of the original objective of educational television?

Mr. BURNS. Yes, I do.

Senator PASTORE. You would be opposed to that?

Mr. BURNS. I would be opposed to it.

Senator PASTORE. Thank you very much, Mr. Burns, unless you want to add anything else. You have been most helpful and we appreciate your coming.

Mr. BURNS. Thank you very much.

Senator PASTORE. Our next witness is Mrs. Robert Hornung. Is she here?

Mrs. HORNUNG. Yes, sir.

Senator PASTORE. Is that the way you pronounce your name?

Mrs. HORNUNG. Hornung; that's right.

Senator PASTORE. Your statement is very brief, and I think that you should read it.

STATEMENT OF MRS. ROBERT HORNUNG, REPRESENTING THE GREATER CLEVELAND TELEVISION EDUCATION ASSOCIATION

Mrs. HORNUNG. Senator Pastore, I am very grateful to have the opportunity to appear before this committee and to be a witness, I believe, for a practical example of a large metropolitan area in the United States that has no educational television, and my purpose in presenting the statement is to define why we do not have educational television and to point out some of the factors that I believe have affected this situation.

As you will note, in the statement I have started by explaining the history of the effort to bring educational television to Greater Cleveland area, which originated around 1954. At that time the superintendent of the Cleveland schools, his staff, and some members of the Cleveland board of education investigated activating channel 25 which, as you will note, is a UHF channel.

A sum of \$500,000 was assigned by the city of Cleveland specifically for this purpose with additional funds to be provided by the Ford Foundation. Due to pressures for salaries from the teachers and requests for new building plus opposition by certain school board members, this effort was never completed.

I should like to extend my remarks in this paragraph because I will go back occasionally to one or two points. One fundamental one certainly is lack of funds, and the second one is lack of information.

In the pressures that were exerted at that time, 1954-55, when this subject first came up in the Greater Cleveland area, the lack of information among the teachers created a sense of insecurity, both in relation to the medium which was being introduced and to the fact that they were at that time rather in an underpaid level, so that they had a very legitimate reason to request salary raises.

This sense of insecurity among the teachers, I think, in the last 5 to 6 years has been alleviated to some extent, but this medium was such a challenge that it requires not only more preparation, it requires knowledge in depth; it requires the best of teaching, and it is my opinion that to settle for anything but the best of teaching for the instruction of not only the children, but the adults in this country, is to undermine the quality of our education.

Therefore, if we conceded to each of the protests from teachers who feel from a sense of inadequacy, or perhaps from a lack of information which should be provided to them, how they can adjust to the use of this medium, I believe that with such information we can proceed and can develop educational television to what it should be.

Speaking also at this particular time about the moneys, it would seem that the Greater Cleveland area, having received a grant from the city, with such huge moneys to establish the station, was very near-sighted, indeed, not to have proceeded. I believe anyone working at a metropolitan area is very cognizant of how complex that is, how the pressures can be exercised, and how it was of great regret to the leadership in the educational organizations that this was not completed at that time.

Now, to proceed to the next paragraph about the recent effort to create an educational television station.

This was taken up by the television committee of the Adult Education Council which put on a workshop to improve programming of VHF channels on public service time. This is one area that we think can stand a great deal of work and investigation to work very closely with the commercial stations in order to best utilize the time that they so provide.

This effort was followed by a civic lunch to explain the pros and cons of UHF and VHF which is a very serious problem for Cleveland. Again, I would like to extend that to bring in the thought that it is indeed possible that where an area has VHF, as we do, with three channels, and the possibility of three UHF, and one is allocated specifically for education, that there may be some opposition to the bringing in of UHF into this area, and this is one thing that we did encounter.

On the surface, the public attitude was one of cooperation and welcoming of educational television. But there certainly has been very, very definite indications of opposition to the bringing in of UHF use at all, no matter whether it was for education.

Senator PASTORE. Opposition on whose part?

Mrs. HORNUNG. On the part of one of the commercial stations. This would mean that if the other two channels were activated to be commercial stations that there would then be five splitting the market in the Greater Cleveland area, rather than three, and this is a definite attitude that is motivated not by public welfare, but one of dollars and cents.

Senator PASTORE. That isn't too clear to me, Mrs. Hornung.

Mrs. HORNUNG. It is not very clear to many of us, because it seems—

Senator PASTORE. I would like to run it down and refine it a little bit for the record. I wouldn't want it to be left that way.

Mrs. HORNUNG. Very good.

Senator PASTORE. Yours would be a UHF?

Mrs. HORNUNG. Exactly.

Senator PASTORE. For education.

Now, right off the bat you start with a disadvantage because most of your sets that are being used in the greater area of Cleveland would be VHF sets, wouldn't they? This is why I asked the question, whether the opposition was coming from the public.

Now, what would a commercial station have to do with it? Why would they be opposed to UHF? It wouldn't interfere with them.

Mrs. HORNUNG. If the other two channels were activated for commercial purposes, it would interfere with them.

Senator PASTORE. The other two channels would be VHF?

Mrs. HORNUNG. They would be UHF, and there is this definite attitude, for several reasons. I think if you want me to, I could expand these remarks about a discussion of the UHF and VHF area, because this has been such a serious problem for us.

As you know, bringing in a UHF station does mean if the general public in the adult educational programs and general information and culture programs were to use these, they would have to convert their sets. In set conversion it has been noted in some of the other areas in Ohio that about one-tenth to one-quarter of the sets in the area are converted and that in our area would mean a possible audience of 165,000 to 200,000, roughly.

I think you also are probably informed about the movement to try to encourage the manufacturers to have a UHF outlet on all new sets now being manufactured.

Senator PASTORE. We have tried that and we didn't get to first base. I mean that is a hard thing to do. We are talking about manufacturing all sets for dual purposes.

Mrs. HORNUNG. Yes.

Senator PASTORE. And nothing ever came of that.

As a matter of fact, we have been talking about the demixture and not much has come from that, either. And this idea of sitting back and hoping that the chances are you are going to alleviate the situation that way hasn't worked either.

Then we talked about making certain concessions from a tax point of view for manufacturers who manufactured dual sets, and not much came from that, either.

Now the question I should like to ask you is this: You have three VHF channels in that area, right?

Mrs. HORNUNG. That is correct.

Senator PASTORE. Then you have two other channels allocated as UHF; one is educational and one would be commercial?

Mrs. HORNUNG. Three others; two commercial and one educational.

Senator PASTORE. Making six in all?

Mrs. HORNUNG. That is correct.

Senator PASTORE. Correct?

Mrs. HORNUNG. Yes.

Senator PASTORE. And you say there was opposition expressed to the other two UHF applications for the reason that this might be interference with them?

Mrs. HORNUNG. No; that is not what I said.

In trying to bring channel 25, the educational channel, into action in an educational station, there has been some definite opposition to bring any UHF activity into the area. This has not come from the public, though, which has not had very widespread information, and there is no big surge and demand for educational television now, mainly because of lack of publicity and information; but it is an attitude on the part of one of the commercial VHF stations that they would not welcome UHF in the area because, according to our understanding, it is entirely possible that, one, there may be complete conversion to UHF for all of the purposes other than military and defense, which would obsolete the VHF activity now; two, that UHF being brought in activated for commercial purposes with a selected audience would, again, so to speak, cut into the audience of the new present and active VHF channel.

Now, whether this is very logical or very valid, it exists as an opposition, and that is all that I am saying.

Senator PASTORE. Has channel 25 ever started up?

Mrs. HORNUNG. Channel 25 has never been activated.

Senator PASTORE. Never been activated?

Mrs. HORNUNG. No.

Senator PASTORE. How far have they gone in showing their resistance to this coming in? I mean, have they actually opposed it openly?

Mrs. HORNUNG. No. The opposition has not been an open one; it has been one more of lack of encouragement of this present activity.

Senator PASTORE. Now have the people who are behind channel 25 ever made a direct application for the activation of that channel?

Mrs. HORNUNG. We are about to do that. The qualifications necessary to make that application are almost in readiness at this point.

Senator PASTORE. What you are actually saying is this bill would help you a great deal in getting the show on the road?

Mrs. HORNUNG. It would help us enormously.

Senator PASTORE. I see.

Don't you worry too much about the objections. You go ahead and go along and we will try to give you all the help we can.

Mrs. HORNUNG. May I proceed?

Senator PASTORE. Yes; you may.

Mrs. HORNUNG. Just reviewing the way that we have approached this, I did mention the opposition that we encountered simply because they have affected greatly the securing of funds. Any opposition, even one that is invalid, does shake confidence. It raises questions, and it makes it very difficult to convince people who are not too

familiar with a medium or a change or a reform, improvement—particularly in education; so that it has made the effort of getting funds very, very difficult, indeed.

It has taken us 18 months to convince the leaders in this particular development that we should activate channel 25 because there has been every effort made to discover whether it would be possible to have a VHF outlet brought in for educational purposes and this has now been proven that engineeringwise it was not possible.

At the present time I have outlined positive factors in our favor. You, as a committee, would look at the fact that Greater Cleveland is a very rich area in not only program resources, but in funds, and you would want to say, if this bill is passed and this amount of money could be allocated to a State such as Ohio, Why are you not able to raise these funds privately? It's because of the factors I have outlined to show you what we have done in trying to get, as you say, the show on the road.

But the main difficulty, I believe, has been this great problem of getting the true information over to the public, and also to get this beginning "seed" money, the thing that would establish it and get the whole chain reaction started. In other words, as I have indicated in this last paragraph, what we would like is an allocation, if possible, of one-quarter of the amount, the total amount that would be allowed by this Senate bill 205, to equip the studio site which is available.

We are in a particularly unique position, because there is a former KYW property, which is a semiequipped station. This would be available to us. We could move in as of tomorrow, as far as having a home is concerned.

Senator PASTORE. Are you prepared to say, Mrs. Hornung, without the help that would come to you from S. 205, that insofar as your area is concerned of putting channel 25 on the air, that the chances would be slim?

Mrs. HORNUNG. The chances would delay bringing education into the area for from 2 to 5 years, and I would like to indicate that if anyone has a child from about the fifth grade and up to about the first grade of high school, going into the college level, if they are going to be denied educational television, the new methods and procedures and the richness of the curriculum which can be provided by this medium, the competition which they will meet both in national scholarships within their own State in getting into the institutions of higher learning, even in being prepared to enter a junior college, which is an extension of this educational television use which we are hoping to develop in the State of Ohio, all of these factors are very involved, and I think many of the parents are extremely concerned.

We really need the action now. The Greater Cleveland area is really the only metropolitan area, except Los Angeles, which I understand is being activated. In New York and, I believe, in Washington, they have some closed circuit television. But this is the only large metropolitan area in the United States that doesn't have educational television, and it is the last area in the State of Ohio that does not have it.

We would close the gap on the educational television network of UHF which to the Ohio Council on Educational Television is a must. It is imperative that we get going immediately, and this Senate bill would certainly more than assist us.

I have taken quite a bit of time.

Senator PASTORE. That is all right.

You have been very, very helpful, and you have made an excellent presentation. You go ahead and take all of the time you want.

Mrs. HORNUNG. I would like to file with you an extension also of my remarks regarding the further community uses of educational television. One of those, which is, I think, particularly interesting, is the aid in community safety and its use by the police department. And this is one that since 1950 the director of public safety in Cleveland has filed in his annual reports, requesting the establishment of the UHF station on channel 25 to provide improved service for his department.

And I think that, plus some of these other activities which are more usual, I will close my remarks, unless you have some questions for me.

Senator PASTORE. Have you given those extended remarks to the reporter?

Mrs. HORNUNG. I will.

Senator PASTORE. All right. And we will have them inserted in the record.

I have no further questions, unless the chairman has.

The CHAIRMAN. I didn't hear all of Mrs. Hornung's testimony, but what you are saying, in effect, is that probably you could do this up there in Cleveland by yourselves, but that it is going to take not only some doing, but some time on that or a half a generation of school children coming up will lose an opportunity in a pretty fast-moving world.

Mrs. HORNUNG. Very, very so. Very true.

The CHAIRMAN. That is all I have.

Senator PASTORE. Thank you very much, Mrs. Hornung.
(Full statement follows:)

STATEMENT OF GREATER CLEVELAND TELEVISION EDUCATION ASSOCIATION

The Greater Cleveland Television Education Association is a nonprofit corporation organized to aid education through the medium of television. This includes an interest in all forms of television: VHF (very high frequency), such as channels 3, 5, and 8; closed circuit, as at Case Institute and certain public schools; UHF (ultra high frequency), such as channel 25, exclusively reserved for educational purposes.

The present board of this association is representative of organizations which would be most involved or would benefit most from educational television. These include public schools; universities and colleges; museums, libraries, other educational institutions; business and industry. Provision under the association's regulations is made for organization, individual, and special memberships. It originated as a corporation in the spring of 1959.

The function of this association related to educational television is threefold: information, education, and financial support. It aims to coordinate information of educational television from National, State, and local sources. It plans to disseminate this information effectively to the Greater Cleveland community by varied media. Its primary target is to activate channel 25, with attendant equipped studio(s), transmitter, needed facilities, and personnel. As a community association, it could coordinate the necessary fund-raising: from tax-supported school systems; privately financed participating institutions; foundations; corporate gifts from business and industry; gifts from individuals; gifts

of services and equipment from commercial broadcasters; State and National grants under legislation (if available) to develop an Ohio ETV network; membership dues, etc. As in Pittsburgh, a technical staff responsible to a director would administer the operation of educational television over channel 25.

GCTEA's prime purpose is to coordinate the major educational institutions of Greater Cleveland: school systems; colleges and universities; private schools; cultural institutions, civic organizations, etc., in a cooperative effort of interest, financial support, definition of policy, and program—by planning, participation, and coordination.

To accomplish this, in addition to developing a representative but workable-sized board, a committee is working on a suggestion to develop advisory committees or councils whose recommendations would aid in board decisions. One such committee could comprise educators aligned in different categories—county superintendents, museum directors, college presidents, etc.—those on both policy and operational levels. Another committee or council could be made up of leading lay people—civic and business leaders—representing social service organizations, certain clubs, unions, commercial television stations, business and industry, etc.

With widespread service, envisaged from Painesville to Lorain, Oberlin, Medina and all of Cuyahoga County, the sources of support should also be widespread, and subsequently the participation in policy and program. In 46 of 54 ETV stations now on the air, the control is in a representative community board. Only eight are run by a single board of education, and those are in smaller towns.

Many "first steps" have been taken to get channel 25 on the air, all needed for the important preparatory phase. Having prudent and conservative members of the GCTEA board who appreciate the great responsibility of founding a public institution of education that will reach out to every individual in Greater Cleveland, our steps have been deliberate, as we have been in touch with professional leaders in ETV in Washington, New York, and Columbus for advice and direction.

After many months of deliberation and checking, we now accept the reality of using UHF, which will require receivers adapted to channel 25, for ETV in Greater Cleveland.

After many interviews, on advice from our personnel committee, we have decided on a director who will act as consultant in our developmental phase during the next few months, eventually becoming director of the station, if all proceeds smoothly.

After much preparation, our finance committee has launched a campaign for initial funds for the first phase, and is proceeding with plans for the major financing, as a responsibility of GCTEA to the total community. The financing program is conceived as a balanced one, of both public and private sources of support as outlined above.

In fulfilling our duty to inform the Greater Cleveland public on ETV, we have had a series of meetings open to the public. One, held in WEWS in 1958, presented a day and evening institute of ways to improve programming on public service time offered on commercial television to educational institutions which have no technical staff to aid in direction or rehearsal. Another was a civic lunch jointly sponsored with the chamber of commerce offering the pros and cons of VHF and UHF television by two national experts. We have had an all-day leaders' conference with Mr. John White of the National Educational Television Center, New York, to give us direction and advice on our association's development. We have had six experts, some engineers, come to Cleveland for conferences on problems of personnel, site and property and financial programming.

In other words, we are ready to launch channel 25; we need citizen interest and financial support; we need the cooperation of the school systems of the entire area, plus all other institutions interested in using television for educational purposes.

With such a program there would be no need for a single municipality such as the city of Cleveland to have to furnish the entire source of financial support by a school levy, as has been suggested by some of the Cleveland School Board members. As a metropolitan area facility, participating school systems, of which there could be over 30, could allocate funds from their budgets, generally without seeking further tax levies, which, together with the privately solicited funds, would more than suffice to establish and run a station.

The matter of timing is of the greatest importance. As the last metropolitan area in the United States, and the last area in Ohio to receive the enriching benefits of ETV, Cleveland should delay no longer in making this available to our schools. The GCTEA anticipates moving ahead concurrently for service to other educational institutions and to the public through the home receiver. To delay until a building goes up to house a station will deprive us of ETV too much longer. At the earliest, we could be on the air in 8 months or by fall of 1961. One way is to use the former KYW property's studios during the transitional period until capital funds could be provided for a building. This would give time for ETV to prove itself, and to arouse interest and public backing to whatever form of financing was required for building a station.

GCTEA's challenge is: Do you want ETV now for the Greater Cleveland area, supported and controlled by Greater Cleveland leadership, or will you let it either be delayed perhaps for 2 or 3 more years, or pass by default to be a tax burden to the city of Cleveland alone under a single school system's control? Yours is the response—you, the educational leaders and citizens. What do you want? It is up to you. GCTEA is at your service to try to work this out to the best advantage of all.

GREATER CLEVELAND AND EDUCATIONAL TELEVISION

The history of efforts to bring educational television to Greater Cleveland dates from about 1954. At that time the superintendent of the Cleveland schools, his staff, and some members of the Cleveland Board of Education investigated activating channel 25. A sum of \$500,000 was assigned by the city of Cleveland specifically for this purpose with additional funds to be provided by the Ford Foundation. Due to pressures for salary raises from the teachers and requests for new building plus opposition by certain school board members, this effort was never completed.

The next effort was taken up by a television committee of the Adult Education Council which put on a workshop to improve programing on VHF channels on public service time. This was followed by a civic luncheon to explain the pros and cons of UHF and VHF, a very serious problem for Cleveland. From these meetings, a nucleus of interested persons representative of educational and television interests formed an organizing group in 1958. This resulted in the formation of a nonprofit corporation in April 1959 called the Greater Cleveland Television Education Association, with a board of trustees.

Having faced the reality of accepting the UHF outlet of channel 25 for educational television, the GCTEA faced three vital problems: financing, personnel, and site.

Positive factors in the Greater Cleveland situation:

1. Greater Cleveland is an area rich in program resources.
2. There is a framework for the next developmental phase of ETC: a nonprofit corporation, a board, and some committees at work.
3. GCTEA has an option on the former KYW property, expiring shortly at a first-year rental of \$15,000 for 15,000 square feet of space. This includes a gift of 6 months free rental.
4. The Cleveland School Board is having a March 1960 report on ETC updated by an engineering study on transmitter and antenna sites.
5. Representatives of the three major school systems have joined our board's executive committee, ensuring more effective cooperation toward a single goal.
6. There are two excellent persons available for executive director, as soon as we have covering funds for salary.
7. Permissive legislation passed in 1955 allowing school districts to use one-half of 1 cent for each \$100 tax valuation for ETV operation.

One major problem could be solved by Federal aid such as might be available through Senate bill 205. This would be the allocation of \$250,000 to equip the proposed studio site described above. Our local sources of funds could cover operation and maintenance, but the capital outlays will be more difficult to raise. Such moneys allocated to greater Cleveland could service one-fourth of Ohio's population which now has little or no ETV. A quarter of a million for a quarter of Ohio's people—or approximately 2 million persons. This would add great strength to Ohio's UHF network.

HOW SOON EDUCATIONAL TELEVISION FOR GREATER CLEVELAND?

Perhaps this should be worded: How much longer are Greater Cleveland children to be deprived and denied the benefits of improved education made possible by television techniques?

If the GCTEA, incorporated in 1958, had its way, it would have channel 25 on the air tomorrow. It is an embarrassment that Cleveland is the last place in Ohio, and nearly the last metropolitan area in the United States, without ETV for its schools and for other educational uses.

It is not the time to point the finger, review the past, and bemoan why we do not have ETV here today. It is more constructive to tell the Cleveland public what GCTEA is doing and planning, and ask its support.

UHF INEVITABLE

After months of careful study, assurances by engineering reports from the Joint Council on Educational Television, Washington, D.C., and advice from the FCC and the National Radio-Television Research Center, New York, the GCTEA accepted the fact that educational television in Greater Cleveland will have to be by UHF on channel 25.

Schools and other educational institutions such as colleges, museums, libraries, etc. would find this the efficient and effective medium for improving education, as it has proven in Pittsburgh, and in other large cities. It has proven particularly useful to raise educational standards in rural areas also. To receive ETV service, participants would buy receivers adapted for channel 25 for their participating groups. For example, each classroom would have such a TV receiver for its special school programming.

It is being predicted that the Government may take over channels 2 to 13, which are now VHF, for military and defense purposes, activating all UHF channels 14 to 84, for commercial, educational, and other purposes. This change may come very fast. If so, channel 25 will be received on the individual family set everywhere in Greater Cleveland, since all sets will be adapted for UHF reception. This removes whatever criticism ensues today for ETV on UHF, since the individual set has to be adapted. However, the charge for this today is not high—about \$12 to \$20, and may become less.

The GCTEA plans are to proceed first to service all the schools, public, parochial, and private, both city and suburban schools; then the major educational and cultural institutions, and thirdly, and as quickly as possible, the adult education and public information sector of ETV. Although the plans call for starting first with service to the schools, it does not preclude advancing on all three services concurrently, as it seems practicable and desirable.

CHANNEL 25 AND COMMERCIAL TELEVISIONS

To date, the relationships of GCTEA and the three commercial VHF stations, KYW, WEWS, and WJW, have been of the most friendly cooperation. Even with a change to UHF, there is every reason why some public service programs are better suited to be telecast with commercial programs than for a solely educational framework. WEWS, in pioneering telecourses with Western Reserve University under Barclay Leathem's direction, or its sustaining program for the Cleveland schools for Mark C. Schinnerer, has no reason to doubt that the value of such public service will increase and continue even with channel 25 in operation. This is also true for the generous public service time, such as Continental Classroom, Educational Research Council programs, etc., donated by KYW and WJW, both of which give outstanding community service.

TOTAL COMMUNITY SERVICE OF CHANNEL 25

The myriad possibilities of television serving the community are in their beginning stages. It is a medium that can effect the tiniest infant to the eldest golden ager. In its third area of development, after first, the schools, and second, the educational institutions, the individual and family at home will be its focus for service. The young mother needing some direction on child psychology; the homemaker wanting improved methods to solve household problems—cleaning, cooking, sewing, first aid, civilian defense; the worker desiring inservice training; the after-hours student wanting a higher education;

the retired men and women thirsting for the enrichment of mind and spirit of cultural and inspirational programs—all these will use and support educational television.

AID IN COMMUNITY SAFETY, USE BY POLICE DEPARTMENT

Expanded uses for municipal safety departments for police work is another way a UHF station could serve Greater Cleveland. Its 57 communities could use channel 25 for 5-minute breaks three times a day (morning, noon, and night) for the lineup of apprehended suspects and known criminals for police identification or for witnesses, for ballistic identification of weapons, and for inservice police training. The use of television is a tool for improved law enforcement, ranking with radio and radar, has markedly reduced the crime rate where it is in use. New York City now uses it successfully. The superintendent of communications of Cleveland has recommended the consideration of the use of television since 1950. The director of public safety of Cleveland has shown great interest in the possibilities of UHF, channel 25, providing improved service for his department.

COMMUNITY COLLEGE OR BRANCH UNIVERSITIES IN CLEVELAND

There is a growing need for more public service in the area of education beyond the high school and several proposals on how this can best be met are pending. Whatever form this will take it is obvious that it would benefit greatly in effectiveness if it could reach its students and faculty through channel 25, both in and out of class.

EDUCATIONAL RESEARCH COUNCIL AND ETV

This privately supported organization, now in its third year, is doing pioneer work in upgrading curricula for over 20 elementary and high school systems in suburban Greater Cleveland, and for all the Catholic Diocesan schools. Its president, Van Leichter, supported by Ralph Besse, vice president, and their executive director, George Baird, are keenly interested in the potential for expanded and better service possible through educational television. The Educational Research Council has presented inservice training in mathematics for teachers on KYW that has been acclaimed nationally for its merit. Access to time on channel 25 for programming would make the Council's progressive approach through the latest research available to all of Greater Cleveland.

SCHOOLS AND EDUCATIONAL INSTITUTIONS

The most important service of all, however, is what an ETV station can do for the schools and other educational institutions. With cooperation at both administrative and program levels between schools, colleges, etc., and the channel 25 staff, optimum time will be given for these educational needs as having precedent rights before other groups. The remarkable record of ETV in other cities should give Cleveland a great enthusiasm to look forward to this improvement in quality to education for our children, as well as opportunities for teacher training and achievement.

URGENT NEED FOR ACTION

KYW, in leaving its quarters at 815 Superior Avenue NE., Cleveland, for a new property at 6th Street and Rockwell, has made a once-in-a-lifetime opportunity—a ready-made television station. This facility offered to us at a reasonable rental, can receive GCTEA tomorrow, if we had tangible individual and group support encouraging us to take it. We need not only a guarantee of adequate continuing financial support, but a statement of intent to use and participate in this ETV station.

If we could act now, we shall be offered some equipment from the Westinghouse Corp. which is of considerable value, and usable. Being installed, if acceptable to our engineers, this equipment would effectuate great savings.

Another pressure for immediate action is the availability of two outstanding leaders in ETV as possible executive directors—either of which could bring the highest standards of ETV to Greater Cleveland.

Another pressure is the need to act promptly in securing initial founding funds, to qualify for foundation grants and to promote a broad appeal for public support.

ETV—A PUBLIC INSTITUTION TO SERVE THE TOTAL COMMUNITY

The GCTEA is in the business of creating a public institution. It is dedicated to the aim of bringing educational television to Greater Cleveland. This cooperative effort, acting as a catalyst agent to bring together varied groups, school systems, educational institutions, cultural and civic organizations is seen as a total community one, with no one group or individual usurping the rights of others. Our goal can be early achieved if our critical and immediate decisions are based on inclusive, objective and judicious viewpoints. We need help from every citizen to make educational television a success.

STATEMENT OF LOREN B. STONE, MANAGER, KCTS-TV, UNIVERSITY OF WASHINGTON, SEATTLE, WASH.

Senator PASTORE. All right, Mr. Stone.

Mr. STONE. I prepared some remarks which I have given to the reporter here, but maybe I can explain briefly what I would like to tell your committee.

I am manager of an educational station in Seattle, Wash., that is in operation, and has been in operation, for about 6 years. Our station operates in a market that has tremendous resources for our part of the United States and yet without some outside help of the kind that is being proposed that the Congress extend to other areas in the country, we probably would not have gotten on the air.

The problem I think in most communities is that of raising the capital funds that it takes to get these stations off the ground. Our station is well financed in terms of its operating funds. We provide services to the educational institutions of our community that justify their providing the operating expenses and we operate on a budget of approximately \$200,000 a year, all of which comes from the educational establishments, two-thirds of it coming from the public schools in our area.

The big problem our communities faced in the beginning was one of getting capital funds and had it not been for the Fund for Adult Education, which provided us \$150,000 in capital equipment funds, and one of our commercial stations owned and operated by a close friend of Senator Magnuson, Mrs. A. Scott Bullitt, who gave us about \$125,000 worth of equipment to get our station started, our station might still not be on the air in Seattle.

I think it is very likely that many stations can come on the air, if they are given a little help from somewhere.

Now the Fund for Adult Education has gone out of business and they are no longer in the position of being able to help stations come on the air. There are many communities in the country in which there are not the kind of television station operators that we find in Mrs. Bullitt in our own community and as a result, these stations in smaller communities that are coming along don't have this kind of an opportunity. With the exception of one market in the country, it is my understanding that now all of the markets in excess of 300,000 population that have VHF assignments have been activated.

The rest of the stations that will come on the air under the allocations that have been made so far by the Commission, are going to be

UHF stations generally in VHF markets, or they are going to be VHF stations in the small markets, that don't have the kind of resources that even we in Seattle have.

I am just sure that a little help of this kind can go a very long way in getting stations on the air, because our station is a good example of this sort of thing, even in our community.

Senator PASTORE. A logical question is going to arise from your statement in the record, what difference will this bill make to you if you are already on the air? Now I would like to get your reaction to that.

Mr. STONE. I am now here to tell the committee that this will make a difference to us. I am here trying to testify, I think, as to what has been done and what can be done when some outside help is available. Because with just our own resources, even in Seattle, I think we might not have been on the air, and certainly not as early as we did; we might not even be on the air yet.

We operate largely out of funds that come to us from public school districts which can justify their payment to our operating expenses as part of their instructional program, because they use our station during the daytime hours to provide instruction to their children in the classroom. It is relatively easy for schools to purchase by contract in our case, with the University of Washington, a service to their children. It is quite another problem for them to acquire capital funds.

The problems we had of bonding and special levies and restrictions that are placed on our schools in acquiring capital funds give them the problem of providing capital funds for stations.

Senator PASTORE. From your experience and background, you are convinced that there are many localities that will be denied the opportunity of educational television unless they get some help for capital funds to build these stations?

Mr. STONE. I am quite sure of this. Out of the 53 stations that are currently on the air, something more than 21 of them got grants from the Fund for Adult Education, grants ranging from \$100,000 to \$150,000. Our station was one of those, and I am quite sure that none of these stations would have gotten on the air at the time they did, maybe some of them never, had it not been for that kind of money. Now, that money is no longer available. It is entirely possible the money that your bill proposes will make it possible for a great many other stations to come on the air.

Senator PASTORE. I wanted the record clear that way.

Mr. STONE. I think it is also a logical thing for Congress to make this sort of appropriation, because these stations are really creatures of the Federal Government. Under the rules of the Federal Communications Commission, acting under authority by the Congress, they are given authority to operate these stations. This whole area of television is one that has been preempted by the Federal Government and I think there may be great logic by approaching this from the Federal Government, giving them some seed money to help these stations get underway.

Senator PASTORE. And all of these educational television stations are nonprofit, aren't they?

Mr. STONE. That is correct.

The CHAIRMAN. Loren, you would agree, wouldn't you, that there may be some discussion or controversy as to the degree of Federal responsibility in this particular field but there is some Federal responsibility, just as we have established that in the field of building schools. That is what this is, physical property that provides the means for education.

Mr. STONE. That is right. I think there is probably more logic talking about help to educational television than just on the basis of education alone, because television is a Federal Government responsibility. It has created these stations—

The CHAIRMAN. The so-called right of use of it.

Mr. STONE. That is correct. And if the Federal Government wants to encourage development of this, and certainly Federal Communications, by creating these stations, indicated a desire on the part of the Federal Government to provide this facility to the community, it may be perfectly logical to provide a little of the seed money that will get many of these stations underway.

The CHAIRMAN. Part of your funds come from the University of Washington?

Mr. STONE. That is correct.

The CHAIRMAN. Which in turn must be appropriated by a State legislature?

Mr. STONE. That is right.

The CHAIRMAN. Which in turn is having nothing but financial problems in all areas of education?

Mr. STONE. That is right, Senator.

The CHAIRMAN. Any questions, Senator Monroney?

Senator MONRONEY. Does the University of Washington have supervisors who help to train the teachers in the effective use of the television programs for courses and to provide examinations and things of that kind for the schools that use them?

Mr. STONE. The University of Washington gives training to students at the university in television production and to classes in the college of education to prospective teachers in the use of television. Our staff and the staffs of the public schools are making use of the television broadcasts, put on quite an extensive program of in-service training for teachers in the use of television. The university does not provide the instruction to the public schools. The public schools make use of the facility to provide instruction by their own staffs to their own children. The station is licensed to the university but is operated in a joint venture with the public schools.

Senator MONRONEY. In my own State we follow up these courses with a lecture, for example, once a month, by a science teacher, to take and mix and blend and augment the television education with extension service that not only provides sample examinations, but also to provide for a personal contact between the university and those teachers using it. I understand it has been very satisfactory in bringing television a little further along to a yield for credit or in some cases, for university credits.

Mr. STONE. Our university has provided some telecourses during evening hours for teachers. We have given a course in Washington State history and Washington Teachers Manual that is required for all teachers for permanent certification in our State, and this has

enabled many of the teachers who have come in from outside the State, who took their training elsewhere, to become permanently certificated for teaching in the public schools in the State.

Senator MONRONEY. Thank you.

Senator PASTORE. Any questions, Mr. Schoepfel?

Senator SCHOEPEL. No, thank you. My regret is that I was tied up. I am going to certainly read this transcript with much interest because your distinguished Senator from your great State has sponsored this measure and I am happy to have been a cosponsor.

Senator PASTORE. Mr. Lausche?

Senator LAUSCHE. I regret that I did not hear your full testimony, but gathering from your final words, you have developed a program in the State of Washington, haven't you?

Mr. STONE. That is correct, Senator.

Senator LAUSCHE. We, at the Ohio State University, likewise have an educational program. How have you financed your Washington program?

Mr. STONE. Our operating funds are financed partly by the University of Washington. We operate as a department of the university. We operate on a budget of \$200,000 a year, of which the university puts in \$65,000. There are two other private universities in the city of Seattle that put in a dollar per student per year and the Seattle Public Library makes a nominal amount, but something more than two-thirds of our operating funds come from the public school districts in the area that make payment to the university on a formula based on \$1 per year per schoolchild. These are the sources of our operating funds.

I was addressing myself in part to the problems that stations like ours have in acquiring the capital funds. Had it not been for help that we got from the Fund for Adult Education, which had been created by the Ford Foundation, and from one of the commercial stations in our community, we might never have been able to raise the capital funds it took to get underway.

Senator LAUSCHE. What amount of capital funds did you need?

Mr. STONE. We have \$606,000 worth of donated capital funds from various participants; \$150,000 from the Ford Foundation; \$125,000, approximately, from one of the commercial stations, and it was this that really got the local community off the ground and underway and believing that they could do this themselves then.

Senator LAUSCHE. So that you did assemble the approximately \$600,000 to provide the capital funds for the capital equipment?

Mr. STONE. This is correct.

Senator LAUSCHE. And you are now spending how much?

Mr. STONE. \$200,000 a year in operating expenses.

Senator LAUSCHE. When did you institute this program in Washington?

Mr. STONE. We went on the air 6 years ago, in the fall, in 1954.

Senator LAUSCHE. Why do you feel that the State of Washington cannot finance a program of this type on its own, if it is a needed one?

Mr. STONE. I think it is very difficult to demonstrate the need to communities that have never seen television in operation. This was true in our own case. In fact, it appeared utterly impossible for our

community to raise the funds that were needed to put the station into being until they saw some outside help coming in. The Fund for Adult Education came along and offered a grant providing the community would match this grant, and this stimulated the community to action. The opportunity to get some help, but also the requirement to have to match this grant, was useful.

Senator LAUSCHE. Was the stimulation the result of a recognition that it was a worthy method of teaching or do you take the position that fiscally the communities are not in a financial position to do the financing?

Mr. STONE. Well, the interest in developing our station grew up among public school people who believed that there was a great need to explore the possibilities of using television to help improve their instruction. And public schools are always faced with very serious problems in meeting their financial problems, particularly those relating to acquisition of capital funds. And for them to acquire the capital funds to put a station into operation just seemed to be utterly impossible to them. They brought together the other educational institutions of the community and among them all, it looked almost insurmountable to acquire capital funds.

Senator LAUSCHE. Let me stop you there. Do you claim that their assets are so meager that they cannot put up the funds or do you take the position that they did not recognize the value of this and therefore did not put up the capital funds?

Mr. STONE. Well, I suppose possibly that is the case, Senator, that if they had recognized the value strongly enough, they might have found the funds.

Senator LAUSCHE. That is, they do have the funds if they would recognize the value of the program?

Mr. STONE. They have the funds, but the problem of where the greatest need lies is the problem they face. Our schools are way behind in construction of physical plant buildings for themselves, and the acquisition of capital funds to do some of these things is a much more serious problem than it is a problem of securing operating funds. The schools make payment to operate the station as a justifiable expense out of their instructional budgets.

Senator LAUSCHE. Now then, have you planned how this money will be used in the event the Federal Government decides to provide it?

Mr. STONE. Our station has no need of additional help from the Federal Government, but there are many communities in the State of Washington to whom channels have been assigned that have not gotten underway. Planning is going on at the present time within these communities. I am not representing a group which is seeking help from the Federal Government for these funds. But planning is going—

Senator LAUSCHE. Would you identify some of those communities?

Mr. STONE. The city of Spokane, which is the second largest city in the State, has a VHF channel assigned to it.

Senator LAUSCHE. Now do they take the position that the city of Spokane is not in a financial status to finance this on its own if it desires to?

Mr. STONE. The interest that currently exists within Spokane is among the public schools, and the public schools in Spokane are hard pressed for capital funds to supply the buildings that they need to carry on within the established framework of their instructional program now. And I don't think that it is utterly impossible for Spokane to provide these facilities, but I think that if some seed money is available, as it was in our case from the Fund for Adult Education, it would get these stations into operation much sooner than if they wait for the normal momentum in the community to develop them.

Senator LAUSCHE. I put these questions to you because I am constantly of the opinion that there is a misapprehension in the country that the Federal Government has unlimited amounts of money with which to finance programs that local communities could finance if they had a disposition to do so. That is all I have.

The CHAIRMAN. Loren, to clear the record, if it had not been for the two large donations from the Fund for Adult Education, and Mrs. Bullitt's donation of equipment, you might have been 3 or 4 years before you could have put this together; isn't that right?

Mr. STONE. I am quite sure of that, Senator.

The CHAIRMAN. And then you heard the testimony of Mrs. Hornung, from Cleveland, who was an earlier witness—Senator, you weren't here—from Cleveland.

Senator LAUSCHE. I spoke to her and I know the situation in Cleveland. In Cleveland, they are in a position to do if they want to.

The CHAIRMAN. Well, the point they made—

Senator LAUSCHE. They are in ample position financially.

The CHAIRMAN. The point she made is, they might be able to do it themselves, but there might be a 3- to 5-year period before the doing would be done, and that therefore, about half a generation of school children would lose this opportunity that has been clearly established all over the country.

Secondly, the Seattle area could do it, but we have heard some testimony here in these hearings about other areas in the United States that they might be 8, 10 years before they get into this thing without, what someone called, the seed money.

Now, the question is whether or not we want to lose that period of time with a new generation coming up in a pretty fast moving world and I think that was the point that Mrs. Hornung made here.

Mr. STONE. We are talking in terms of a million dollars per State, talking about a relatively small amount of money to any one of a large number of installations that might go in. We have capital equipment in our station of \$600,000. This is probably less than the average of all of the 53 existing television stations so we are talking—we have a dozen areas in the State of Washington that can come into being in the next 5 or 10 years.

The CHAIRMAN. Yes, sir, I think all the testimony that was developed here was to the effect that there are many areas in my State and in Kansas—I suspect even Ohio, I know Oklahoma, too, from the testimony—that if the channels are put on the air, that then the possibility of State networks and State coverage to other school children, which are not covered from one station, will be given several. In our State alone, savings would be great because the cost to each

station then would be lower and the possibility of State networks and coverage which we should start immediately under this legislation would be started.

Mr. STONE. We have had a large growth in the number of school districts that are participating in financing the operating expenses, districts in the outlying areas are beginning to make use of it.

Senator LAUSCHE. Mr. Chairman, may I put another question?

Do you take the position that we ought to help provide the moneys for the acquisition of the operating structure?

What is your position on providing moneys for operation?

Mr. STONE. Well, let me make my position clear.

I don't take a position that Congress ought to do anything. I hope to offer evidence of a successful operation that had received help and I am suggesting that it is entirely possible that if Congress can see its way clear to do something in this field in bringing stations into being far sooner than they will on their own. I am not suggesting that Congress ought to do this, but I am suggesting that here is a possibility of stimulation.

Senator LAUSCHE. Why do you hesitate about saying that Congress ought to do it?

I understand you feel that it would be a good thing.

Do you have some qualms about whether the Federal Government ought to do it or whether the States and local governments ought to do it?

Mr. STONE. I don't have the competence to decide how Congress should spend the money that it has available to it.

This is your responsibility, sir, and I am suggesting here is something useful that can be done. But you have to determine whether or not Congress ought to do it.

Senator LAUSCHE. That is a wonderful statement. I appreciate it.

Mr. STONE. Now as to the question of operating funds or capital funds, we each of us, I am sure, draw on our own experience and feel there are values to the ways in which we have done things, or we would have done them differently had we thought some other way better, but I think it would be a mistake for anyone, a foundation, or a government, to subsidize the continuing operation of such stations.

If they cannot operate by themselves, they should not be created. That is something else to provide some stimulation to getting these things created.

Senator LAUSCHE. I am glad to have you say that. If I am here another 6 years, I would wager today, that the next measure will be to provide finances for operation.

Now you feel that if they are helped to put up their capital equipment, that they ought to, on their own, see that it is financed on a local level, is that correct?

Mr. STONE. I do, right.

Senator PASTORE. You are familiar with the fact that the bill so provides?

Mr. STONE. I am.

Senator PASTORE. Mr. McGee?

Senator MCGEE. No, I have no further questions.

I think you have just cleared up the point that I thought the record ought to make very clear, that is, your testimony here that the real obstacle was getting these operations off the ground in the first place.

Mr. STONE. That is what I believe.

Senator MCGEE. It would be because of a dispute over priorities, whether it would be the absolute difficulty of capital funds in the beginning, whatever it may be, but once they are off the ground, that they can pretty much take care of themselves?

If they cannot, something else is wrong?

Mr. STONE. That is right.

Senator MCGEE. I think the brilliance of your testimony is illustrated in the fact that the distinguished Senator from Ohio takes great comfort from the things that you say because of some of the spending features and so do I.

Perhaps we reach opposite conclusions, but I think the important thing is to stress the urgency of putting these stations into operation.

As the chairman of this full committee said so well yesterday, once they get going, their usefulness and capacity to sustain themselves will be clearly demonstrated.

Mr. STONE. I think this is true.

Senator MCGEE. I think it should not be forgotten here, that we have school systems, public and private, in this country and without getting into the political argument of Federal aid to education as to how it applies, here is something that all schools in any community, public, private or even an adult group, can use.

Mr. STONE. Right.

Senator MCGEE. Without any problem at all. I mean, any political problem, let's put it that way.

And part of the cooperation we get in the Seattle area comes from a great enthusiasm from the private schools, Seattle College?

Mr. STONE. Right.

Senator MCGEE. And they use it extensively out at this very fine private institution, and others?

Mr. STONE. Parochial schools, we have two.

Senator MCGEE. Pacific Lutheran, parochial and otherwise.

Senator LAUSCHE. May I suggest, Mr. Chairman, that I take no exception with that. I think the medium is wonderful.

My discussion is directed at what I believe to be an erroneous conclusion that the only way it can be done is through Federal financing.

Senator PASTORE. I agree with that philosophy and I think myself that is the constant dilemma that confronts the Congress and confronts us in Washington. It is true there are many communities that if they did burden further their local constituents, that many of these things they could do themselves.

But we have let ourselves into the Hill-Burton Act that has to do with the building of hospitals. I daresay that we would not have many of those fine facilities today in some of the communities unless there was some incentive on the part of the Federal Government. And who can say it is wrong, because you have a community of participation there, and yet there is no inclination on the Federal Government to operate the hospitals and no one even dares think of the fact they are going to come here to the Federal Government to operate that hospital.

You take the hot school lunches, there is not a community, I suppose, which could not tax their citizens to provide hot lunches for their students. On the other hand, if the Federal Government had not done it, I don't think many school children would be receiving these hot lunches. It is unfortunate that it is so. We have lived long enough to know that unless the Federal Government takes a hand to promote some of these things, we do not promote the things that should be promoted in the public interest.

We end up with illiteracy, halfway education, empty stomachs here and there, and slum areas here and there, and we find, yes, if every community was as wealthy as Ohio and the State of Washington, maybe we would not have much to worry about.

There are some communities that just cannot afford them.

Senator MONRONEY. Don't we stand in a rather peculiar light, if we fail to move in this direction of a million dollars a State, when we are putting up \$4 billion a year on a 90-percent Federal participation, 10-percent State matching to build superhighways across the Nation?

Certainly the education of our youth calls for a better standard, if humanly possible. It is worth some degree of Federal effort the same as the \$4 billion that we will appropriate again this year toward a \$40 billion Federal highway system.

Now I cannot square my conscience with any suggestion that would deny bringing into being a very modern and helpful supplement to our educational system which has just as great a national value as does the building of a \$40 billion highway system. While I am for the highway program, I still feel we cannot neglect the educational tools on which all improvements to our Nation finally must depend.

If we neglect the education, no matter how good our physical facilities are, we will be a second-class nation.

Senator LAUSCHE. May I reply to that?

I think the argument made by the Senator from Oklahoma demonstrates the very point that I am trying to make, that is, as you keep multiplying these programs of Federal help, you reach what you call the interminable cycle demonstrating that highways had to be financed, and unless the Federal Government financed them, they would not be financed at all.

You then justify the adoption of a new program and so on without end.

Now, then, I heard the words of the Senator from Rhode Island. I think we ought to give recognition that things in the United States are not in a state where people are in hunger, where slums are of a nature that are causing distress, especially when you compare our condition with those in the world, but let's assume that is the fact, my position is that local governments and State governments ought to undertake using their resources in the fullest capacity and not come constantly to the Federal Government.

Senator PASTORE. I agree with that.

Senator LAUSCHE. And the correctness of my position is demonstrated by the fact that the purchasing power of your dollar has fallen to 46 cents.

People in the world will not take your paper money, they say, "We want your gold, because your paper money is growing cheaper and cheaper."

The President of the United States is scared to death about the outflow of gold, and if we come up with a \$10 billion or \$12 billion deficit in the next 2 years, there will be still greater consternation and worry about where we are heading, at the end of fiscal year 1962.

And finally, may I say that I subscribe to the worth of this program. I think it ought to be adopted, but the question is, How should it be financed, and on that minds can differ.

I have my view and you have yours, and I respect you for yours, but I ask you not to deprecate mine.

Senator PASTORE. No one is; no one is deprecating anyone else's point of view. I hope we are old enough and have reached far enough in life to respect the other man's point of view, but I was merely asking a question here that was raised, that in many instances, many of these worthwhile programs would have never been undertaken or would never have been brought to fruition unless there was a spirit of partnership. I would hate to see the day in the United States of America when a man has a lot of gold hoarded and children are illiterate. Then man has gained nothing. If we educate our people and make them worthwhile citizens and make them more instructive, more illuminated of mind, spirit, body, and soul, I think we have enhanced the wealth of the United States of America.

I would even go for a \$4 billion imbalance in payment, if we could beat the Russians in better education.

Mr. STONE. Thank you, sir.

The CHAIRMAN. The next witness.

Is Mr. Ford ready?

Now all your associates may accompany you to the front here.

(Mr. Stone's statement in full is as follows:)

STATEMENT OF LOREN B. STONE, MANAGER, KCT-TV, UNIVERSITY, SEATTLE, WASH.

Senator Magnuson, and members of the Senate Committee on Interstate and Foreign Commerce, I am Loren B. Stone, manager of KCTS-TV, a noncommercial educational television station licensed to the University of Washington at Seattle, Wash. Our station, which operates on VHF channel 9 was the ninth of the educational television stations to begin use of the reserved channels. It has been on the air since December 1954—a little more than 6 years.

The sixth order and report of the Federal Communications Commission reserved 10 channels in the State of Washington for noncommercial educational television stations—3 in the VHF (at Seattle, Spokane, and Pullman) and 7 in the UHF.

To date our station is the only one of the VHF reservations which has been put into operation. Only one of the UHF channels is in use—by the Clover Park School District, suburban to Tacoma, Wash. The Tacoma public schools hold a construction permit for another UHF noncommercial educational television station to be operated on a nonreserved channel.

Seattle is the largest city in the State of Washington and has a relatively large number of educational establishments within its immediate area. But had it not been for the outside financial assistance given the groups working to create the station—financial help from sources that are not now generally available to many of the communities which are desirous of utilizing the channels assigned to them—our station would certainly not have come into being at the time it did. In fact, without this outside help, it might not yet be providing the schools of the area with the instructional service it now does.

Perhaps a brief summary of the manner in which our station has been financed and of the service which has been provided through it to the community will be of interest to you and will serve to illustrate what can be done when a relatively small amount of outside help forms the catalyst around which local interest and effort can be crystallized.

The initial interest in utilizing the reserved channel 9 in Seattle appears to have developed among public school directors and administrators in Seattle and surrounding King County who believed they owed it to the children in their schools to explore ways in which television could be used to improve the quality of instruction.

As the public school people studied the problems attendant to the establishment and operation of such a station, they brought together representatives of all the major educational institutions of the community to see if such a combination could meet what appeared to be insurmountable initial costs. But even the full group, which by then included the University of Washington, Seattle University, Seattle Pacific College, the Seattle Public Library, the Seattle public schools, and the majority of the public school districts of rural King County were unable to see where they could raise the funds needed to acquire the capital equipment to bring the station into being.

The problem was ultimately solved through the offer of outside help from two principal sources—the Fund for Adult Education and from KING Broadcasting Co., which operates commercial television station KING-TV, Seattle.

I know you are familiar with the assistance offered by the Fund for Adult Education to groups in selected cities of the country during the early years of the development of educational television stations. They offered the Seattle Educational Television Committee assistance in an amount ranging between \$100,000 and \$150,000 on the condition local community groups would provide matching funds of twice the amount of the Fund for Adult Education grant. This meant local groups would need to raise between \$200,000 and \$300,000 to qualify for the Fund's grant.

These needed matching funds appeared to represent an almost impossible amount to be raised by schools and colleges which themselves were operating under curtailed budgets, until Mrs. A. Scott Bullitt, president of KING Broadcasting Co., offered the group a substantial amount of equipment—equipment which was ultimately valued at \$121,963 and both represented badly needed equipment for the station-to-be and, by itself, constituted more than 40 percent of the local matching funds required.

With these two outside sources of help providing the stimulus for local activity the balance of the funds for equipment and facilities began to come more easily. The Seattle Television Committee with the help of local PTA groups and of the schools themselves conducted a "gifts" campaign which raised \$33,441. The regents of the University of Washington pledged studio building facilities to a value of \$275,000. Seattle public schools pledged transmitter housing to a value of \$16,000. Emerson Radio & Phonograph Corp. ultimately gave the station a gift of \$10,000 for being among the first 10 noncommercial educational television stations to commence broadcasting. The total of the locally raised matching funds enabled the station to qualify for the maximum grant of \$150,000 offered by the Fund for Adult Education, bringing the station's total capital funds to \$606,404, acquired as follows:

Fund for Adult Education.....	\$150,000
KING Broadcasting Co.....	121,963
Seattle ETV Committee.....	33,441
Emerson Radio & Phonograph Corp.....	10,000
Seattle School District No. 1.....	16,000
University of Washington.....	275,000
Total.....	606,404

Once the capital equipment costs were determined to be manageable it was found the local community itself could and would meet the operating costs of the station. Each of the public school districts agreed, by written covenant, to contribute on the basis of \$1 per student per year on their average daily attendance. The two private colleges agreed on the same basis of support, while the University of Washington offered to match the contribution of the Seattle Public Schools, providing \$65,000 per year, or an amount equal to approximately \$4 per student on their then enrollment.

It was further decided that the University of Washington, as the largest of the participating educational institutions, would become the applicant and licensee of the station, operating it, though, as a joint venture with the others of the educational community. The university's offer to provide studios on its campus grew in part out of its desire to provide instruction in television pro-

duction to the students of its school of communications. Seattle Public Schools offered housing and student operation of the station's transmitter at its Edison Technical School.

The large number of students provided as staff by these two institutions has made possible the operation of the station on a schedule exceeding 40 hours per week on a budget of less than \$200,000 per year, which, during 1960-61 arises as follows:

University of Washington.....	\$65,000
Seattle Public Schools.....	65,000
King County school districts.....	63,201
Other schools.....	4,175
Miscellaneous income.....	2,000
Total.....	199,376

KCTS-TV broadcasts a normal evening schedule of 4 hours per evening 5 days each week, including 1 hour of children's programs; 1 hour of telecourses, formal instruction of either credit or noncredit courses at the college level; and 2 hours of general cultural and informational programs for the entire family. Its daytime schedule of nearly 5 hours per day is planned by a special curriculum committee of representatives of the participating public school districts to encompass instructional programs designed for classroom use in the public elementary and secondary schools of the area.

Currently instruction includes Spanish and French language for elementary schools at several different grade levels; science for 5th grade; Washington State history for 9th grade; calculus for 12th grade; and programs in a wide range of other subjects to help the teacher improve classroom instruction. A considerable number of inservice instruction programs are offered teachers during the after-school hours to help, in this way, to improve teachers themselves.

Interest in using the classroom instruction has grown far beyond the group of schools which provided the initial impetus to start the station. Two different county school groups in areas so far removed from Seattle that they are unable to receive the station direct have provided themselves with the in-school programs through the installation of translator stations which automatically receive and rebroadcast the programs on one of the UHF translator channels provided by the Federal Communications Commission at the top end of the UHF band.

A number of other school districts beyond the normal range of the station are being provided the instructional programs through special cooperation of community cable systems which receive and transmit the KCTS-TV programs over the local cables and have offered cost free service to the schools lying within the areas served by cable. Two cable systems at a distance of more than 200 miles from Seattle have applications on file with the Federal Communications Commission to construct special microwave facilities, at their own expense, to permit their providing our programs to their schools. These outlying schools will bear their just share of the operating costs of the station insuring an expanding growth of the service which the station can provide to the classrooms of its area.

This station is financially secure, earning the support it requires from the educational community it serves. But it probably could not have been created by a hard-pressed educational establishment without timely assistance from outside financing—assistance that was not necessarily great in terms of dollars, but assistance which by the terms of its matching requirement was tremendously useful in stimulating the community to action.

There are 53 noncommercial educational television stations presently in operation in the United States. Except for the city of Cleveland, Ohio, every one of the cities of over 300,000 population to whom a VHF reservation has been made has found the means of activating its reservation. The stations which will come on the air in the future will be those struggling with UHF operations (generally in VHF markets) and those attempting to activate VHF stations in the smaller cities of the country. The Fund for Adult Education has ceased its grants to educational television stations and no other private foundation or fund has taken its place. Few cities have the type of public spirited ownership of commercial television stations found by Seattle in Mrs. A. Scott Bullitt of KING-TV.

Without this kind of help KCTS-TV would not be in operation. Without similar help the majority of the presently operating stations could not have been started. Without some outside help many of the additional stations which could and should be serving their communities will never be able to get over that first all-but-insurmountable hurdle of acquiring the necessary capital funds for transmitting equipment.

Perhaps it would be a wise expenditure by the Congress to provide a small amount of "seed" money to each of a large number of potential broadcast stations and closed circuit systems which can do so much to help the schools of our country meet the needs brought on by the present explosions of knowledge and population.

The stations in being and those to come are, in fact, creatures of the Federal Government, for their existence is made possible by rules and regulations of the Federal Communications Commission acting under authority of Congress. Now that private philanthropy and private industry have shown how far a little assistance can carry a station perhaps the Federal Government can find an ability to give similar assistance to the smaller communities of the Nation which have not been favored with funds from philanthropy or industry but which desire to provide their children with the type of instruction made possible by television.

I thank you for the opportunity to appear before you today.

STATEMENT OF HON. FREDERICK W. FORD, COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION, ACCOMPANIED BY COMMISSIONERS ROSEL H. HYDE AND JOHN S. CROSS, AND STAFF MEMBERS, ASSISTANT GENERAL COUNSEL DEE W. PINCOCK AND MR. GOLDIN

Senator PASTORE. All right, Mr. Ford, you may proceed in any way you care to.

Mr. FORD. I appear here today in behalf of the Federal Communications Commission to give our views in support of the objectives of this bill.

S. 205 would authorize the appropriation of funds, not to exceed \$1 million in a State, for establishing or improving educational television broadcasting facilities. Applications for such assistance would be made to the U.S. Commissioner of Education.

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 the bill, 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 bill further specifically provides that nothing therein shall be deemed

to give 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.

The CHAIRMAN. Mr. Ford, I wonder if I could just ask one question because I have to go.

In writing the bill, we tried to achieve as simple language as we could. On page 3, section 6, where we say:

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.

I want to ask whether or not the Commission feels that that language is strong enough or if it should be made even stronger because our full intention, that is those of us who wrote the act, that there would be absolutely no control, but at the same time, responsibilities of the FCC would still remain.

I wonder if you think this language is sufficient?

Mr. FORD. It occurs to me that it is. I know there may have been some question raised to it, but specifically, what this says to me is that no substantive control of the programing materials shall be in the Commissioner of Education and no provision of this bill alters, amends, or modifies in any way any provisions of the Communications Act.

The CHAIRMAN. The only thing that was bothering me, where we say, "(a) to give the Commissioner of Education any control over television broadcasting," whether or not the word "television programing" or "broadcasting" should be added.

Well, anyway, I won't interrupt you.

Mr. FORD. I think it is quite broad. The word "broadcasting" is broader than programing, and in addition to that, I think we have a definition of broadcasting that Congress has already provided.

The CHAIRMAN. That would take care of it.

Mr. FORD. I will read that into the record at this point, if you would like me to, so that it will be clear.

The CHAIRMAN. You can put that in the record.

Mr. FORD. May I furnish this section?

The CHAIRMAN. In other words, then, the definition of broadcasting is sufficient to achieve what we intended to achieve here?

Mr. FORD. I believe so.

The CHAIRMAN. OK. You can put that in the record later and proceed with your statement.

Mr. FORD. I will furnish it in just a few minutes

Senator PASTORE. May I ask a question at this point, Mr. Ford.

We have authorized, that is you have authorized, the establishment of 268 channels for educational purposes. Of the 268 established, only 54 have thus far been utilized. Has the Commission ever concerned or interested itself with the fact why a full utilization of these available channels was not being made?

Mr. FORD. I think we would have to answer your question, first, "No," and then explain it.

Senator PASTORE. I don't mean any formal concern. I mean what we are trying to discover here—the question was raised today and very aptly so, Why does the Federal Government have to engage itself into this venture if it is something that can be done on a local level?

The question is, Why isn't it being done on a local level and why is it that 268 channels have not been utilized? I think the record ought to indicate that pretty emphatically for the purposes of the Members of Congress. The FCC hasn't allocated all these channels and after a period of all of these years, would ask the question why haven't they been used? Have you ever asked that question, why?

Mr. FORD. Commissioner Hyde would like to answer that question.

Senator PASTORE. I would like to have somebody answer it.

Mr. HYDE. Mr. Chairman, I thought because of my participation in the promulgation of the sixth report which contains the allocation of channels both for commercial and noncommercial, that I might be able to provide some background information.

Actually, the appropriation and use of commercial channels is not much greater percentagewise, oh, it is greater, but it is far short of the potential. There are many channels available in the total allocation of some 1,800 station assignments which have not been exploited or used for regular television.

The CHAIRMAN. VHF or both?

Mr. HYDE. This is both. I will add quickly here that VHF assignments available in the larger cities are at a premium and there are contests for them, but there are many VHF assignments available in smaller places and actually we had the situation only recently of a VHF station ceasing to operate. So, this failure to use channels available is not limited to channels allocated for commercial television.

Senator PASTORE. I know, Mr. Hyde, but you have to make a distinction. It is true that all applicants for commercial television channels preface their application with a strong desire to serve the public interest. But fundamentally they are interested in dollars. The reason why they are not applying for these stations that you are talking about is because they happen to be in areas where it would not be profitable to apply for them and get a station started.

Now here in educational television you have an entirely different situation. Here we are not interested in dollars. Here we are interested in the illumination of the mind, the soul and the morals of our people.

Now, why haven't they been taken up?

Mr. HYDE. Mr. Chairman, some of the reasons which apply to commercial channels also apply here. It is more difficult for the school in the sparsely settled area with a minimum of resources to obtain the funds and make a showing or to put them in position to construct and operate a station. This is one of the reasons why for my part I am going to urge that Federal assistance be given to this bill.

Senator PASTORE. That is one of the reasons why I asked you the question. In other words, unless help is forthcoming, as indicated by S. 205, you are convinced, as a member of the FCC, there will not be a full utilization of the 268 channels that have been made available?

Mr. HYDE. That is right, sir; and, of course, I feel that the potential of using these channels could have tremendous consequences both educationalwise and in terms of improvement of our communication system, which I will explain when my turn comes.

Senator PASTORE. I wasn't being critical at all, Mr. Hyde, I merely wanted to fill in the record.

Mr. FORD. I would like to supplement that just a little bit. Perhaps I am saying the same thing, and that is, I have broken it down into two reasons: One is the UHF problem, and the receiver problem, in addition to the second one, which is money.

Senator PASTORE. All right, sir.

Mr. FORD. 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 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; for 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 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 the Congress.

The Commission strongly endorses the objectives of S. 205, but would defer to those responsible for its administration concerning the details of the bill.

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

(The tables follow:)

APPENDIX

TABLE 1.—Total number of assignments in assignment table and number of 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

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

NOTE 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 2 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 Aug. 3, 1953, and Sept. 10, 1954, ceased operation and requested cancellation of its construction permit on Feb. 9, 1955. Station WKAR-TV, East Lansing, Mich., which operated, between Jan. 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.	Lincoln, Nebr.	Fargo, N. Dak.
Carbondale, Ill.	Reno, Nev.	Lubbock, Tex.

Group II—Educational Reservation Changed From VHF to UHF

University, Ala.	College Station, Tex.
------------------	-----------------------

Group III—Educational Reservation Added—VHF

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

Group IV—Educational Reservation Added—UHF

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

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.

EDUCATIONAL TELEVISION

ATTACHMENT B
Noncommercial educational television stations and applicants

State and city	Call letter	Channel No.	Educational institution	Date		Applic- tion pending
				Granted	On air	
Alabama:						
Andalusia.....	WAHQ.....	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
Murford.....	WCIQ.....	7	do.....			
Arizona:						
Phoenix.....	KAET.....	8	Board of regents of the universities and State colleges of Arizona.....	Nov. 8, 1960	Jan. 30, 1961	
Tucson.....	KUAT.....	6	University of Arizona.....	July 16, 1958	Mar. 8, 1959	
California:						
San Francisco-Oakland.....	KQED-TV.....	9	Bay Area Educational TV Association.....	July 22, 1953	Apr. 2, 1954	
Sacramento.....	KVIE.....	6	Central California Educational Television.....	July 30, 1958	Mar. 2, 1959	
San Bernardino.....	KRMA-TV.....	24	San Bernardino Valley Joint Union Junior College District.....	July 1, 1953	Jan. 30, 1956	X
Colorado: Denver.....	WCTB.....	71	School District No. 1 in City and County of Denver.....	Jan. 29, 1953		
Connecticut:						
Bridgeport.....	WEDH.....	24	Connecticut State Board of Education.....	Jan. 29, 1953		
Hartford.....	WEDH.....	24	do.....	Jan. 29, 1953		
Norwich.....	WCTN.....	63	do.....	Jan. 29, 1953		
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.....	WFSU-TV.....	11	Florida State University.....	Oct. 22, 1957	Sept. 19, 1958	
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. 27, 1956	Feb. 17, 1958	
Savannah.....	WEGA-TV.....	9	Georgia State Board of Education.....	Feb. 17, 1956		
Waycross.....	WXGA-TV.....	18	do.....	Apr. 6, 1959		
Illinois:						
Carbondale.....	WSIU-TV.....	8	Board of Trustees of Southern Illinois University.....	Nov. 19, 1959	July 14, 1955	
Champaign-Urbana.....	WILL-TV.....	12	University of Illinois.....	Nov. 4, 1953	Nov. 5, 1953	
Chicago.....	WPTW.....	11	Chicago Educational Television Association.....	Nov. 5, 1953	Sept. 6, 1955	
Iowa: Des Moines.....	KDPS-TV.....	11	Des Moines Independent Community School District.....	Dec. 12, 1956	Sept. 14, 1959	
Kansas:						
Manhattan.....	KSAC-TV.....	8	Kansas State University of Agriculture & Applied Science.....	July 24, 1952		X
Laywell.....	WFPK-TV.....	15	University of Kansas.....	Jan. 3, 1958	Sept. 8, 1958	
Kentucky: Louisville.....	WFPK-TV.....	15	Board of trustees, Louisville Free Public Library.....	Jan. 3, 1958		

See footnotes at end of table.

ATTACHMENT B
Noncommercial educational television stations and applicants—Continued

State and city	Call letter	Channel No.	Educational institution	Date		Applica- tion pending
				Granted	On air	
Louisiana:						
Monroe	KLSE	13	State Department of Education, State of Louisiana	Dec. 14, 1955	Mar. 9, 1957	
New Orleans	WYES-TV	8	Greater New Orleans Educational TV Foundation, Inc.	Feb. 16, 1955	Apr. 1, 1957	
Massachusetts: Boston	WGBH-TV	2	WGBH Educational Foundation	July 15, 1953	Jan. 10, 1955	
Michigan:						
Detroit	WTMS	56	Detroit Educational TV Foundation	July 14, 1954	Aug. 10, 1955	
Onondaga, East Lansing	WTVS	10	State board of agriculture	Sept. 3, 1958	Mar. 1, 1959	
Minnesota: Minneapolis-St. Paul	KTCO-TV	2	Twin City Area Educational TV Corp.	June 20, 1956	Sept. 2, 1957	
Missouri:						
Kansas City	KCSB-TV	19	School District, Kansas City	Mar. 24, 1950	Mar. 24, 1950	
St. Louis	KEFC	9	St. Louis Educational TV Commission	May 4, 1953	Sept. 13, 1954	
Nebraska: Lincoln	KUNZ-TV	12	University of Nebraska	Oct. 15, 1953	Nov. 1, 1954	
New Hampshire: Durham	WENH-TV	11	University of New Hampshire	Oct. 3, 1953	June 22, 1959	
New Jersey: New Brunswick	WTLV	19	New Jersey Department of Education	Dec. 3, 1953	June 22, 1959	
New Mexico: Albuquerque	KNME-TV	5	Regents of University of New Mexico	Oct. 23, 1957	May 1, 1958	
New York:						
Binghamton	WQTV	46	University of the State of New York	Aug. 13, 1952	Aug. 13, 1952	
Buffalo-Niagara Falls	WNED-TV	17	Western New York Educational TV Association	Mar. 4, 1959	Mar. 4, 1959	
	WTVF	23	University of the State of New York	July 24, 1952	Sept. 8, 1959	
Ithaca	WIFT	14	do	Jan. 7, 1953		
New York	WRFG	25	do	Aug. 13, 1953		
Rochester	WROH	21	do	July 24, 1952		
Syracuse	WHUV	43	do	Sept. 17, 1952		
Utica-Rome	do	25	do			
North Carolina: Chapel Hill	WUNC-TV	4	Consolidated University of North Carolina	Sept. 30, 1953	Dec. 27, 1954	X
Ohio:						
Cincinnati	WCET	48	Greater Cincinnati TV Educational Foundation	Dec. 2, 1953	July 29, 1954	
Columbus	WOSU-TV	34	Ohio State University	Apr. 23, 1953	Sept. 19, 1954	
Toledo	WGTE-TV	30	Greater Toledo Educational TV Foundation	July 27, 1957	July 1, 1959	
Oxford	WMUB-TV	14	The president and trustees of Miami University	July 18, 1956	Oct. 14, 1959	
Oklahoma:						
Oklahoma City	KETA	13	Oklahoma Educational Television Authority	Dec. 2, 1953	Apr. 9, 1956	
	KOKH-TV	25	Independent School District No. 89 of Oklahoma County	Feb. 11, 1953	Jan. 26, 1959	
	KOED-TV	11	Oklahoma Educational Television Authority	July 21, 1954	Jan. 12, 1959	
Oregon:						
Tulsa	KOAC-TV	7	State of Oregon, State Board of Higher Education	May 1, 1957	Oct. 17, 1957	
Corvallis	KOAP-TV	10	do	Sept. 8, 1950	Jan. 30, 1961	
Portland						

State	Call Letters	Number of Stations	Operating Basis	Station Name	Start Date	End Date	Notes
Pennsylvania:	WHYY	35	1	WHYY, Inc.	Mar. 28, 1956	Sept. 16, 1957	X
	WQED	13	1	Metropolitan Pittsburgh Educational TV Station	Mar. 19, 1954	Mar. 19, 1954	
	WQEX	16	1	Board of Education, State of Rhode Island and Providence Plantations	Nov. 12, 1958	Mar. 20, 1959	
Rhode Island: Providence	KUSD-TV	2	2	University of South Dakota	Mar. 30, 1960		X
South Dakota: Vermillion	WKNO-TV	10	2	Nashville Educational TV Foundation Memphis Community TV Foundation	Nov. 23, 1955	June 25, 1956	X
Tennessee:							
Memphis							
Texas:							
Dallas	KERA-TV	13	1	Area Educational TV Foundation	July 30, 1958	Sept. 11, 1960	
Houston	KUHT	8	1	University of Houston	Aug. 20, 1952	May 8, 1953	
Lubbock	KTXI-TV	5	1	Texas Technological College	May 21, 1958		
Richardson	KRET-TV	23	1	Richardson Independent School District	Aug. 3, 1959	Feb. 29, 1960	
San Antonio	KLRN	9	1	Southwest Texas Educational TV Council	Sept. 28, 1960		
Utah:							
Ogden	KWCS-TV	18	1	Weber County School District	Mar. 9, 1960	Oct. 3, 1960	
Salt Lake City	KUED	7	1	University of Utah	Dec. 12, 1959	Jan. 6, 1958	
Washington:							
Seattle	KCTS	9	1	University of Washington	Dec. 23, 1953	Nov. 18, 1954	
Tacoma	KPEC-TV	66	1	Clover Park School District No. 400, Pierce County	Oct. 22, 1958	Apr. 1, 1960	
	KTPS	102	1	Tacoma School District No. 10	Jan. 13, 1960		
Wisconsin:							
Madison	WIHA-TV	21	1	University of Wisconsin	Oct. 7, 1953	Mar. 26, 1954	
Milwaukee	WMVS-TV	10	1	Board of Vocational & Adult Education	June 6, 1955	Oct. 28, 1957	X
Puerto Rico:							
Mayaguez	WIPM-TV	13	1	Department of Education of Puerto Rico	Feb. 3, 1959	Jan. 6, 1955	
San Juan	WIPR-TV	6	1		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.

ATTACHMENT C

Commercial television stations operated by educational institutions

State	City	Call letter	Channel number	Educational institution	Date on air
Indiana.....	South Bend.....	WNDU-TV..	16	University of Notre Dame..	July 2, 1955
Iowa.....	Ames (Des Moines)	WOI-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 (56-percent ownership).	Oct. 22, 1957
Wisconsin...	Green Bay.....	WBAY-TV...	2	Norbertine Fathers (St. Norbert College).	Mar. 17, 1953

Mr. FORD. My colleague, Commissioner Rosel H. Hyde, who is here with me, desires to express his personal views in support of this proposal.

Senator PASTORE. Before Mr. Hyde does that, I think we ought to give an opportunity to the members of the committee here to interrogate you, if they so desire.

Mr. Magnuson?

The CHAIRMAN. I have no questions.

Senator PASTORE. Senator Schoepfel?

Senator SCHOEPEL. I don't believe I have any questions.

Senator PASTORE. Senator Lausche?

Senator LAUSCHE. Yes. Would you elaborate a bit to illustrate what you have in mind that you are firmly of the opinion that educationally this proposal is sound and that it will aid our country in giving needed education, but that as far as the question is concerned, whether the States or the Federal Government should do it, you feel that is a matter of substantive policy and the Congress ought to decide. Why do you hesitate about taking a position on that?

Mr. FORD. I don't think individually the members of the Commission would hesitate too much in taking the position, but we feel that as a governmental body with certain responsibilities in connection with this particular proposal, a different governmental body would have that responsibility, namely, the Office of Education, so that for the Commission at this point, which is not expertise in this area, in the allocations and uses of facilities and that sort of thing, yes, but in the question of this kind, it seems to us as a body, that this is a matter for the discretion of Congress and a matter in which it falls more nearly in the expertness of the Office of Education.

Senator LAUSCHE. Officially you take the position from the standpoint of our educational system that this proposal is sound and ought to be carried into effect. However, the matter of whether the operation and the capitalization should be done by the States and the local governments or the Federal Government is a matter of substantive policy and officially you take no position on it?

Mr. FORD. That is right. But the objectives of this bill, is what we say here we are for.

Senator LAUSCHE. Now then you say out of some two hundred and some stations, out of 268 television channels, only 54 have been utilized. Do you have a tabulation of the areas that have utilized that?

The CHAIRMAN. They are all in here.

Mr. FORD. They are attached as an exhibit to this statement. I didn't read the complete exhibits and tables, but attachment B lists the State, city, call letters, channel number, and educational institution involved, the date it was granted, the date it went on the air, or in a few instances, applications are still pending.

Senator LAUSCHE. I observe on page 3 that Ohio has utilized four of the channels, is that correct, Cincinnati, Columbus, Toledo, and Oxford?

Mr. FORD. That is according to our records, yes, sir.

Senator LAUSCHE. Are you familiar with what happened in Cleveland with respect to the utilization of the right in that area?

Mr. FORD. No, sir.

Senator LAUSCHE. That is all on that.

Now then, you are more familiar with the areas that have made use of the right. Can you give me your summary of what the category would be from the standpoint of big cities, medium populations, or rural areas, where the utilization has been made?

Mr. FORD. Well, it is primarily in the larger cities, but I think New York and Los Angeles do not have—well, Los Angeles had a U but it is off the air. Primarily it is in the larger cities.

Senator LAUSCHE. I think that is all I have.

Senator MCGEE (presiding). I would like to raise with the chairman the question to which he made a brief allusion a moment ago. While he speaks of the inhibiting factors of costs, to what extent has been the problems of UHF and VHF been an inhibiting factor in the spread of educational TV?

Mr. FORD. It has been the receivers in the hands of the public. There are many UHF allocations made to educational television and many made to VHF channels allocated to education. But, I think you will find about 13 percent of the V's that have been allocated have been allocated to educational television and about 11 percent of the U's; and 51 percent of the V's allocated to educational television have been taken up or requested, whereas only 15.7 percent of the U's.

Senator MCGEE. The reason I raise that point again here for the record, it came up yesterday in our discussions through the initiative of the Senator from Oklahoma, Mr. Monroney, and I think that the record ought to contain a statement from you on whether the Commission has any thoughts in the mill that would tend to facilitate the resolution of this problem which is now posed on a receiving set.

Mr. FORD. Yes, sir. We are currently trying to get a bill cleared to send to the Congress providing for an all-channel receiver. It was introduced in the Senate last year. We are undertaking to get it drafted and get it up here and it should be forthcoming within just a few days.

Senator MCGEE. Would you explain for the record why legislation is required to bring into being an all-purpose receiver?

Mr. FORD. In the allocations, the Sixth Report and order, U's and V's were intermixed in various markets. Manufacturers of television sets pretty uniformly constructed, that is, their standard set a receiver which would only receive the V signal. About 150 or 175 UHF stations were built and put on the air. Of that number, about half of them had to go off the air because the public just didn't have the

receiver and didn't have the quality in order for the U's to go, so we studied this problem and we studied it very extensively.

We cooperated two or three times and finally we spent about a year with the Department of Defense, going into great details whether or not the spectrum space immediately adjacent to and above channel 13 could be transferred from Government use to non-Government use of television. The groups met extensively over a period of months, and finally the Commission and the Department of Defense came to the conclusion that it just was not feasible and that the home of television, and the future of it had to be found in the 82 channels presently allocated.

Senator MAGNUSON. Why does the Department of Defense, if you can say, maybe you can say, this may be classified, why can't they use U's? Is there any reason?

Mr. FORD. They can. The problems of equipment, of treaties, of the lag time, and changeover, the problems of switching are almost insurmountable. And the costs are astronomical.

Senator MAGNUSON. Could you say whether or not they use, fully use, the spectrum assigned to them?

Mr. FORD. They claim that—

Senator MAGNUSON. Not what they claim. You people know what channels are being used, not what they claim. Do they use them or can you answer that?

Mr. FORD. I can only quote—

Senator MAGNUSON. I know you can answer.

Mr. FORD. The Chief of the Signal Corps, who made a talk to the National Association of Broadcasters, I believe, a year ago or 2 years ago, in which he said that they had experimental and developed equipment in almost all of the areas.

Senator MAGNUSON. Is that above 12?

Mr. FORD. I am talking about all of the U's, equipment which required the characteristics of U's and V's both.

The CHAIRMAN. I never could get from them whether they—yes, they all say they are experimenting, but this could go on for a long time, whether they use them or not.

Now here is one of the real problems of getting all kinds of TV to the people of the United States because somebody down in the Signal Corps said, "Oh, don't touch this, because we are experimenting on it."

I don't even know what they are experimenting on.

Mr. FORD. I can say that in the course of this year's study, this which we investigated the equipment, the frequency characteristics required for the equipment, the Boulder Laboratory cooperated with us. We went into it very extensively, undertaking to see whether or not a shift could not be made. And a great deal of this material, of course, was classified.

The CHAIRMAN. Yes, I know.

Mr. FORD. The Commission and the Commissioners were most vigorous in urging this shift.

At the conclusion, we finally had to admit, well, it just was not feasible to make that switch.

The CHAIRMAN. I can appreciate the problem of the shift, that involves a lot of equipment and everything else, but I cannot appreciate

the military hanging on to a part of the spectrum or whatever part they are hanging on to, if they are not actually using it.

Mr. FORD. They are using it. They are using it.

The CHAIRMAN. How much use?

Mr. FORD. Well, I don't know the time involved.

The CHAIRMAN. They do not use all of it. They don't use all of it. They might intend to use it, or they might want it sitting there, but I think sometimes we ought to reevaluate just what they do use their part of the spectrum for.

Mr. FORD. I really do not believe that I am in a position to discuss fully this area.

The CHAIRMAN. I know. That is probably my job and not yours. Because they will put the stamp "classified" on you on anything if they think that you might come up here and might get one of those channels; they will put that stamp on it. And you being down in Government, of course, are going to respect the stamp.

I think sometimes we have a right to inquire, not under the cloak of secrecy or classification, just what do they do with some of these V channels. Sure they use them. They experiment with them, a little while, and if they have not got an experiment pending, they will think one up so they can say they are experimenting. And here are these valuable frequencies thus being used in spite of the terrific problem that the Commission has regarding the U's and the V's, in which television is denied to part of the Nation as commercial television because you cannot go beyond channel 13.

We will go ahead, I should not have gotten off of the subject.

Senator McGEE. Were you through with your statement on my question that I raised?

The CHAIRMAN. Excuse me.

Senator McGEE. No excuse is called for, Mr. Chairman, you brought out a very good point.

Mr. FORD. We were discussing an all-channel receiver.

Senator McGEE. Why legislation was required.

Mr. FORD. Why legislation was required.

Now, as a result, companies have sprung up pretty generally throughout the country, and we tried it the other way. We tried asking people to build the stations first, and they did, and 75 of them are no longer in existence, and 50 percent of them went out of business, because people just did not have the receivers; so after we concluded our efforts with the military, and we found that this was the salvation and hope for the future in television in these 82 channels, that the only way it could ever get off the ground in that 82-channel area was to build up and to convert the country gradually to an all-channel receiver, because then if the receiver, the television receiver corresponded to an FM or AM receiver, in which you snap on your set and you can get any station in the country in whose service area your set is located, that over a period of 4 or 5 years—or maybe a little bit longer—because it is estimated that the age of a television set is 7 or 8 years—

Senator McGEE. I can tell you one that is older than that.

Mr. FORD. I can tell you another. Mine was made in 1952, and it works very well, but I am satisfied that if an all-channel receiver came on the market—it will not be too long before I start to buy an-

other one—I would buy an all-channel receiver, providing that is the set that is going to be the universal set.

Consequently, we believe that in view of the competitive factors that have grown up in the television set manufacturing industry, that the only way that the entire industry can convert to an all-channel receiver without running into agreements that might be very questionable, is for the Congress to give the Commission the authority to prescribe the minimum performance characteristics to receive these 82 channels and then prohibit the transportation by interstate commerce of those sets' resale to the public of those sets which do not comply with the standard.

Senator MCGEE. You will recall, or some of the older members of the committee, about 4 years ago, all of the manufacturers came in voluntarily, at least 98 percent of them, to a meeting regarding what could be done about this problem. And all agreed that taking the tax off was an approach, and of course, that never happened.

Mr. FORD. We have tried everything else, and it seems to me this is the only thing left in order to get this system working.

The CHAIRMAN. This may be the approach and we will give consideration to the bill when it comes up.

Mr. FORD. When this kind of a thing happens, then the educational television channels presently allocated may not be nearly enough and, as a matter of fact, I have urged the educational interests, the community in the United States, to design a nationwide educational television system and demand the channels to put it into effect.

Now, I realize that they would not work for a couple of years, but if the system is designed—and we see how children are going to be taught throughout the country and the improvements that go with it, I think even though it might take a fairly good share of television channels, that if it accomplishes what we want to accomplish, it certainly would be worth while.

The CHAIRMAN. The networks generally are of the opinion, they have so testified on two or three occasions, that this would be a fine competitive thing for them, because it would have the tendency of probably raising higher the whole programing and the whole use of television in the United States and I think they have taken a very fine attitude.

Senator LAUSCHE. Mr. Chairman, may I put a question?

Senator MCGEE. The Senator from Kansas had a question.

Senator SCHOEPEL. Apropos, Mr. Chairman, of what Chairman Magnuson has said here, at a time when we had the men and representatives of industry up here, they raised some, as they viewed them, serious questions with reference to the cost of these sets.

Let me ask you this: I think that was about 4 years ago, 3, 4 years ago. For the benefit of the record, I am sure your Commission has, from time to time, been in conferences or consultations with representatives of the manufacturers in further answer of this objective, have you not?

Mr. FORD. Yes, sir.

Senator SCHOEPEL. You said a while ago that it should probably be based upon some legislative enactment which comes as a result of the Commission feeling that manufacturers cannot and will not do it voluntarily; is that right?

Mr. FORD. They have not done it voluntarily. I think that is the best evidence that they just would not unless something of this sort takes place.

I think they feel that—I have had conversations with some of the representatives of these companies in the last few days, and I have told them if there is any other way to do it, if they will suggest it, and it will accomplish the purpose of putting all-channel receivers in the hands of the public, then I personally would be in favor of it.

I am not wedded to this particular type of legislation; I don't think anybody else is, but I am wedded to the idea that we have to have all-channel receivers in the hands of the public in order for educational television to get off the ground, and in addition to this, for the commercial system to get off the ground.

Senator SCHOEPEL. I would like to ask one other question, Mr. Chairman.

With reference to this cost factor of these sets, have you had any indication or has your exploration of this problem given you any information that you could base a statement here or a judgment factor as to what the additional cost might be?

Mr. FORD. We have had discussions with manufacturers on this point, and I would summarize our conclusions as follows: At present the list price to the consumer of a VHF-UHF receiver is approximately \$20-\$30 higher than for a VHF-only receiver. Currently, however, less than 10 percent of television set production includes receivers factory equipped for UHF reception. If all-channel receivers were produced, there is reason to anticipate that economies could be effected which would reduce the differential. At the same time, it must be recognized that improvements in the quality of UHF-equipped receivers would be helpful in fostering UHF usage, and that such improvements are technically feasible. Some of these improvements would initially, at least, add to the costs of production. However, considering the technical ingenuity of TV manufacturers, and the price competition in the industry, it would be my judgment that ways would be found to reduce these costs. If manufacturers were to produce all-channel sets only, they would, I am confident, devote much more research and development resources in this area than they do now. And I believe that out of such efforts will come a better UHF receiver at a lower cost.

Senator SCHOEPEL. Thank you.

Senator MCGEE. It would be fair to say, in your judgment, that the real purpose of the legislation then is as the lesser of the possible evil alternatives in forcing this changeover, that in your view, because of the competitive factors now operating, that it would require some kind of collusion in the industry to agree to go over to such production, this kind of forced inducement is required to equalize those factors?

Mr. FORD. That is right, sir.

Senator MCGEE. Senator Lausche, from Ohio.

Senator LAUSCHE. That is if all-channel receivers were put on the market, those who now have receivers could use them, though they would be limited to only one type of receiver, but the ones who are buying new equipment, would get equipment that would make all channels receivable by them.

Mr. FORD. Yes, sir; that is the purpose.

Senator LAUSCHE. So that your proposal would not be a coercive measure upon the public to buy the newly manufactured receiver, only when they bought a new one or substituted one for an old, they could get one that would take all channels.

Mr. FORD. That is right.

Senator MCGEE. For about the same price.

Senator LAUSCHE. The difference in price would be \$10, is that right?

Mr. FORD. Estimated.

Senator MCGEE. But the proposal you have in mind, would it approach the proposal from the Senator from Oklahoma, let's say, with some kind of a tax exemption on such sets—it would tend to equalize the cost in fact to the purchaser if he were buying it for all purposes?

Mr. FORD. We did not follow that course, because it had been attempted and had been worked on and the Congress had considered it and I think the Treasury Department was opposed to it, and all kinds of troubles arose through that route, and so that this is the alternative route.

Senator MCGEE. From the Commission's point of view, and again I speak only for the Senator from Oklahoma, because he put it forward yesterday in discussion, the proposal to consider the waiving of excise tax on those sets that would be for all purposes and purchased from here on out, would this pose any other problems for the Commission?

Mr. FORD. There is one difference. This I have not given too much thought to, but I do visualize it as it might present a problem, and that is this: At the present time, the UHF receiver is not the equivalent in quality of the VHF receiver and that if the tax were removed and the quality of the UHF receiver were not improved and research was not performed in improving it up to the level of the present V receiver, perhaps the V would still retain considerable advantage, even though you had an all-channel receiver on the market. So there is the performance characteristic.

Senator MCGEE. In relative terms, there is no direction other than to go up from where we are now, as far as reception is concerned in UHF. There are, in most cases, no receivers available for those who do the purchasing.

I raise the question whether that kind of reluctance, because of the uncertainty of the signal, would be in order to get it started again, the importance of getting it off the ground.

Mr. FORD. I had just given up on the elimination of the excise tax because of its failure, and this seemed to me to be a very reasonable approach and one which would bridge the gap of agreements between industry, and at the same time I would suggest the legislation should be just as tight and narrow as it can be, limiting it to television receivers and to the 82 channels which we presently have allocated to television.

Senator MCGEE. Are there any other questions?

(No response.)

Then we are ready for Mr. Hyde's testimony.

Mr. Hyde?

Mr. HYDE. Mr. Chairman, what I have to offer is a statement of my own views and not those of the Agency.

I strongly favor financial aid to educational television because I believe that our communications system no less than our educational system needs a nationwide, adequately supported educational television service.

The importance of television to education can best be explained by the experts of this field in which I am only a humble layman. However, in connection with the mandate of the Communications Act to study new uses for radio and assisting in the effort to assign frequency channels to such uses as will best serve public interest, I have talked to many professional educators. They confirm the opinion that television represents a breakthrough in means of communicating light and knowledge comparable in significance to the development of the printing press and as indispensable to improvement of educational techniques as the latter.

Educational TV has many unique advantages for the educational process. It has impact; it can use the hypnosis that glues the viewer to the screen once the dial is turned to stimulate interest in learning. It is economical; it can utilize most fully the Nation's most important asset, the good teacher. It is flexible; it can transcend time and space; it can reach the city and the farm, the child and the adult, the day student and the night student. It can make vivid the past, and it has the potential of leveling mountains of ignorance which confine the vision of many who have not had the opportunity to see and understand the ways of other peoples and other civilizations.

There is no doubt, as I view the matter, as to the importance of television techniques to education, but it would probably be more appropriate for me to discuss the contribution which I believe educational television can make to our national communications system. I firmly believe that an extensively available and adequately financed noncommercial television service is the single most important addition needed to improve our communications institutions in the public interest. It can offer real choice of program fare, real diversity of viewpoint, and real and continued efforts to satisfy minority tastes as well as to improve the tastes of the larger public.

Starting with a different economic base, educational television is not under the pressing need to equate public interest with maximum sales of soap, cigarettes, beer, deodorants or cold remedies. It can take the long view; it can recognize that the educational level of our country is rising and that the leisure time available to our citizenry is increasing.

Senator McGEE. I wonder if the Commissioner would stop there for a moment.

Isn't it conceivable if we get too much educational TV we will put the soap, cigarette, and so forth out of business?

Mr. HYDE. I am going to suggest before I complete my statement that the process you refer to would stimulate the television as we know it now to better things.

I would suggest, for instance, that the public, if better informed about such matters as the classics, and better informed about the quality, the real quality of the soap opera type of thing, would, with the benefit of more sophistication, choose the more cultural program.

Senator McGEE. What would it do to Laramie, for example?

Mr. HYDE. I have no fear about the loss of position by the cowboys at all. I think they have an appropriate place. But I think we should have something else.

Senator MCGEE. We agree.

Mr. HYDE. Going back to my statement, educational television can take as its focus human values and see the American family in broader perspective than as a potential customer. It can employ the devices of the showman but to inform the citizenry, to hold up enduring cultural values, and in general stimulate interest in improvement of social and cultural qualities.

I believe that most will agree that pluralism and diversity of institutions are characteristic of the democratic approach and one of the important advantages of the system. Diversity conduces to the broad opportunity of choice and promotes decentralization of authority and decision making. I have come to doubt that our commercial television system provides sufficient diversity. As long as it derives its economic support from advertising it is bound by that central nexus. Not bound altogether—broadcasters do exercise some controls, but not as much as I would like to see.

Other democratic countries, England, Canada, and Australia, have made provision in their communication institutions for advertiser-supported and for non-advertiser-supported television service. I feel that providing subsidies to noncommercial educational stations is a better technique than establishing a Government-operated system. It permits us to promote true diversity: a noncommercial service which is run by local organizations and which derives support from private as well as public sources.

I am particularly impressed by the provision of this bill which places the provision on the local licensee of the station. The act makes specific provision which would not change the provisions of the Communications Act in which licensee responsibility is a very dominant characteristic.

I am optimistic enough about the possibilities of educational TV to believe that it can even educate the people to demand of commercial television something better than a surfeit of cowboys, private eyes and giveaways.

This is the question you asked me about earlier, Mr. Chairman. This is not to indicate an expectation of a full and immediate change, but rather of immediate progress.

There is, as you know, a world competition of cultures. If we had an educational TV service available in every good-sized city of the United States, this would certainly enhance our image in the world and assist in the fight against the Communist system.

For the reasons outlined, Mr. Chairman, I feel impelled to urge the use of Federal funds for educational television.

As I mentioned earlier, I do not make this recommendation as an educator, because I am not an educator. I make it as a communications man, because I believe it would add a new and important and, I will say, diverse approach in broadcasting which would be good in and of itself and would have a stimulating effect on other services, and would inform the public better in its function of choosing and requiring services.

Senator MCGEE. Thank you, Mr. Hyde, for this statement.

I think it is becoming apparent who has the free luncheon invitations this noon and who doesn't.

I will benefit because of the testimony that is being contributed here.

I have no further questions, Mr. Hyde.

I would like to turn to the distinguished Senator from Kentucky, Mr. Cooper, and invite him to testify.

Mr. Ford. Before you leave us, may I supply the definition of broadcasting that is contained in the Communications Act for the record.

This is section 3(o).

Broadcasting means the dissemination of radio communications intended to be received by the public directly or by the intermediary of relay stations.

And that is in connection with Senator Magnuson's question with respect to section 6 of the bill relating to television broadcasting.

Senator McGEE. Thank you, Mr. Ford.

STATEMENT OF HON. JOHN SHERMAN COOPER, U.S. SENATOR FROM THE STATE OF KENTUCKY

Senator COOPER. Mr. Chairman, Members of the Congress I will move along quickly.

I might say, in response to your comment a moment ago, that I have invited five friends to have lunch with me. It may appear that I have run away from them, but I have not.

But I am glad to be cosponsor of this bill with the distinguished chairman of this committee and with Senator Schoeppel.

I know your time is limited and I will be as brief as I can.

I do think it is true that the States which can afford the best educational television facilities the least are precisely the States which need it the most.

I would like to speak briefly about my own State. I always hesitate about speaking of conditions in my own State because it appears I am only interested in that State; so I give it as an example.

There are still more than 100 one-teacher elementary schools in Kentucky and about 500 which employ two or three teachers. An uncomfortable percentage of Kentucky teachers have less than a college degree. Basic courses in science and languages are often omitted from curriculums because there is no one competent to teach them. That these conditions exist primarily in rural areas makes the problem no less painful. As a recent study of this particular situation pointed out:

Population mobility is the rule today rather than the exception. Interdependence in the economic field is an indisputable fact. Far-ranging competition for jobs, for markets, for recognition is the order of the day. Eastern Kentuckians do not compete only with eastern Kentuckians, nor Louisvillians only with their immediate neighbors. A student from Kentucky who wishes to enroll at Oberlin or Yale or the University of Wisconsin must compete with students from all over the country.

By assuming the responsibility for providing free public education for the youth of the Commonwealth, Kentucky has committed itself to preparing its young people for competition in life. No one in the States wants these students to be shortchanged in that preparation.

The struggle to raise educational standards in all possible ways has proceeded apace in Kentucky under the leadership of able educational and governmental administrators. However, the problem is growing so much faster than the application of conventional solutions that bold and imaginative steps are clearly indicated.

The last biennial session of the general assembly recognized this fact by authorizing a legislative research commission study of the potential of educational television for Kentucky. That study is almost complete and an advisory committee appointed by Lt. Gov. Wilson Wyatt is charged with bringing in a recommendation for the next session of the legislature.

The Commonwealth of Kentucky faces a major decision. I am sure it is one which many other States face. Competent teaching must be made available to every school child in every community in Kentucky and that is only possible by extending the reach of the teachers available. Resource and enrichment material must be made to go further. The highest quality education can be, and must be, available to every citizen of the State. If its educational system is not to founder, Kentucky must take giant steps and quickly.

This picture of the crisis in Kentucky illustrates one facet of the urgent need for S. 205. At this moment of decision, which it shares with many other States, the provisions of this bill could provide the stimulus, the challenge and the financial help to make the first and most difficult giant step possible.

Educational television will serve the burgeoning school system and school population in Kentucky in a number of ways. On the level of the elementary system, a State network will bolster the local teacher with the ablest teaching the State can provide. A system of transmitters and retransmitters, in the form of satellites, boosters, translators, will make it possible for every school in the Commonwealth, one-roomers included, to receive this service. No school child, no matter how remote, will be denied equal educational opportunity.

Such a network will make it possible for the too many deficiently educated teachers to take further training without leaving their community or their work. It will, in effect, extend the university's summer session—to which many teachers cannot come because of distance and expense—throughout the entire State. Teachers can continue to work toward a degree or an advance degree while on the job.

Perhaps the most obvious need has grown up in the past year. There are five extension centers attached to the University of Kentucky today where there was only one something more than a year ago. Staffing those centers has been a difficult task and while some outstanding teachers were obtained, the number was insufficient and did not cover the curriculum as it should. The immediate answer is to connect those five extension centers with the campus of the University of Lexington by television and to make the best of the State's faculty available to the students in these junior colleges. If these junior college students receive an inferior 2-year course, the whole purpose of the extension centers will have been negated and the university will have to do the same weeding out on the junior level that it now does on the freshman level—a situation the centers were established to correct.

The same principle applies to the State colleges. Their burden of enrollment and of staffing will be immeasurably lightened by a television system which will enable them to offer courses to intraining teachers, to home students, to extension students, and to the elementary and high schools in their respective regions.

A noteworthy pioneering effort has been made and proved in Kentucky in the Louisville and Jefferson County Schools which now have their own educational television stations. The need runs from as great to much greater in the rest of the State.

To insure positive action in the nearest future help is needed in Kentucky, help in the kind provided for in S. 205.

Every citizen of the Commonwealth should be able to participate equally in a program of education which can be as good as the best—and only the best will be good enough in the days to come.

I have always supported the Federal aid to education bill. I have done so because I believe strongly that this equality of education should be available to every student.

Now it seems to me this is a method which can move faster even than a Federal aid program. And it can do something else that a Federal aid program for rural and for elementary and high school students cannot immediately do. It can provide a better quality of education, because as I have pointed out, your best teachers in your State with a program like this would become available to every schoolchild in the State. At the same time it would raise the standards of our teachers and enable them in their work to provide better teaching for schoolchildren.

I think it is a great opportunity. I think we can make, as I said, a giant step quickly to provide us not only equality of educational opportunities for the children, but it brings a higher standard of education and quality of education. I think we all admit that is needed.

I thank the committee.

Senator McGEE. Do you have any questions?

Senator SCHOEPEL. No questions.

Senator McGEE. I thank the Senator from Kentucky for this contribution.

I thank the members of the Commission for their patience this morning.

Mrs. Campbell.

Is Mrs. Campbell here?

STATEMENT OF MRS. EDMUND D. CAMPBELL, THE GREATER WASHINGTON EDUCATIONAL TV ASSOCIATION, INC., RALEIGH HOTEL, WASHINGTON, D.C.

Mrs. CAMPBELL. I am very happy to be here this morning.

You have copies of my statement and I am just going to begin in the middle of the statement because in the first part of the statement you have the record of what has happened in the Greater Washington metropolitan area, since I testified in 1959 on S. 12.

The CHAIRMAN. Let me say, Mrs. Campbell, that the full statement will appear in its entirety in the record.

Mrs. CAMPBELL. Thank you.

Now on page 2 of the statement I gave you there is an error. I called your attention to a very remarkable medium that was held in Virginia, Natural Bridge, in December, and the date there says December 1961. It should be December 1960.

I want to say today, gentlemen, that Washington, D.C., is ready for and can support an ETV station. The Greater Washington Educational Television Association, Inc., is almost 8 years old. With the help of foundation grants finally to buy essential minimum equipment, \$50,000 received in January from the Old Dominion Foundation, the other \$50,000 soon to be made available, we shall be ready to file our application with the FCC in the very near future for channel 26, the channel reserved for education in the Greater Washington metropolitan area. Several members of the board who worked hardest for this achievement have not lived to see it. I mention specifically Mr. Seymour Krieger, our legal counsel, who served untiringly through all the years without remuneration. He testified with me in 1959. Mr. Krieger died in June 1960. Mr. Arthur Fisher, Director of Copyrights at the Library of Congress and chairman of the board since 1957, died in December. The board of trustees adopted a tribute to him in annual meeting on February 20, 1961, which said in part, "He held the light aloft during dark days. As a leader he inspired his followers to look beyond the discouragements of the moment to the unfolding of tremendous possibilities in the future."

It seemed to me appropriate to say this to you today, in contemplating a bill which would get stations off the ground, because a great deal of discouragement has gone into the efforts of this group during these 8 years to find the capital funds necessary to get a station established in the Greater Washington metropolitan area.

Now you gentlemen know something about the difficulties of the area which includes the District of Columbia, parts of Maryland and Virginia. Our organization encompasses the school systems, the universities, and the cultural institutions within these areas. It is in some ways a cumbersome operation; in other ways it is an ideal situation because through this organization we have brought together the resources for programing and for support of all of the major institutions in this area.

It is because of this tremendous spread in organization that I am able to come to you today to say that we will be able to support a minimum programing when we get this station on the air.

We have a lease—

Senator McGEE. I want to congratulate you for your patience and perseverance in pursuit of this goal.

Mrs. CAMPBELL. I would like to say "Amen" to what Mr. Cooper said, to what many of the persons here this morning have said. I am interested in this personally because I believe in education. I believe that it is the right of every child in the United States of America to have the kind of education that he needs and I don't think that the fact that he moves from one State to another should deprive him of that right.

I also feel that the Federal Government is not something superimposed upon the citizens. I am a citizen. I am a part of the Federal Government. I pay my taxes to the Federal Government. I like to feel that some of that money—a large share of it, because I believe

education is the most important function today—I want to feel that a large share of that money is going into education, so I don't see this matter of trying to make available a facility that will not only provide quality education quickly, but really, at a less cost than any other method I know of.

I just can't see why the Federal Government isn't only right, but should make it available.

Senator MCGEE. I think what you said reflects something else in your philosophy as well. I don't know of a person in this country but what says he believes in education. Everybody believes in it, even the enemy. What you are saying in addition, you are not afraid of its power, the power of truth, the power of pursuit of knowledge, and that is where the line is often drawn.

Mrs. CAMPBELL. If we become afraid of power of education in this country, we are sunk.

Senator MCGEE. The Senator from Kansas has a question.

Senator SCHOEPEL. I would like to ask you a question. I recall when you testified before on this matter. There is always a distinction, of course, in owning outright or in the new method, whether in the trucking industry or whatever it is, of leasing. Now, I would just like to ask you this question for your consideration, whether you care to answer it now or not: Would it be helpful if funds authorized in this bill could be available for lease as well as purchase of equipment?

Mrs. CAMPBELL. Well, I would say that I would prefer that it would be for purchase. I think it is safer; yes, sir. The only reason we are interested in the lease is that we have finally reached the conclusion that the only way to get this thing going is to get on the air and we were able to get enough money for lease to get it on the air for this first year. But I don't think that is the better way to approach it, if you can take the other way.

Senator SCHOEPEL. Your point is well taken, but I was wondering, where they may want to match funds, or where they may be short of funds, whether they could get this service quicker if we would allow that broadened attitude, that broadened approach to the utilization of some funds?

Mrs. CAMPBELL. I don't believe so, but I may be mistaken. You see, not only have we been in the position of having to get the capital funds, and we approached foundations because I feel that is about the only source we had for capital funds in this area, we tried a great many other areas.

Now you see, we must support this with our programing budget and we are planning a minimum programing budget to take care of the needs of the 18 school systems that are now participating with us and they, during this past month, have, through their superintendents or superintendent representatives, expressed their willingness to participate in a minimum programing next year on the basis of 50 cents per elementary school child enrolled in grades 3 through 6.

There are approximately 230,000 of these children in the school systems now participating in our limited program over the commercial stations. This will bring in a total of 115,000 for a cooperatively planned program. In addition to that, we would have 2 hours each day available to individual school systems that wanted to put on pro-

grams of teacher training, or specific programs for their own school instruction, and they would pay the cost of that. So that we believe that we will have a budget of \$150,000 to support a minimum in the school program over channel 26, which is UHF.

Now we face the converter problem and we have been facing the converter problem for 8 years and—I mean we haven't been facing it—we have just been saying it is a problem.

We have now been told by the FCC that there is no way in which we can get an educational channel on the air in Washington except by using channel 26 UHF. We are, therefore, going to begin by having the conversion within the school systems and we are going to try to move from there out into the community as quickly as we can, that is, first through the teachers, through some courses which will be given by the universities in the area, for credit, specifically to teachers or to parents who are willing to come to the schoolhouse and take the course.

It would be easier to get to your nearest schoolhouse and park than to drive all the way across town, but we are hoping, and this is where I am so interested in the bill, that we will, if this bill passes, be able to improve the equipment which we have by more equipment, so that we can do a better adult programing job that will be really worthy of the resources in the Washington area.

Many, many thousands of schoolchildren come here every year to see what is in Washington. Much of that we could take to them, if we had an educational station here with a mobile unit, the proper kind of production. This doesn't mean they still wouldn't come to Washington; I think maybe more would come.

We have found out that television has a terrific motivating force and we know that if a child sees something on one of our programs, that has come from the Smithsonian, the next week that class or some of that class try to get to the Smithsonian to see it. This is the way in which television can enrich and motivate. But, the resources in Washington are tremendous so that we want to move into adult programing and programing which can provide for the other parts of the country the materials which are here in Washington.

And this is one of the reasons why I am so interested in this bill. We will be, as it were, in a very small operation. Now it will be possible for people who have UHF converters to see what is going on, but we are going to have to encourage them by better programing and this means very good equipment.

I want to say one more thing about our organization. During this month I visited every school system involved in this. Many of these are located in Virginia and in Maryland and in West Virginia, which are fringe areas to any broadcasting service. Now these fringe areas will have to be served by translators or boosters or some special equipment in order that they may get a good signal. We are very anxious to be able to give them a good signal. They want the program. So, this is another reason why I feel that these people who live in fringe areas should have the opportunities that are so easily available to the children who live in the city.

Now I have been comforted by a sentence with which I closed my written testimony, and I want to read it. Theodore Roosevelt said, "Nothing is so powerful as an idea whose time has come."

Well, I have been testifying down here for several years. I believe that educational television is an idea whose time has come.

Senator McGEE. I think that the members of the committee, most of the members of the committee, would agree and have no question about the time having arrived, with the idea out of desperation on the part of some of us, that the time is already moving on ahead and there is a sense of urgency which you command here in your remarks very commendably, that I think we have to try to get around to others interested.

I was particularly interested in the opportunities which you point to in making available this great laboratory which is Washington for people who aren't able to get here. Now I would be the first to admit that there are parts of Capitol Hill that probably should not or would not qualify as educational TV, but I do think that there is a real live facility that could become one of the most potent and powerful teaching opportunities and instructive devices for bringing about an understanding of what it is we say we are seeking, what it is we say we exist for, and how we go about it, that we have taken for granted all too long.

Mrs. CAMPBELL. Yes, sir.

Senator McGEE. This serves as a reminder to us that there is really something which makes the wheels go around and something good generally comes out.

Mrs. CAMPBELL. You may have noted in the morning paper that we, if we had had an educational station here, would have been able to have provided the service to get this program with Mrs. Roosevelt and the President and this would have gone out on all of our educational stations all over the country. As it was, the people in Boston had to employ a commercial station to do the programing for them. This will not have the availability that it could have had and also we need this kind of a service in Washington so that just as soon as we can get going, we are going to have a mobile unit and be able, as I say, to bring many, many of the resources here to them.

Of course, I haven't said anything about the international implications of this, either, and they are terrific.

Senator McGEE. They are both terrific and somewhat frightening in some respects because again of the rate these things are moving.

Mrs. CAMPBELL. I just think we can't wait and if there is anything any of us can do to push it on, we certainly want to do it. We felt going on the air might help. Maybe if people could see what we could do, this might help.

Senator McGEE. Yes, sir, the Russians again, sometimes, or others even than the Russians, manage somehow to destroy language, but it is very difficult to destroy what you can see and I think that is important. We have a showcase for the world here, we are in the center where you have the heartbeat of the power and political struggles of the world, originating here in this particular spot in our country, and the potential is so great, as you say, I really think it is a little frightening as well when you think of that potential.

Mrs. CAMPBELL. I think that is one of the reasons it is very good to have an organization with as broad a base as this making the application for the channel.

Senator McGEE. Yes, I agree.

Mrs. CAMPBELL. Because, as I say, there is everything represented, every educational structure in the area is represented in this. I think this will give us the kind of control on programing which is not control, but is—

Senator McGEE. Direction.

Mrs. CAMPBELL (continuing). Direction; yes, sir. Right.

Senator McGEE. I try to avoid that word "control." It incites images. It is the same thing on Federal aid. I think if they would call it some kind of incentive to educational—

Mrs. CAMPBELL. If you could just take the words "Federal aid" out, that might help.

Senator PASTORE. People have a fixation on that and it kind of fixes their thinking.

Thank you very much.

(The complete statement of Mrs. Campbell follows:)

TESTIMONY OF MRS. EDMUND D. CAMPBELL, PRESIDENT OF THE GREATER WASHINGTON EDUCATIONAL TELEVISION ASSOCIATION, INC.

Senator Magnuson and committee, thank you for allowing me to appear before you once again in support of S. 205—a bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs. Senator Magnuson's analysis of the purpose of S. 12 in the opening statement read by Senator Monroney before the introduction of the testimony on January 27, 1959, has, in the light of the events in these 2 intervening years proven prophetic. An increasing number of school systems and educational groups desirous of using television for education have developed programs and supported them on commercial stations but have not been able to secure adequate funds to pay for the basic installation of television facilities. The fact that since 1952 groups such as ours, the Greater Washington Educational Television Association, Inc., have been organized and have continued to function without an educational station is an overwhelming evidence of their commitment to faith in the potential value to education of the television medium.

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.

One of the recent examples of this movement on the part of teachers is the conference of educational television—a tool for teaching—organized by the Virginia Education Association and held at Natural Bridge, Va., December 9 and 10, 1961. The VEA Educational Policies Commission as a result of an analysis on the use of television in the public schools of Virginia 1959-60 which revealed that 20 school divisions, involving 50,083 children had reported that they are using educational television, recommended that "attention be given to this comparatively new teaching tool." The conference was limited to approximately 200 participants and was oversubscribed. The school divisions paid the expenses of their representatives. Nationally recognized speakers and consultants participated in the program with Virginia teachers, principals, school superintendents, and school board members. More than 30 division superintendents were in attendance.

In concluding a summary of the conference, Dr. Arthur Foshay, executive officer, Horace Mann Lincoln Institute of School Experimentation, Columbia

University, said, "Let's for heaven sake not let this thing slip away," and there was hearty applause. Only five television channels have been reserved for education in Virginia—at Norfolk, Richmond, Roanoke, Charlottesville, and Blacksburg. None has yet been activated. All ETA programing in Virginia has been done over commercial stations. Northern Virginia school systems now participating in GWETA were active participants in this Virginia conference on ETV. Only one of these is within range of a channel reserved for education in the State.

The readiness on the part of the member institutions of the Greater Washington Educational Television Association located in Washington, Maryland, and Virginia to increase the use of television for education, was predicted in the testimony which I gave in the hearings on S. 12 in 1959. Today, March 2, 1961, I can report that educational television in Washington, D.C., within the limitations of time available on commercial stations, has grown in quality and community support. The demand for educational programs has led one commercial station—WRC-TV—to continue the network educational program "Continental Classroom" at 6 a.m. and during the summer of 1960 to televise on Sundays the color kinescopes of the science enrichment series produced for the Greater Washington Educational Television Association by the television division, Walter Reed Army Medical Center under a grant from the National Science Foundation. WTOP-TV continues the District of Columbia board of education's shorthand class for the third year on Saturdays and has arranged with George Washington University and the University of Maryland for the production of courses televised in the early mornings Monday through Friday. The enrollment in these courses both for credit and noncredit has varied but all have been well received. The subjects presented in these 2 years are Russian, world politics, Spanish, personal and family finances, art and design, astronomy, human development, and the Civil War.

The statement which I made before the FCC on December 8, 1959, is still true. If you will examine the Monday through Friday schedule of the four Washington stations you will find that before breakfast or during it you can have a little education; and between 8 and 9 in the morning, if you haven't left for work, you can have a few minutes of inspiration and religion. But from then on until most of you have gone to bed at night I don't believe you can get over TV any program within the category "education" or discussion. From 9 a.m. until bedtime, Monday through Friday, education and discussion would seem to be entirely taboo. The only regularly scheduled break in this educational blackout is GWETA's half hour "Time for Science" program telecast over WTTG-TV 4 days each week, and, since September 1960, the half hour each Friday called "Time for the Arts."

WTTG, the nonnetwork station, has not only produced the GWETA "Time for Science" for this now the third year, but has also used, under GWETA sponsorship, a number of National Educational Television and Radio Center programs at noon on Sundays. One of these series, "Language and Linguistics," by Dr. Henry Lee Smith, has been requested for repeat showing. In addition, GWETA has been able to provide through the resources of member cultural institutions and universities appropriate programs to follow the "Age of Kings" series on Friday evenings. One of GWETA's member institutions, Georgetown University, had the distinction of presenting its 500th consecutive Georgetown Forum TV program "Atoms for Peace" on February 8, 1961, over WTTG.

Since September 1958, station WMAL-TV has produced on Saturdays with the cooperation of American University and the Council of Churches, National Capital area "The Life and Teaching of Jesus." This course has been viewed by more than a quarter of a million people in the Washington, D.C., area. Under a grant from the Lilly Endowment, Inc., the telecourse is now being made available to six other communities throughout the United States and has been requested by several foreign countries.

Gentlemen, Washington, D.C., needs, is ready for and can support an ETV station. The Greater Washington Educational Television Association, Inc., is almost 8 years old. With the help of foundation grants to buy essential minimum equipment, \$50,000 received in January from the Old Dominion Foundation, the other \$50,000 soon to be made available, we shall be ready to file our application with the FCC in the very near future for channel 26, the channel reserved for education in the Greater Washington Metropolitan Area. Several members of the board who worked hardest for this achievement have not lived to see it. I mention specifically Mr. Seymour Krieger, our legal counsel, who served

untiringly through all the years without remuneration. Mr. Krieger died in June 1960. Mr. Arthur Fisher, Director of Copyrights at the Library of Congress and chairman of the board since 1957, died in December. The board of trustees adopted a tribute to him in annual meeting on February 20, 1961, which said in part, "He held the light aloft during dark days. As a leader he inspired his followers to look beyond the discouragements of the moment to the unfolding of tremendous possibilities in the future."

GWETA has a lease-purchase option on a tower and transmitter building, essential to any television station. This tower, located at 19th Road North, just off Lee Highway, Arlington, is owned by Two Way Tronics, Inc., once used by WTTG. Its height is 600 feet above the average elevation of the ground within 10 miles. The building is 30 feet by 65 feet and is adequate for housing the transmitter and engineering staff.

The capital equipment which can be purchased or leased on a purchase-payment plan will be minimum for an inschool operation of 4 hours on the air 5 days a week. The Ford Foundation will contribute a tape machine valued at \$50,000 and \$10,000 worth of tape "as soon as the Washington affiliate-to-be of the National Educational Television and Radio Center meets the fairly obvious criteria which apply".

Adequate studio space for limited live programing is available for rent within less than a mile of the tower.

During the month of February GWETA's president has conferred with the superintendent or his designate in each school system now financially supporting the "Time for Science" and "Time for the Arts" programs. (See attached list.) It is estimated that a minimum, cooperatively planned TV program for the kindergarten and six grades of the elementary school can be financed by the contribution of 50 cents per elementary school child enrolled. The total enrollment in these grades is approximately 230,000. This number does not include the District of Columbia. The budget of \$115,000 would be augmented by payment of costs of production by these school systems, universities and other members of GWETA who wished to present educational programs within the limitations of equipment and time which this initial capital investment will prescribe.

As you know we have sought in vain for a VHF station. Having finally assured ourselves that UHF 26 is the only channel available for education we have decided to get a station on the air.

The passage of S. 205 would make it possible to improve the television broadcasting facilities now planned for the Washington station so that they would be more nearly adequate to meet the needs of the adult community and more capable of doing justice to the program resources in the Washington metropolitan area.

We would also call to your attention the fact that this ETV station using UHF 26 must reach fringe areas in Maryland, Virginia, and West Virginia that cannot be served by any other educational television station. Our engineers tell us that translators or boosters may be necessary if we are to get a clear and steady signal into these communities. This expense is not included in the initial capital budget for the station, though it is essential to total participation in the program by the schools and communities which desire and will support it.

As evidence of wide metropolitan area support for a GWETA operated station I cite the resolution adopted by the Washington metropolitan regional conference at its Thursday, February 16, 1961, meeting:

"Whereas the educational crisis developing from a rising birth rate and a growing teacher shortage is a continuing one, the number of children in the school years has continued to increase, while the number of qualified teachers, school facilities, and equipment has failed to keep pace with them, and this situation in the future tends to become more aggravated; and

"Whereas many other cities and metropolitan regions of comparable size are arranging to improve their educational systems through the use of educational television; and

"Whereas the Greater Washington Educational Television Association, Inc., was organized to establish and to maintain an educational television station, utilizing channel 26, allocated for this purpose, for the benefit of the people of the Washington metropolitan region; and

"Whereas the establishment of an educational television station in the Washington metropolitan region could help meet our educational needs for students of all ages and interests, could provide specialized education of various kinds, permit impartial discussions on innumerable subjects of metro interest, provide

unlimited opportunity for cultural expression through music, art, and drama, and could contribute to the elevation of the general educational and cultural level of the people of the metropolitan region: Be it hereby

Resolved, That the Washington metropolitan regional conference go on record as endorsing the establishment of an educational television station for the metropolitan region and actively support the Greater Washington Educational Television Association in its efforts to establish and to maintain this station; and be it further

Resolved, That the conference endorse and actively support the passage of S. 205 which would provide funds to the individual States and the District for such a stand."

In conclusion I would like to leave one thought with you—a thought which is bolstering the morale of the members of the association, the members of the board of trustees and volunteers who are working for the activation of the GWETA station—"Nothing is so powerful," said Theodore Roosevelt, "as an idea whose time has come." We believe that the time for educational television has come and that S. 205 must be passed in this session of Congress.

THE GREATER WASHINGTON EDUCATIONAL TELEVISION ASSOCIATION, INC.

OFFICERS

Acting chairman, board of trustees—Dr. William Stuart Nelson, Howard University

President—Mrs. Edmund D. Campbell, 2912 North Glebe Road, Arlington, Va.

First vice president—Rev. Daniel E. Power, S.J., Georgetown University

Second vice president—Mrs. Zeldia Horner Kosh, 3606 North Woodstock, Arlington, Va.

Secretary—Miss Patricia Oliver, 2501 Que Street NW., Washington, D.C.

Treasurer—Mr. Daniel W. Bell, American Security & Trust Co.

Assistant Treasurer—Mr. Ralph H. Mittendorff, American Security & Trust Co.

CONSULTANTS

Engineering—John Mullaney

Legal—Mr. Norman Jorgensen, Krieger & Jorgensen

Public Relations—Ludwig Caminita, Silver Spring, Md.

Publicity—Mrs. Julia Weckster, Bethesda, Md.

EXECUTIVE COMMITTEE

Dr. William Stuart Nelson

Rev. Daniel E. Power, S.J.

Mrs. Edmund D. Campbell

Mrs. Zeldia Horner Kosh

Mr. Stafford Cassell

Mr. Irvin Schmitt

Mrs. Louise S. Walker

Mr. Harry N. Rosenfield

Dr. Barnard Joy

Mr. Willard M. Kiplinger

TRUSTEES

Cultural institutions

Brookings Institution¹—To be appointed (term expires 1962), Brookings Institution, 1775 Massachusetts Avenue.

Library of Congress¹—To be appointed (term expires 1961), Library of Congress, Washington, D.C.

National Gallery of Art¹—Mr. Ernest R. Feidler (term expires 1963), National Gallery of Art, Washington, D.C.

Phillips Gallery¹—Miss Elmira Bier (term expires 1963), Phillips Gallery, 1600 21st Street NW., Washington, D.C.

Smithsonian Institution¹—Mr. Paul Oehser (term expires 1961), Smithsonian Institution, Washington, D.C.

Corcoran Gallery of Art—Mr. Herman W. Williams, Jr., director, Corcoran Gallery of Art, 17th and New York Avenue, NW., Washington, D.C.

Folger Shakespeare Library—Dr. Louis B. Wright, director, Folger Shakespeare Library, 201 East Capitol Street, Washington, D.C.

National Symphony Orchestra Association—Mr. Carson Fraley, president, Roosevelt Hotel, Washington, D.C.

¹ Trustee representation.

Elementary and secondary schools

- School boards of Virginia—Mr. Irvin Schmitt (term expires 1963), superintendent of schools, Falls Church, Falls Church School Board, 300 Park Avenue, Falls Church, Va.
- School boards of Maryland—Mr. William Schmidt (term expires 1962), superintendent of schools, Prince Georges County, board of education, Upper Marlboro, Md.
- District of Columbia public schools—Mr. Lawson J. Cantrell, deputy superintendent (term expires 1963), District of Columbia public schools, Franklin Administration Building, Thirteenth and K Streets NW., Washington, D.C.
- Parochial Schools—Very Rev. Msgr. John S. Spence (term expires 1961), director of education, parochial schools, Archdiocese of Washington, 1721 Rhode Island Avenue, Washington, D.C.
- Independent Schools Association—Mr. Barton Biggs (term expires 1963), Landon School, Wilson Lane, Bethesda, Md.

School systems participating in elementary science and arts series

Alexandria	Falls Church
Arlington County	Fort Myer
Archdiocese of Washington	Fredericksburg
Berkley Springs, W. Va.	Independent Schools Association
Calvert County	Loudoun County
Charles County	Montgomery County
Charlestown, W. Va.	Prince Georges County
Diocese of Richmond	Prince William County
Fairfax County	St. Mary's County

Universities

- American University—Mr. Stafford Cassell (term expires 1961), the American University, Massachusetts and Nebraska Avenues NW., Washington, D.C.
- The Catholic University of America—Rt. Rev. Msgr. John J. McClafferty (term expires 1962), the Catholic University of America, 620 Michigan Avenue, Washington, D.C.
- Georgetown University—Rev. Daniel E. Power, S.J. (term expires 1963), Georgetown University, Washington, D.C.
- The George Washington University—Mrs. Lillian Brown (term expires 1963), the George Washington University, Washington, D.C.
- Howard University—Dr. William Stuart Nelson (term expires 1962), Howard University, 2400 Sixth Street NW., Washington, D.C.
- University of Maryland—Mr. Robert J. McCartney (term expires 1963), University of Maryland, College Park, Md.

Representing the public

- Mrs. Gertrude Broderick (term expires 1961), Radio-TV education specialist, U.S. Office of Education, Washington, D.C.
- Ludwig Caminita, Jr. (term expires 1963), Thayer Building, Silver Spring, Md.
- Mrs. Henry Grattan Doyle (term expires 1961), 5500 33d Street NW., Washington, D.C.
- Rabbi Norman Gerstenfeld (term expires 1963), 3935 Macomb Street NW., Washington, D.C.
- Col. West A. Hamilton (term expires 1962), 1353 U Street NW., Washington, D.C.
- Dr. Barnard Joy (term expires 1963), 3111 North Monroe, Arlington, Va.
- Willard M. Kiplinger (term expires 1963), 1729 H Street NW., Washington, D.C.
- Harry N. Peterson (term expires 1961), District of Columbia Public Library, 499 Pennsylvania Avenue NW., Washington, D.C.
- Harry N. Rosenfield (term expires 1963), 1735 DeSales Street NW., Washington, D.C.
- Douglas R. Smith (term expires 1963), National Savings & Trust Co., 15th and Pennsylvania Avenue NW., Washington, D.C.
- Michael W. Straus (term expires 1961), 2714 Quebec Street NW., Washington, D.C.
- J. C. Turner (term expires 1963), Greater Washington Central Labor Council, AFL-CIO, 1311 L Street NW., Washington, D.C.
- Mrs. Louise S. Walker, Montgomery County Board of Education, Rockville, Md.

STATEMENT OF DR. J. BERNARD EVERETT, ASSISTANT SUPERINTENDENT OF SCHOOLS, NEWTON, MASS., ACCOMPANIED BY HARTFORD N. GUNN, JR., GENERAL MANAGER, WGBH-TV

Dr. EVERETT. Mr. Chairman, I have no delegation, but I have with me Mr. Hartford Gunn, who is station manager of WGBH, because he might be able to answer some questions I could not answer.

I have already given the clerk for the record a complete statement.

Senator McGEE. The complete statement will appear in the record intact, and anything you care to say informally.

Mr. EVERETT. Since it is getting very close to lunch time, I think I shall try to be very brief.

I would like to make four points, if I can. First, I would like to say, however, that I am a public school educator. However, here I am not representing Newton, Mass., public schools; I am representing an enterprise known as the 21-Inch Classroom, which is a school broadcasting activity at station WGBH at Boston. I also am representing an organization that is just getting off the ground called the Eastern Educational Network.

I would like to try to make four points. First, I believe that where educational television stations have been made available, that educators—public school educators and college educators—have demonstrated that they want school programming, that they can finance it, and that they can use this medium intelligently and creatively.

Let me give just one or two illustrations from our own "21-Inch Classroom" operation.

There have been quite a few questions raised about financing an operation once the medium is provided. I am convinced that the school people in the Boston area could not have raised the money to put a station on the air. However, once the station was available—and it was made available in 1955—in 1957 we in the public schools in the Boston area, through cooperative action, raised funds to provide programming.

We started with a very, very low per capita cost, 25 cents per pupil, and at this low rate of 25 cents per pupil we have been able to raise approximately \$125,000 per year. We started with about 35 members and now we have 160 school systems participating.

Television is used differently in different parts of the country.

We have no crucial teacher shortage in the Boston area.

Senator McGEE. You may be approaching one. Everybody from up there is coming down to the Government now.

Dr. EVERETT. We are. I agree with you. [Laughter.]

We have no crucial teacher shortage in the public schools, shall I say, and, therefore, we conceived television from the start as a way of bringing into the classroom certain resources, certain people in certain places, and events and experiences that could not be provided by the regular classroom teacher, and this has been the basis on which we have operated, and it has sold this operation to the public schools.

We also have based it on quality. We have never been content to simply put a teacher and a blackboard before a classroom. We have always backed up our programs with production facilities, with

artists, with staffs, so that we could perhaps compare somewhat favorably with the production facilities of commercial television.

And so we have these two things, bringing in resources not available, and trying to provide quality rather than just quantity. We also have provided quality, I think, by a policy which has been made possible by the fact that WGBH was the first educational channel in the country to have a video tape recorder.

We have followed a policy of banking our programs. We started off with 1 or 2, and now we have a library of some 14 different programs which can be used.

Now these are some of the policies on which we have operated.

We also have been actively seeking program exchange with other stations. We have been seeking network operations and the exchange of taped courses.

Right now there is incorporated an Eastern Educational Network. There aren't many active stations involved in it. There are a lot of people who would like to be involved. It runs from Canada potentially to Washington, D.C. There is station WGBH in Boston; there is station WENH in New Hampshire. There is no station in Maine; there is no station in Vermont; there is no station in western Massachusetts; there is no station in Connecticut; no station in Rhode Island. Yet the people from the State departments of education, and the people interested in television, have been meeting regularly to get this network underway. Actually, all it lacks now is the capital outlay to put the stations on the air. They are ready to go. They may be able to get them underway without funds, but it will take a lot longer.

We expect to be able to get this on the air and to be able to exchange programs all the way from Washington, D.C., to Canada, and, hopefully, we could import some of these riches in Washington that we just heard about; and perhaps there is some culture in Boston—we would like to think there is—that might come back to Washington.

Senator McGEE. We are told even the beans take a course in Browning. [Laughter.]

Dr. EVERETT. With regard to the uniqueness of some of our courses, I might mention that we had the idea of using the resources of Harvard, I think, before Mr. Kennedy did. We have a professor emeritus from Harvard teaching a course called exploring nature to fifth grade children in the Greater Boston area.

We were able, with the assistance of the Massachusetts Council for Public Schools, to initiate a course in elementary French, which has become the first course which has been offered by the National Educational Radio and Television Center for national distribution.

And so we are looking for the unique function of this medium, and think this is the reason why our membership has grown from about 35 school systems to 160.

However, I did point out that our signal does not reach to western Massachusetts. It does not reach to Vermont, does not reach to Maine. And I am convinced that the cost of providing an educational channel is so great that it means that this facility is likely to be barred from sparsely settled States and from rural areas for a long time to come. Vermont, I understand, still has more cows than

people. As long as this condition exists, they will have a rough time, I think, raising funds for the capital outlay that is involved in the station.

However, these have-nots want television, and I am quite sure that if this bill becomes a reality we will have, in effect, an Eastern Educational Network.

Finally, I would like to say that in reading this bill it seems to me to be admirable in purpose and also admirable in its simplicity, and I would venture a guess that if it is passed it might—I say “might,” advisedly—make a greater contribution to improved education and to equalized educational opportunity in this country than the National Defense Education Act, because this provides education for all the people and for all ages and in all subjects. Unfortunately, the National Defense Education Act is not that broad. This is an admirably simple bill. The National Defense Education Act is exceedingly complex and imposes a great deal of red tape.

Thank you.

(Prepared statement by Dr. Everett follows:)

STATEMENT BY DR. J. BERNARD EVERETT

INTRODUCTION

The 21-Inch Classroom is a project engaged in the production of television programs broadcast to over 250,000 schoolchildren in Massachusetts, Rhode Island, Connecticut, and New Hampshire. It was conceived to meet definite educational needs in its member school systems, and has used television as a tool to provide children with educational experiences which they could receive in no other way.

This unique ability of television, to bring into the classroom a wide variety of hitherto unavailable resources, is being utilized not to replace the teacher but to supplement and fortify him in his important role. Hence, the emphasis has been on the production of a few, but qualitatively significant, series of programs each year. These series over the last 3 years have been recorded on video tape and now make up a schedule of 14 offerings. An ongoing evaluation helps determine the effectiveness of these series in the classroom and points up the need for their continuation, reproduction, or replacement.

The project would not have been possible without the prior existence of WGBH-TV, Boston. Since this educational television station had been founded in 1955 by the WGBH Educational Foundation, the opportunity existed for the production and broadcasting of school programs making use of the full facilities and staff of that organization. Other geographical areas have not been so fortunate. Educators with the same needs have had to devote their major efforts to raising funds for the construction of an educational television station before they could develop school television programs.

Even now in Massachusetts, only 227 out of the 351 school systems in the Commonwealth are technically able to receive the programing of the 21-Inch Classroom. The coverage area of WGBH-TV is substantial, but some school systems which could benefit most from the potential of televised education are in western Massachusetts, too distant from the transmission source to receive the television signal.

Most metropolitan areas have the necessary initiative, leadership, and resources to establish high power ETV broadcasting stations, but the more sparsely settled rural areas all too frequently are unable to muster the necessary support.

The establishment of an ETV station in western Massachusetts has been a prime objective of educational forces in the Commonwealth for several years, and could be brought closer to reality with the Federal aid proposed by this legislation.

Other States in New England and the east coast are in precisely the same situation. Local resources in the metropolitan areas are able to move more quickly, and hence, have created stations and production centers. The local

initiative in ETV has been remarkable, but as a government is interested in all its citizens, so the educator is interested in all his students.

Additional production and broadcasting facilities will bring to the students of suburban and rural communities the benefits of the existing facilities and extend the possibilities of new resources to all within the State.

The future of projects such as the 21-Inch Classroom are closely allied with the future of State and regional educational television networks. As each school television project strives to serve its children better, it finds others presenting many similar offerings. By mutually exchanging these presentations, common to two or more organizations, each production center may then expend its funds on additional services.

When WENH-TV, Durham, N.H., went on the air an immediate exchange of school and adult programs was undertaken with WGBH-TV, Boston. The 21-Inch Classroom freely made available substantial portions of its school broadcasting schedule to the schools of New Hampshire. WENH-TV, operated by the University of New Hampshire, and a large group of New Hampshire educational institutions, did not have to spend its energy and funds duplicating existing programing; instead was able to marshal its resources to create programing to meet the specific and urgent requirements of the New Hampshire schools.

Program interchange is also carried on between Maine and New Hampshire, and as the regional network in northeast United States grows, a mutual program exchange will be carried out to the mutual benefit of all its members. This regional network is in the process of developing and is called the Eastern Educational Network.

THE EASTERN EDUCATIONAL NETWORK

The Eastern Educational Network is an organization of the principal public and private bodies concerned with educational television in Eastern States. Its members include the licensees of educational television stations WGBH-TV, Boston; WENH, Durham, N.H.; WHYI-TV, Philadelphia; and WNED-TV, Buffalo; and the sole owner of the permittee of station WPTT, channel 10, Augusta, Maine (to begin broadcasting by September 1); as well as institutions hoping to construct educational stations in the near future, such as the Mohawk-Hudson Council on Educational Television, Schenectady, N.Y., the University of Vermont, and the University of Maine. The Canadian Broadcasting Corp. and the National Educational Television and Radio Center, New York City, are also members.

The Eastern Educational Network was organized to provide a means whereby present and future educational television stations in the Northeast could interchange programs and otherwise pool their programing resources for mutual support in the expansion and development of educational television in that section of the country. It contemplates an interconnected system of nonprofit educational television stations stretching from Maine to Washington, D.C., west through Pennsylvania, and north to a connection with the Canadian Broadcasting Corp. This network system would provide a comprehensive coverage of the Northeast by educational television stations each of which, through its interconnection with the other stations of the network, would have access to the programing of all. The vast educational and cultural resources of such centers as Boston, New York, Philadelphia, and Washington would thus be made available to viewers in homes and classrooms throughout nine States and the District of Columbia.

The value of such a network arrangement is incalculable. Cities along the network would have access to each other's educational and cultural facilities. By lightening the burden of program production, the sharing of significant programs would enable each station to concentrate more intensively on improving the quality of its local school and adult programing. Moreover, the availability of network programing would provide an impetus for the construction of educational television stations that might not otherwise be established. And, of particular importance, rural and smalltown areas, which of course do not and cannot offer locally the educational and cultural advantages of metropolitan centers, would have access to programing hitherto available only in the largest cities.

CONCLUSION

Educational television has become a dynamic and versatile tool of American education. The schools have recognized ETV as a means of meeting certain needs more effectively and less expensively than they could have met in any other way; and they have done so with remarkable speed and wisdom.

The next logical step seems to be the mutual exchange of programs through regional ETV networks. This can become a reality when three objectives are reached:

1. A sufficient number of ETV stations are on the air within the region.
2. These stations are technically able to instantaneously exchange major portions of their school and adult broadcasting schedules.
3. Workable solutions are composed in the curriculum, administrative, and legal areas to the problems of program exchange.

The educators in the Northeast are making outstanding progress on objective No. 3.

The speed with which we meet the first two objectives will be greatly accelerated by the enactment of the legislation before this committee.

EXHIBIT A. 21-INCH CLASSROOM ORGANIZATION

Membership in the 21-Inch Classroom has grown from 35 school systems to the current 160 systems, indicating that educational television is being accepted in this part of the country as another valuable tool of teaching.

Programs of the 21-Inch Classroom are financed with funds voted by member school systems. Each year, participating member school systems pay 25 cents per enrolled student, grades K through 12, for the educational television services—program series, study guides, evaluations and workshops.

The coordination of the 21-Inch Classroom is carried out by the Massachusetts Executive Committee for Educational Television, composed of the following members:

- John B. Hendershot, superintendent of schools, Wakefield, chairman.
 J. Bernard Everett, assistant superintendent of schools, Newton.
 Hart Fessenden, headmaster, Fessenden School, Newton.
 William H. Ohrenberger, assistant superintendent of schools, Boston.
 Rt. Rev. Timothy F. O'Leary, superintendent of schools, Archdiocese of Boston.
 William F. Young, Jr., deputy commissioner of education.
 Norman Harris, education director, Museum of Science, Boston.
 Frederick B. Robinson, executive director, Museum of Fine Arts, Springfield.
 Graham T. Winslow, chairman, Massachusetts Council for Public Schools, Boston.
 John B. Chaffee, superintendent of schools, Wellesley.
 John L. Fitzpatrick, superintendent of schools, Chicopee.
 W. Gordon Swan, chairman, School Committee, Milton.

EXHIBIT B. 21-INCH CLASSROOM PROGRAMING

Music—Grade 2

This series of 30 programs is designed to acquaint the children with folk songs and instruments, and to encourage self-expression in song and dance. Participation is the keyword in these programs as the classroom student discovers the rhythms and words of folk music.

The television teacher is Mr. Anthony Saletan, music consultant, Newton Public Schools.

Literature—Grades 3 and 4

The 29 programs fall into two general classes: 18 book talks and story-telling programs which follow a consistent pattern, and 11 special programs which vary in presentation according to the subject and guest of the day.

This series, produced with the cooperation of the Boston Public Library, is designed to introduce to the child highly interesting writing of true literary merit. It aims to encourage a wide range of reading on a high level by means supplementary to those used in the classroom.

The television teacher is Mrs. Beryl Robinson, children's librarian, Eggleston Square Branch of the Boston Public Library.

Parlons Français—Grade 4

This series of elementary French programs is designed to serve as a prototype for teaching foreign languages by television to elementary school children by the oral-aural method.

The television teacher is Mme. Anne Slack, formerly of the Schenectady Public Schools. Mme. Slack makes extensive use of puppets, pictures, actors, and everyday objects of French and American life. The content of the lessons

will follow topics which are very familiar to children of this age. Learning a language is a cumulative process; therefore, there is a certain amount of repetition of words in various patterns and situations.

Such topics as the following are covered in the first half-year program: greetings, names, counting, classroom commands, time, weather, days of the week, classroom objects, Christmas tradition, colors, animals, persons, typical French songs.

Parlons Francais—grade 5

This series is designed to continue conversational French started in grade 4. After review of material from *Parlons Francais* grade 4, such topics as simple geography, games and sports, and family activities in the home will be taken up. Film inserts for some of these lessons will be made in France.

Exploring nature—grade 5

Teaching is Dr. William H. Weston, Jr., professor emeritus, Harvard University. The series is presented by the Natural Science television project (the Children's Museum, Boston, the Massachusetts Audubon Society and the 21-Inch Classroom).

This natural science series is designed to arouse interest in the broad field of science, particularly but not exclusively in the area of biological science. The program makes very extensive use of live animals and plants, special motion pictures, sound recordings and graphic arts. An experimental approach to biology is emphasized.

Funds for this project have been provided in part by the U.S. Government under title VII of the National Defense Education Act.

Science—grade 6

The 15 programs deal with matter and energy, and the relationship between them. Some of the program topics are matter, air, the atom, magnetism, electricity, nuclear energy, sound, light, forces and motion, simple machines, and space travel.

The television teacher is Mr. Eugene Gray, Consulting Teacher in Elementary Science, Newton Public Schools.

Focus: U.S. Foreign Policy—grades 11 and 12

Television teacher for the half-hour bi-monthly series is Dr. John S. Gibson, chairman, Liberal Arts Division, Babson Institute of Business Administration. The programs are presented with the cooperation of the World Affairs Council, Boston.

This educational television course for the secondary schools is planned as a current supplement for such courses as world history, U.S. history, problems of democracy, and civics. It will cover areas of U.S. foreign policy, such as NATO, Africa, Latin America, and foreign aid programs.

PROGRAMS FOR TEACHERS

Parlons Francais (program for teachers)—grade 4

Thirty weekly half-hour programs, for teachers using *Parlons Francais* grade 4, presented by Mme. Slack and other members of the modern language project. This series is designed to provide inservice training for the elementary schoolteachers whose classes participate in the first year of *Parlons Francais*.

Parlons Francais (program for teachers)—grade 5

Thirty weekly half-hour programs, for teachers using *Parlons Francais* grade 5, presented by Mme. Slack and other members of the modern language project for inservice training of teachers.

SECOND SEMESTER SERIES

Science—Primary grades (K-1-2)

A series of eight 15-minute programs designed to bring children closer to some of the common things around them (inside as well as outside) through the use of the senses, so that they may have a chance to begin to understand, interpret and adjust to the rich and exciting world we live in.

This K-2 science series is on video-tape and was loaned to the 21-Inch Classroom for the spring semester by the Oklahoma City Public Schools.

THE 21st CLASSROOM IS PRESENTED BY THE EASTERN MASSACHUSETTS COUNCIL FOR SCHOOL TELEVISION, A COMMITTEE OF THE MASSACHUSETTS EDUCATIVE SERVICES BOARD, WHICH HAS RECEIVED FINANCIAL SUPPORT FROM THE MASSACHUSETTS DEPARTMENT OF EDUCATION AND THE MASSACHUSETTS DEPARTMENT OF TELEVISION. THE PROGRAM IS PRODUCED BY MCRB-TV, CHANNEL 2.

A COOPERATIVE EDUCATIONAL TELEVISION PROJECT, THE MEMBERSHIP INCLUDES THE PUBLIC SCHOOLS OF THE FOLLOWING COUNTIES: BARNSTABLE, BRISTOL, DORSET, ESSEX, FRANKLIN, HAMPDEN, HAMPSTIRE, MIDDLESEX, NORFOLK, PLYMOUTH, SUFFOLK, WINDHAM, WORCESTER, AND YARROW. THE FOLLOWING TOWN AND PAROCHIAL SCHOOLS AND SCHOOL DISTRICTS:

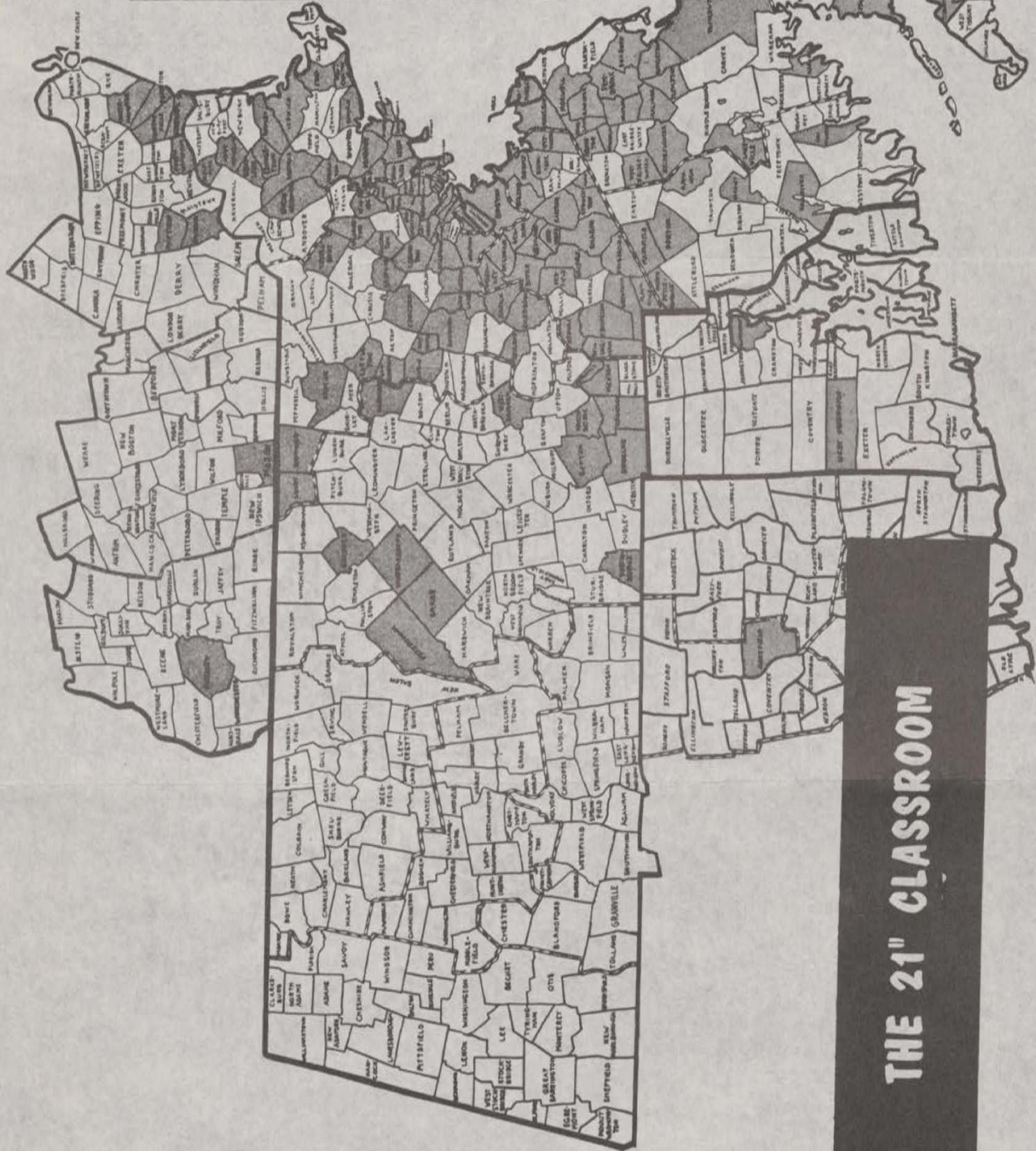
- MASSACHUSETTS**
- ACADIA OF NORTON, Massachusetts
- BARRETT SCHOOL, Weymouth
- BEAVER COUNTRY DAY SCHOOL, Newcom
- BELMONT DAY SCHOOL, Belmont
- BIRMINGHAM AND MAY SCHOOL, Newton
- BOYD SCHOOL, Weymouth
- BOYD SCHOOL, Massachusetts
- MASSACHUSETTS DEPARTMENT OF CORRECTIONS
- PARK SCHOOL, Brookline
- SACRED HEART SCHOOL, North Attleboro
- ST. ANNE'S SCHOOL, Arlington

RHODE ISLAND

- MOSES BROWN SCHOOL, Providence
- ROCKY HILL SCHOOL, East Greenwich
- ST. JOHN THE BAPTIST SCHOOL, Warren

- NEW HAMPSHIRE**
- KEENE STATE TEACHERS COLLEGE

3/1/66



THE 21st CLASSROOM

THE SA. GIBBERALBUM



SA. GIBBERALBUM
A. Habitus
B. Magnified view of the inflorescence

The lessons were created and taught by LeRoy D. Weber, then their supervisor of elementary science. The 21-inch classroom is experimenting with this series: (1) to see what programs in this subject area are most useful via television; (2) to find out how such programs should be scheduled in a school year; (3) to try a new format in a study guide—one addressed to three grade levels.

Accent on music—Grades 7, 8, 9

The eight programs—the first series for grades 7, 8, and 9—will be taught by Dr. Edward F. Gilday, chairman, Music Department, State Teachers' College, Lowell, and conductor of the Handel and Haydn Society. It will bring such experiences as the symphony, jazz, ancient instruments, the changing voice, the concert band with special performances to reinforce the teaching.

The humanities—Grade 11

This is a special series using films given by the Council for a Television Course in the Humanities, showing three eras, three dramas, three teachers, and, with the Stratford Ontario Players enacting scenes as part of the lessons on theater, Hamlet and Oedipus the King.

Report to teachers

Two telecasts for teachers using the humanities pilot course (12 lessons). Parts I and II to be telecast for teachers before the humanities pilot series begins.

Afternoon at symphony—Senior high

This series of four hour-long programs, each program broadcast once per month, brings to the schools selected concerts by the Boston Symphony Orchestra. Dr. Edward F. Gilday, chairman, Music Department, State Teachers' College, Lowell, and conductor of the Handel and Haydn Society is the host and teacher.

The drama—Senior high

This series of monthly telecasts, each approximately 2 hours in length, is composed of the full length portrayals of some of the world's best dramatic literature.

These dramas are:

1. Henry V—Shakespeare
2. Julius Caesar—Shakespeare
3. The Master Builder—Ibsen
4. The Lower Depths—Corky

Senator MCGEE. Thank you for your comments.

I would hope that the testimony being taken here, and particularly the vigor and dynamism contained not only in the presentation but the ideas being conveyed, will ultimately be absorbed now up in the U.S. Office of Education.

I think there has been a little reluctance to go along with this kind of approach in recent years. I would hope that perhaps this reluctance will rapidly abate and we will find a new spirit there and a new sense of cooperation in order to get this not only on the road, but to carry it still further off the ground, which we have said here repeatedly.

I have no further questions.

I would like to ask the remaining individuals on the list of witnesses this morning, Mr. Baudino, Mrs. Bell, Mr. Robertson, and Mr. Zimmerman, to consider one of two alternatives, because of the time: either to submit your statements intact in the record at this point, or to return for an agreed-upon hour this afternoon and to resume this so that you may present your testimony personally. Now I am willing to abide by your preference in this regard. I think it is time to break off. I ask first, Mr. Baudino.

STATEMENT OF JOSEPH BAUDINO, VICE PRESIDENT, WESTINGHOUSE BROADCASTING CO., WASHINGTON, D.C.

Mr. BAUDINO. My name is Joseph Baudino. I am appearing here today on behalf of Donald H. McGannon, president of Westinghouse Broadcasting Co., who regrets very much he could not be here to testify on behalf of S. 205. He regrets it particularly because in January of 1959 he presented testimony before this same committee on S. 12.

We do want to urge and to give our complete support to this bill and repeat in its essence what we presented to the committee in the testimony on S. 12.

Senator McGEE. Thank you very much. The full statement of Mr. McGannon, president of Westinghouse Broadcasting Co., will be carried in the report of the hearing.

(The statement follows:)

STATEMENT OF WESTINGHOUSE BROADCASTING CO., INC., BY DONALD H. MCGANNON

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	Cleveland-----	KYW
	WBZ-TV		KYW-FM
	WBZ-FM		KYW-TV
Baltimore-----	WJZ-TV	Chicago-----	WIND
Pittsburgh-----	KDKA	Fort Wayne-----	WOWO
	KDKA-FM	San Francisco-----	KPIX
	KDKA-TV	Portland-----	KEX
			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 today to urge this committee's favorable report on Senate bill No. 205. 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 supersedes 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, education, 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 at-

tention 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 multimillion-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 everyone 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 be accomplished in this world of nuclear physics and international hypertension.

The multimillion-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 in this room 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 clearest 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 busi-

nessmen, 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 WQED this 500-foot tower for their television antenna and land. The present replacement value of this property is estimated at \$264,000.

3. A recent grant of \$10,000 was made to WQED by the Westinghouse Electric Corp. as a 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 \$6,000.
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 programming 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+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 coproduction 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 5 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 founding members anticipate that by dubbing these programs in foreign language 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 6 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 crystallized, 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, needs 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 exceptions, 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 Federal grants in an equitable manner and as proposed in the subject Senate bill S. 205. This legislative action will achieve a breaking of a "logjam" that is thwarting the forward progress and expansion of educational television. The Westinghouse Broadcasting Co. strongly urges the favorable reporting of the bill out of the committee and ultimate enactment into law.

Senator McGEE. Mrs. Bell?

(No response.)

Senator McGEE. Apparently Mrs. Bell isn't here at the moment.

Mr. Robertson?

STATEMENT OF JAMES ROBERTSON, VICE PRESIDENT FOR NETWORK AFFAIRS, NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER, NEW YORK, N.Y.

Mr. ROBERTSON. Mr. Senator, I think it would be sufficient at this point to introduce into the record the full statement of Mr. John F. White, the president of the National Educational Television and Radio Center.

I appear on his behalf as vice president for network affairs of the National Educational Television and Radio Center, and I would only call to the attention of the committee the fact that a great many of the crucial points that have been raised already in the testimony are further emphasized in Mr. White's statement, and that this underlining, as it were, of the points which, in my judgment, having listened to all of these hearings, the points that are most crucial and that have

been brought out most clearly are also emphasized on the basis of our experience in our organization.

We are the national headquarters and network program service for 50 of the 54 educational television stations on the air at the present time. We deal with them directly every day. We know their problems; we know their objectives.

We also deal with many communities in the process of trying to put stations on the air, and I think that on the basis of our experience day to day we would simply second, as is done in Mr. White's statement, the testimony that this committee has brought before it in the last 2 days.

We heartily approve the bill and recommend its passage and if the committee feels that at any point it would like to have additional information as to the programing that is carried on these stations currently, either furnished through our organization or in their total schedule, this material is available and we would be glad to furnish it or anything else that the staff requires.

Senator MCGEE. Thank you very much, Mr. Robertson, and particularly for the endorsement of what has transpired here by a group such as yours that is so close to the national ramification of the proposal.

You can be sure that Mr. White's statement will appear in full and any additional aspects of this that seems called for will be added in the record likewise.

(The statement follows:)

TESTIMONY BY JOHN F. WHITE, PRESIDENT, NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER

My name is John White. I am the president of the National Educational Television and Radio Center. The center serves as program network headquarters and leading spokesman for 50 of the 54 noncommercial educational television stations across the country. 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 persons—is attached to the transcript of this testimony. We have constantly moved forward and our growth continues. Six years ago there were four educational television stations on the air. Four years ago there were 20. One year ago there were 45. Last month in Portland, Oreg., the 54th station began its first telecast.

One of our major responsibilities to the network of educational television stations is that of providing 10 hours each week of filmed and video-taped programing. This programing is derived from the finest talents and production facilities available throughout the country. On occasion our commercial colleagues have developed programs for our use. Also, we have acquired many of the fine programs being produced in European countries and Canada.

In addition to furnishing this program service, we work to help stations help themselves and also to assist communities and educational agencies in their efforts to activate stations. To this end, we frequently provide consultation services, sponsor meetings and conferences, and supply literature and training aids. As an extension of this service, we established on February 1 a Washington office and absorbed the professional staff of the Joint Council on Educational Television. This new office is located in the American Council on Education Building at 1785 Massachusetts Avenue NW., Washington, D.C.

These various activities have given us intimate knowledge of the significant growth of educational television stations; we know their successes and potentials; we also know their problems and the obstacles they face. It is against such a background that this testimony is submitted.

While the growth in numbers of educational television stations has been dramatic, it should be noted that many of the idle reserved channels demand activation if the schools and colleges, as well as children and adults at home, are to benefit from this powerful instrument of communication.

One might say merely that other communities and educational institutions should follow the lead of those that have activated stations, but a look at the map and the educational television allocations suggests strongly that they cannot do so without special aid. As of today, every VHF reserved channel in cities of 300,000 population and over has been activated, with the exception of the one in San Antonio, where an activating group is now hard at work. The remaining assignments in large cities are UHF in VHF markets, and it is extremely difficult to obtain local citizen support for a station that the viewer at home cannot see unless he spends \$50 to convert his set to UHF. Even here, more often than not, limited operational dollars are obtainable from schools for whom direct services would be performed. But the participation of individual citizens is negligible because adult education and cultural programming would not be readily available to them. Thus, in such cities as New York, Washington, Cleveland, and Los Angeles the schools also are denied full-scale service.

Beyond this, one finds blank spots on the ETV map—blank spots that represent the smaller communities and sparsely settled regions where educational and cultural resources also are limited. Here too, of course, construction dollars are difficult to obtain, but the service that activated ETV stations, sharing the resources of educational and cultural centers, could provide for people in these areas would be tremendous. And the need for this service will be even greater in the years ahead when our schools are crowded and adequate teaching staffs are not easy to come by.

The value of the service renderable by such stations has already been demonstrated and testified to in these hearings. There is no better evidence than the fact that two cities, Pittsburgh, Pa., and Oklahoma City, Okla., are now served by two educational stations each because their schools required even more help than one could provide. Milwaukee, Wis., Dade County Fla., and the Florida State Educational Television Commission also have recently applied for additional educational channels, and other communities will be following in their steps.

Interconnections among the stations in a State or region will be necessary too if the smaller communities to which I referred earlier are to receive the rich service available from schools, universities, colleges, libraries, museums, and other cultural institutions of the larger State and regional population centers. The advantages of such an arrangement already are being realized in the State of Alabama, whose three educational television stations are interconnected. 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., share their resources through live interconnection.

As you gentlemen know, the early stimulation of ETV was aided immeasurably by large grants from the Fund for Adult Education, which gave money for station activation on a matching basis to communities and institutions. The Ford Foundation, through its various funds, has contributed nearly \$50 million to the ETV movement. 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, it should not, undertake the total task itself, for financing as well as utilization must be shared if ultimate success is to be achieved.

Therefore, the total job can be completed 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. Of the 54 stations on the air, approximately 40 percent are integral parts of universities and derive their operational dollars from university budgets. Approximately 20 percent are controlled by and receive operating dollars from public school systems. The remaining 40 percent, located for the most part in larger cities—such as Boston, Pittsburgh, Chicago, Minneapolis-St. Paul, New Orleans, St. Louis, San Francisco—are independently organized, nonprofit corporations that receive capital and operating funds in return for services performed for educational institutions, as well as through voluntary contributions from independent citizens and industry. Thus, the total picture is one of diversified control and support. This, in our opinion, is to be desired, for just as public and private educational institutions 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, and its Morrill Acts, the Federal Government should make money available without Federal control to bring into full effectiveness this important American educational movement.

The National Educational Television and Radio Center congratulates the authors of this bill and urges its passage. We would prefer that the bill, in its final implementation, provide that State plans for use of the dollars be submitted and approved before the grants are made. In this way, we believe, the American people can be assured of the most effective expenditure in terms of the best possible statewide service. Such State plans could include station establishment, improvement, and linkage. Furthermore, we would prefer that grants be made on a matching basis, for these Federal dollars can best be used to stimulate, not substitute for, local initiative. If State and/or local institutions, or nonprofit foundations organized for the purpose, are required to match dollars for construction, they are more likely to recognize their responsibility for the adequate financing of that station's later operation. At the same time, it is our conviction that there should be no penalty placed upon those who already have shown initiative in the activation of stations. Hence, we believe that adequate credit in any matching funds formula should be given for prior investment and that grant money should be available for improved power and equipment for existing stations.

If Congress fails to pass this legislation, it could well mean that many Americans will be deprived, for many years, of the educational television service they desire and need in their elementary and secondary schools, in their colleges, and in their homes. We urge your support.

NATIONAL EDUCATIONAL TELEVISION AND RADIO CENTER

Board of Directors

Ralph Lowell, chairman, board of directors; chairman, Boston Safe Deposit & Trust Co., Boston, Mass.

Everett N. Case, president, Colgate University, Hamilton, N.Y.

Norman Cousins, editor, The Saturday Review, New York, N.Y.

Darwin S. Fenner, vice president, Merrill Lynch, Pierce, Fenner & Smith, Inc., New Orleans, La.

Leland Hazard, director-consultant, Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Harold D. Lasswell, law school, Yale University, New Haven, Conn.

Lloyd S. Michael, superintendent, Evanston Township High School, Evanston, Ill.

George E. Probst, executive director, Thomas Alva Edison Foundation, Inc., New York, N.Y.

Glenn T. Seaborg, chancellor, University of California, Berkeley, Calif.

George N. Shuster, president emeritus, Hunter College, New York, N.Y.

Mark Starr, educational director, International Ladies' Garment Workers' Union (1925-60).

Herman B. Wells, president, Indiana University, Bloomington, Ind.

John F. White, president, National Educational Television and Radio Center.

Raymond H. Wittcoff, president, Transurban Investment Corp.

Senator McGEE. Is Mr. Zimmerman here?

**STATEMENT OF MORT ZIMMERMAN, PRESIDENT, ELECTRON CORP.,
DALLAS, TEX.**

Mr. ZIMMERMAN. Mr. Chairman, I would like to enter my statement in the record.

I am president of Electron Corp. We are involved with one of the 54 stations presently in operation in the educational field. I think I would like to quote one paragraph from this statement.

Senator McGEE. Please do.

Mr. ZIMMERMAN. It might insert a little more usefulness, or let us say a little more emphasis on the use of the \$1 million per State proposal. I quote:

"Whereas previously \$1 million per State would have constructed four of the more sophisticated variety of television broadcast stations, it has now become possible to construct at least 20 television stations for the same applied budget."

This is the substance of the statement as verified by an existing educational station in Richardson, Tex.

Senator McGEE. Thank you for this expert observation and testimony from Electron Corp.

(The statement follows:)

STATEMENT BY ELECTRON CORP. OF DALLAS, TEX.

Electron Corp. is an aggressive equipment manufacturer which has made available complete television transmission facilities, both open circuit and closed circuit based on new concepts and specifically aimed at proving out the use of a UHF television broadcast station as an instructional type facility.

The first installation of this type was installed at KRET-TV, UHF channel 23, Richardson, Tex. This facility utilized the concept of on-the-air instruction daily during school hours between 10 a.m. and 3 p.m. and has over a period of 16 months proved a dynamic success.

The Richardson educational station competes for no audience. On the other hand, its programs are designed for direct injection into the classroom through the media of air telecasting. The homeowner or other viewers become therefore, bystanders to the direct instruction offered by the teachers of this facility.

Of particular significance and in line with these hearings before the Senate of the United States, it is emphasized that this type of educational television broadcast station represents the lowest cost investment ever conceived in the United States, and the lowest cost of operation of any educational television station in the United States.

Whereas previously \$1 million per State would have constructed four of the more sophisticated variety of television broadcast stations, it has now become possible to construct at least 20 television stations for the same applied budget.

This statement is fully backed up by the educators involved with the Richardson Educational Television Station, Electron Corp. and its parent company, Ling-Temco Electronics, Inc.

The reasons that will back up such a statement are based on our opinion that the ultimate and maximum use of educational television is achieved when the "intimacy of presence" of the teacher is fully projected into the classroom—when the personality and individuality of the teacher is transmitted directly to the student.

Such a goal can only be reached if the circumstances surrounding the complete facility and the overall environment of both the origination area and receiving area is not too far removed from conditions existent in the normal classroom environment wherein the teacher is physically a part of the direct student body.

The instructional television broadcast station becomes therefore, a facility which requires the least amount of reorientation or adaptation on the part of the teacher—a television system that conforms and adapts to the normal habits of the teacher almost as if the system were an inconspicuous bystander or observer through which knowledge and information would be conveyed.

The television broadcast station designed for the public school district must not contain the sophistication associated with the previous concepts conventionally used by both the larger commercial and educational television stations, primarily because such facilities cause the non-television-trained teachers to adapt and conform and change their normal teaching habits. The instructional television station does not contain a maze of lighting, a multiplicity of studios, a large crew of floor directors, cameraman, lighting experts, boom mike technicians, plus a specialized set of control room engineers and technical directors.

On the other hand, the Electron Corp. concept of an instructional television station utilizes simplified, rugged, and dependable equipment that uses ordinary room lighting, a single engineer, unattended television cameras, simple microphone technique and a staff of personnel reflected through the academic teaching staff assigned to the station—all of which produces excellent picture and sound quality and television instructions as closely related to the finest classroom techniques as is possible. "We cannot expect the educator of today to

become a television actor or actress at the sacrifice of losing their normal individualistic teaching techniques."

"If educational television is to become the servant rather than the master, the broadcast facilities must not disturb, but must enhance and take full advantage of the teachers as they are."

In its initial stages, educational television utilized standard television broadcast on-the-air technique appealing to the community as an audience or closed circuit television systems appealing to the classroom as an audience. In some cases, combinations of both have been used and all have been successful. All have proven the tremendous effectiveness of electronics in education. The one factor which had to be resolved was the initial investment and the cost of operation. There was no doubt as to the effectiveness of electronics in education. There was, however, the doubt of how the budget could cover such need.

As time progresses, educators are facing greater and greater problems associated with the ever-increasing student population explosion coupled with tighter available budgets. At the same time, demand by these same educators becomes greater for the use of facilities for the establishment of the wonderful tool that educational television represents. This demand is more in the form of a desire for the instructional television broadcast station and reflects the need for facilities which can be handled by existing teachers, equipment that is very simple to operate, and installation-operating economy, that suggests an open circuit station when trying to cover a complete school district or a closed circuit station when the requirements are for coverage of a physically small area. The engineer, therefore, has been faced with a complex problem of designing better equipment, simpler equipment, more rugged equipment and at lower prices. Additionally, such stringent requirements had to be coupled with the necessity for all equipment to be in compliance with the specifications established for the broadcast service by the FCC.

The Richardson, Tex., educational television station has these basic technical considerations that satisfy the requirements of the typical public school district:

1. An origination television broadcast station with adequate power and sufficient capability to give snow-free television coverage to a school district within a 30 mile diameter.
2. Origination equipment which permits either live or film broadcasts.
3. A complete facility containing live studios, film studios, control room and transmitting equipment all within an area of less than 400 square feet.
4. The well-engineered video and RF cable distribution system installed in each of the 14 schools within the district.
5. Equipment that has been basically easy to maintain, rugged in design, economical in replacement parts cost and maintained fully by one licensed technician.

We therefore wish to go on record before this U.S. Senate hearing that we are fully in favor of a bill submitted by Mr. Magnuson, Mr. Schoeppel, Mr. Metcalf, and Mr. Cooper which is to expedite the utilization of television transmission facilities in our public schools and colleges with the following additional recommendations:

1. That the concept of the instructional television broadcast station supersede other types of conventional educational television broadcast stations thus permitting greater utilization of Federal funds.
2. That certain rules and regulations established by the FCC both in regard to technical facilities and legal requirements be relaxed in a manner which would expedite speedier handling of educational television broadcast station applications for construction permits, license renewals, and technical specifications on equipments.
3. That the bill in its present form be passed by the Senate and House of Representatives of the United States of America as soon as possible in order to advance the American system of education through the use of this marvelous media, educational television.

Senator McGEE. I would like at this time to make the following a part of the printed hearing record:

A letter from Mr. Henry F. Chadeayne, executive director, St. Louis Educational Television Commission, 6996 Millbrook Boulevard, St. Louis, Mo.; and

A letter from Mr. Claude Purcell, State superintendent of schools, State department of education, State Office Building, Atlanta, Ga.

(The letters follow:)

KETC CHANNEL 9,
St. Louis, Mo.

[Channel 9 is operated by the St. Louis Educational Television Commission]
Hon. WARREN G. MAGNUSON,
Chairman, Interstate and Foreign Commerce Committee,
Senate Office Building,
Washington, D.C.

DEAR SENATOR MAGNUSON: It was my privilege, at your invitation, to appear before the Committee on Interstate and Foreign Commerce when hearings were held in April 1958 on S. 2119, your bill dealing with educational television. I was unable to attend the hearings on S. 12 in 1959, but I did send you a statement which you indicated would be made a part of the record.

I would like to reaffirm my earlier testimony and urge favorable consideration by the committee of S. 205. You will hear from others of the development of educational television in the past 3 years, of its increasing utilization and increasing importance, of the continuing need for its development, and of the part which the Federal Government can play if this bill becomes law in strengthening and extending educational television.

KETC, of which I am the executive director, 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.

One aspect of the proposed bill that particularly appeals to me is the fact that the administration will be centered in the Commissioner of Education, with the grants being made directly to the designated agency or organization after an appropriate investigation, rather than being channeled through a State agency.

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 the 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.

Many other educational 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, channel 25, 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.

Sincerely yours,

HENRY F. CHADEANYE,
Executive Director, St. Louis Educational TV Commission.

STATE DEPARTMENT OF EDUCATION,
STATE OFFICE BUILDING,
Atlanta, Ga., February 23, 1961.

Hon. WARREN G. MAGNUSON,
U.S. Senator, Senate Office Building, Washington, D.C.

DEAR SENATOR MAGNUSON: It is my understanding that the Senate Commerce Committee will hold hearings on March 1 and 2 on Senate bill 205 which provides grants to the States for the establishment and improvement of television broadcasting facilities.

At the last meeting of the Georgia State Board of Education, we awarded a bid to the Radio Corp. of America to construct a television station, channel 8, at Waycross, Ga. We hold an FCC permit to use channel 9 in the Savannah, Ga., area of our State. We are also using channel 8 through the University of Georgia's station WGTV at Athens, Ga. This would allow us to use three broadcasting stations in our educational television program. We will need three other stations to completely illuminate the State with educational television.

The Georgia State Board of Education would welcome Federal funds to help us achieve these goals. I want to thank you for your interest in educational television and to indicate to you our genuine interest in using this new media to improve the quality of our instruction for all of the children of our State.

Sincerely yours,

CLAUDE PURCELL,
State Superintendent of Schools.

Senator MCGEE. This concludes the public hearings on this bill.

We will go into executive session subsequently and the committee will then take action on the pending legislation.

(Whereupon, at 12:45 p.m., the committee was adjourned.)

(The following information was subsequently received for the record:)

FEDERAL COMMUNICATIONS COMMISSION,
Washington, D.C., March 7, 1961.

HON. WARREN G. MAGNUSON,
*Chairman, Committee on Interstate and Foreign Commerce,
U.S. Senate, Washington, D.C.*

DEAR SENATOR MAGNUSON: For the consideration of the committee, I am attaching a statement of my views with respect to S. 205, a bill to expedite the utilization of television transmission facilities in our public schools and colleges and in adult training programs.

I have not been able, in the very brief time, to become familiar with all of the details of the legislation, but I want to go on record personally (not on behalf of the Commission) as supporting its principles and objectives.

Sincerely,

NEWTON N. MINOW, *Chairman.*

STATEMENT OF NEWTON N. MINOW, CHAIRMAN, FEDERAL COMMUNICATIONS
COMMISSION

Having assumed office on March 2, 1961, I was unable to comment on the above bill at the same time as my colleagues. But because of the immense importance I attach to this legislation, I take the liberty of transmitting this statement to you in the hope that it may still be considered by the committee.

I join Commissioner Hyde in urging the use of Federal funds for educational television. I believe, with him, that a widely available and adequately financed noncommercial educational television service is vitally necessary to improve our educational and communications system. Through such a service, our Nation may have an unparalleled opportunity for education, for experimental programming, for real diversification of program fare, and for cultural advancement. In view of the present lack of funds in many areas to meet station construction costs, I believe that 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 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 establishing or improving educational television broadcasting facilities.

CHAMBER OF COMMERCE OF THE UNITED STATES,
Washington, D.C., March 2, 1961.

HON. WARREN G. MAGNUSON,
Chairman, Interstate and Foreign Commerce Committee,
Senate Office Building, Washington, D.C.

DEAR SENATOR MAGNUSON: The Chamber of Commerce of the United States wishes to express its opposition to S. 205 proposing Federal subsidies for educational television broadcasting facilities.

The chamber considers this measure unnecessary in view of the tremendous expansion in the last few years in educational television broadcasting initiated by local, State, and private enterprise.

Continental Classroom, financed by grants from the Ford Foundation, the Fund for the Advancement of Education and leading corporations, has brought outstanding educational programs within the reach of a nationwide audience—without Federal funds.

A grant from the Ford Foundation financed a 5-year experimental program in Washington County, Md., which proved so successful that the local school system appropriated \$180,000 to continue it during this school year.

A "flying classroom" beamed from Purdue University now brings educational television instruction within reach of 5 million schoolchildren in 13,000 schools and millions of adults in six Midwestern States.

Present affiliated National Educational Television stations have a potential audience of approximately 10 million homes or 26 million viewers. Affiliated stations served by NET have grown from 1 in 1953, 20 in 1956, 34 in 1958, to 49 as of January 1961. NET programs are financed by corporations, foundations, and Government agencies.

Individual initiative, private enterprise, and existing agencies have made educational television the fastest growing television service in the United States.

Educational television will continue to develop through local, State, and private initiative without the unwise Federal supervision that necessarily must accompany Federal funds.

The example you cited of Seattle's effort shows what people can do when their desire is strong enough—without Federal funds.

These are a few of the many reasons why the Chamber of Commerce of the United States urges your committee not to add another program to be financed from Federal deficit expenditures which already cost American taxpayers \$9 billion a year in interest payments.

Cordially yours,

CLARENCE R. MILES,
Manager, Legislative Department.

P.S.—I would appreciate it if you would make this letter a part of your current record.

THE STATE OF KANSAS,
SENATE CHAMBER,
Topeka, March 3, 1961.

Senator ANDREW F. SCHOEPEL,
Senate Office Building, Washington, D.C.

DEAR SENATOR SCHOEPEL: In accordance with your suggestion over the telephone a few days ago, I am submitting the following statement concerning plans to establish a State educational television network in Kansas. The Kansas Legislature, which is now in session, is considering the establishment of a statewide system of educational television. The plan proposed for consideration includes six high-antenna 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. There would possibly be three major program production centers at Wichita, Lawrence, and Manhattan, and five minor pro-

gram centers at Emporia, Hays, Kansas City, Pittsburg, and Topeka, 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 a 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 antenna the relatively small number of people residing in the intervening areas could receive an adequate signal.

This plan was developed as a result of a special educational and engineering feasibility survey which was completed last September by Dr. John C. Schwarzwalder, director of the Twin City Area Educational Television Corp., and consultant on numerous educational television surveys. He was assisted by Mr. John B. Heffelfinger, of Kansas City, Mo., a radio and television consulting engineer in this area.

The survey report is the outcome of action taken by the 1959 Kansas Legislature. House bill 512 (ch. 35) of the 1959 laws, appropriated \$25,000, in item No. 35, to provide for an engineering survey of the feasibility of educational television in Kansas and to make known the benefits of educational television and promote its use by the people of Kansas.

As a matter of fact, the House of Representatives of the Kansas Legislature passed a bill in 1959 to establish a State educational television authority, and empower it to take the necessary steps to secure channels, construct transmitters, organize a staff, and develop a statewide program for educational television in Kansas. Due to the failure to secure favorable action by the Kansas Senate at the end of the session, the bill creating the authority did not become law, but an appropriation was made to the Kansas Legislative Council to conduct the feasibility survey.

The legislative council introduced a proposal, No. 12, relating to the study of educational television, and assigned this to the committee on education, of which I am chairman. That committee entered into a contractual arrangement with Dr. Schwarzwalder to conduct the survey, after several conferences had been held with a number of the outstanding authorities in the field of educational television. Members of the committee made a special trip to the convention of the National Association of Educational Broadcasters in Detroit in December 1959, and obtained first-hand information on the operation of educational television at the local level.

A citizen's committee for educational television in Kansas was organized nearly 8 years ago. For several years it has advocated the establishment of a Statewide educational television system. This committee is made up of representatives of the various State and private colleges and universities, municipal universities, junior colleges, and public school systems of the State, and representatives of other Statewide organizations interested in the field of education, including the Kansas Congress of Parents and Teachers, the Kansas Medical Society, the Kansas Council for Children and Youth, American Association of University Women, and farm organizations. A number of legislators have indicated that they received more mail in favor of educational television in the 1959 session than for any other proposal.

The report of the feasibility survey showed that a Statewide system of educational television is entirely feasible and practical from an engineering, administrative, and educational programming standpoint. Parents, teachers, and school administrators indicated that a Statewide system of educational television is needed to improve, enrich, and extend the curriculum. The areas of greatest need are in the improvement of the quality of instruction, and in providing instruction in courses not now available, particularly in many of our smaller schools, such as science, mathematics, and modern languages. Teacher training, especially for rural schools, is another area in which educational television could be helpful and render a beneficial service. Other secondary benefits would accrue from the education of homebound children, extension of education of out-of-school youth, evening courses for adults, and special informational programs. Competent teaching personnel is available within the State to provide instruction over educational television.

The survey pointed out that the existence of a large number of small schools makes it extremely difficult for them to develop a comprehensive modern curriculum. It was found that there were approximately 15 subject areas which are now in some measure being neglected or served inadequately throughout the State. The subject areas in which there is the 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 preschool education. There was general agreement 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.

Permission was granted by the legislative council committee on November 15, 1960, to its education committee to continue its consideration of proposal No. 12, and to submit a report directly to the Kansas Legislature.

The committee's report was submitted to the legislature on February 13, 1961, and is printed in the Journal of the Senate, 22d day, on pages 99-108. On the following day, the vice chairman of the committee called the attention of the members of the Kansas House of Representatives to the report printed in the Senate Journal. He reviewed the background of the report and urged the members to give serious consideration to the recommendations contained therein.

The report of the education committee to the 1961 Kansas Legislature states that it is the firm conviction of the members of the committee that educational television is economically and educationally sound, and that Kansas students should have the benefit of this important educational tool. It recommends that a bill should be enacted creating an educational television authority with power to employ an executive director and to organize an educational television system, formulate a program, and to activate its plans as rapidly as possible. An educational television authority composed of nine members appointed for 4-year overlapping terms, not more than two of whom should be from the same congressional district was recommended, and it was further suggested that seven of the nine members be chosen from three names submitted by 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 School Association, and the Kansas Public Junior College Association.

The report further pointed out that it is imperative that action be taken by this legislature in order that proper steps could 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. The committee further recommended that the legislature appropriate \$1 million to the authority to enable it to establish the necessary organization, secure equipment, and formulate an educational television program as soon as possible. Since the Kansas Legislature meets annually, it was deemed unnecessary to appropriate the entire sum estimated as the total cost of constructing the entire system. It would disrupt the financial program of the State to divert approximately \$7 million to this one program, much of which could not be expended immediately.

I feel confident that the legislature will enact the necessary enabling legislation, and that within a short time the Kansas educational television authority will be established and will be ready to take the first steps in developing a program. As is the case in many States, Kansas State government will be facing a financial problem. How far the legislature can go at this time in appropriating funds for construction and purchase of equipment is not clear, but it is expected that additional funds could at least be made available by the time of the 1962 budget session of the Kansas Legislature.

Respectfully submitted.

LAURIN W. JONES,
Chairman, Senate Committee on Education.

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 1948. In 1949-50 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 organizations 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 S. 205 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-three of the twenty-six 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 S. 205 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 programing 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 S. 205 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.

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.

Matching requirements

Mr. Chairman, chief State school officers have expressed a preference for S. 205 over other bills which require the State to provide matching funds. The purpose of S. 205, 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 41 State legislatures convened in January 1961 and will have adjourned by the time S. 205 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. S. 205 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 of the type you have introduced. 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.

DESCRIPTION OF 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 COUNCIL OF CHIEF STATE SCHOOL OFFICERS

Edgar Fuller, executive secretary

- 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, 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, 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, Superintendent of Public Instruction, State Department of Education, Cheyenne

(The following information was subsequently submitted for the record.)

CLARION STATE COLLEGE,
OFFICE OF THE PRESIDENT,
Clarion, Pa., March 7, 1961.

HON. JOSEPH S. CLARK, JR.,
U.S. Senator, Senate Office Building,
Washington, D.C.

DEAR SENATOR CLARK: I am writing to urge your support in favor of Senate bill 205, sponsored by Senator Magnuson, authorizing grants up to \$1 million for each State to establish educational television facilities.

At present Clarion State College is taxing its own funds to the limit in cooperation with two other State colleges to establish the first block of a microwave relay system that will eventually unite Pennsylvania's 14 State colleges with the State university and other educational television stations throughout the State.

In his testimony before the Senate Interstate and Foreign Commerce Committee, Dr. Charles H. Boehm, Pennsylvania superintendent of public instruction, stated the goal of this network is to bring educational TV to every schoolchild in the State.

By careful management of State appropriations, Clarion in common with other colleges in Pennsylvania can finance a major portion of the cost of necessary studio and classroom TV equipment, but we have no funds to defray the cost of the microwave network which in our case may involve an outlay of \$2 million.

Your support of the Magnuson bill will hasten the attainment of Pennsylvania's goal.

Respectfully yours,

JAMES GEMMELL, *President.*

THE OHIO STATE UNIVERSITY,
OFFICE OF THE PRESIDENT,
Columbus, March 15, 1961.

HON. WARREN MAGNUSON,
Chairman, Senate Commerce Committee,
Senate Office Building, Washington, D.C.

MY DEAR SENATOR MAGNUSON: I am grateful for this opportunity to record my support of Senate bill 205 for the Committee on Interstate and Foreign Commerce of the U.S. Senate. It is a privilege to endorse a measure with such far-reaching implications for improving the quality and the efficiency of education in the elementary and secondary schools, in colleges and universities, and for adults not regularly enrolled in institutions of learning.

During the past several years, in addition to my responsibilities as president of Ohio State University, I have served as chairman of the committee on radio and television for the American Association of Land-Grant Colleges and State Universities; as a member of the National Educational Policies Commission; and as a member of the Ohio Interim Educational Television Study Commission. In these several roles (and in my previous role as school superintendent) my conviction that television has a major role to play in the educational patterns of today and tomorrow has become increasingly strong.

In our 1959 report for this committee on radio and television we suggested that the "new media (radio, television, magnetic audio and video tape recording, etc.), as title VII of the National Defense Education Act calls them) give increasing evidence of becoming basic tools of education in programs of resident instruction for enrolled students in schools and colleges, and in programs of extension education for adults." Business and industry are rapidly completing a transition from a mechanical to an electronic technology, but education still conducts most of its processes in a "hand labor" economy with the exception of the textbook, one of the first productions of the industrial revolution. Now 500 years later, the whole complex of electronic communications devices may well provide the next major advance in education's technological ability to communicate information and ideas.

The 1961 report of the Ohio Interim Educational Television Study Commission to the Governor of Ohio and the 104th general assembly recommended the establishment of a permanent Ohio Educational Television Network Commission and the construction of a statewide educational television network which would serve every Ohio citizen in and out of school. I would like to quote from one section of that report:

"Teaching by Television," a 1961 study by the Fund for the Advancement of Education and the Ford Foundation, suggests that television experiments it describes may well mark the 'beginning of a new era in American education.' The use of television for teaching may still be novel to some, yet the experiments listed involve more than 50 colleges and universities, 250 school systems, and more than 300,000 students and their teachers. It is estimated that in this current year about 7,500 elementary and secondary schools are offering some instruction by television from educational television stations to around 3 million pupils. These figures do not include students receiving their television lessons over commercial television stations or by closed circuit television.

"During the last 4 or 5 years, schools and institutions of higher education have been conducting an intensive search for new and better ways of providing an education for the Nation's young people. In part, this ferment has been stimulated by the unprecedented increase in the number of boys and girls to be educated. Since the end of World War II the number of births has risen more than 50 percent, and each year for the past 5 years it has hovered around the 4 million mark, or 1½ the level of the depression decade of the thirties. Enrollments have risen steadily at all levels of education, and educators now know this is not a temporary situation but a permanent problem—and opportunity—which will be with us for the foreseeable future.

"Along with the rapid rise in student numbers there has been an acute shortage of able teachers. Since the war the number of new college graduates entering teaching has not kept pace with the increase in students, and the number of poorly qualified or temporarily certificated teachers has been alarmingly high. The problem now exists on the college level as well as in the schools. One population authority has said that unless new methods are devised, colleges and universities might have to double their faculties and facilities during the next 10 years. This total problem has spurred many educators to seek new ways

of multiplying the effectiveness of good teachers lest a whole generation of young Americans 'become short changed in their education and in turn short change future generations when they themselves become teachers.' Television appears to be one of the most promising ways of multiplying this educational resource and of making possible greater economies and efficiencies in education.

"The Ohio Commission on Education Beyond the High School in its December 1959 report to Gov. William O'Neill stated: "There is widespread belief that the pattern of the past in education beyond the high school need not necessarily be a model for the future.

"Probably none of the current proposals for educational improvement offers more potential for serving well in the broad field of adult education as well as for conventional instructional purposes than that of a closely knit, statewide educational television network.

"Financed by State funds this medium could serve many schools and colleges at great economy to all concerned."

I particularly call to your attention the last sentence of the quotation from the Commission on Education Beyond the High School: "Financed by State funds this medium could serve many schools and colleges at great economy to all concerned."

As the committee well knows, Ohio, like many other States, faces a crucial problem during the next decade in the financing of education on all levels. This problem is particularly acute in the case of State-supported higher education and even more crucial during the fiscal biennium many of the States are about to enter. The natural tendency in many institutions when funds are short is to support ongoing operational patterns, not to embark on new pilot projects, despite the promise new techniques may hold for improved quality and economy in the future. If State funds for higher education seem likely to continue at the same or lower levels, the many colleges and universities will quite naturally regard educational television as an extra and expensive additional investment.

It is for these reasons that a one-time Federal grant-in-aid to the several States, such as this bill proposes, has such unique potential. It would provide the capital to construct the facilities which would permit this remarkable new tool of education to be utilized where otherwise it would not be utilized. It would make possible the prerequisite to this particular educational change in any given educational institution—actual demonstration and use on the State and local level, a requirement no amount of "pointed proof" from elsewhere ever supplies.

I am proud to report that Ohio has made remarkable progress in the development of educational television. Yet at the same time I must say that the development has not gone far enough to become either basic or integral in the statewide educational process. Furthermore, without Federal aid to speed up the process of meeting the very real challenges we face, the development of appropriate educational television facilities under State financing is likely to take a number of years. In other words, while there is a real understanding and interest in this new medium in Ohio in many quarters, and while its ultimate full development is hardly to be doubted, the educational crisis we face calls for an immediate, not a gradual, development of this educational resource.

Let me be more specific. There are now four educational noncommercial television stations on the air in Ohio: WCET, a community nonprofit corporation in Cincinnati serving 53 school districts; WOSU-TV at Ohio State University, serving 70,000 students in elementary and secondary schools and institutions of higher education in central Ohio; WMUB-TV at Miami University, primarily used to served credit course students on the campus and extension students in the area; WGTE, another community-type station in Toledo. Three other State universities have constructed closed circuit television installations but require funds for transmitters. Of the stations on the air, only WOSU-TV has sufficient power to cover its service area adequately. The others, unhappily, had insufficient capital funds at the outset to make the proper engineering installation. Our new State network plan calls for 26 stations with appropriate and sufficient power.

Lest I leave the impression we are content with the television situation at Ohio State University. I want to point out our present on-campus enrollment of 22,245 will inevitably be greatly increased by 1970. Already we have established four branch campuses in addition to our main campus: Lima, Mansfield, Marion, and Newark. Plans for a fifth branch are underway. With WOSU-TV's present power we are able to serve only the Newark and Marion branch campuses with

instructional television. Unless we can secure additional power or construct a translator and/or microwave facilities we cannot serve the Mansfield and Lima areas. On our central campus in Columbus and in the branches last year 3,370, or 48 percent of the freshman class, received instruction in mathematics and health education by television lessons broadcast over WOSU-TV. At the same time another 36,000 elementary and secondary students were receiving instruction broadcasts from this same transmitter. Next fall, in addition, 1,600 students in mathematics, 1,500 students in zoology, 4,500 students in health education, and 500 students in psychology are scheduled to receive regular instruction by television. We face the curious problem of having run out of channels. That is, the single channel licensed to WOSU-TV is now used to the maximum. Some courses are repeated several times during the same day. In other words, unless we can construct a campuswide closed-circuit facility or acquire a new television transmitter or use several translators as transmitters, we cannot meet this expanding need. In effect we have "used up" the WOSU-TV channel. To accomplish the task we will need additional capital funds. There is little likelihood at the present time that such funds will be forthcoming from the State.

Thus we face a curious set of contradictions. We believe in educational television in Ohio and we are using it. Educational television at some points in Ohio is fairly well advanced. Yet, as I have pointed out, educational television is not advanced enough in terms of the new needs to meet the educational problem. Ohio State University, for instance, is construed by other institutions to be in an extremely well-equipped position with respect to television. This was true, but is no longer true in terms of new demands. Each of the other installations at other institutions will meet the same rising curve of demand as each undertakes greater realization of this medium and obtains greater acceptance. The irony, however, is that while some communities are just now becoming aware of the potential of a single television channel for educational use, others already are facing the need for multiple-channel service and additional facilities.

If we had all the time in the world to meet our crucial problems of student numbers, teacher shortages, and the new needs for educational quality, this laborious and uneven development could be permitted. But education is in real crisis. Television offers one of the important ways to help meet that crisis. Without aid such as the committee proposes, I seriously doubt that television facilities will be constructed soon enough or in sufficient amounts to meet this need in Ohio and in the other States.

Sincerely,

NOVICE G. FAWCETT, *President.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,

March 17, 1961.

HON. WARREN G. MAGNUSON,

*Chairman, Committee on Interstate and Foreign Commerce,
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: This letter is in response to your request of January 12, 1961, for a report on S. 205, a bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs.

This bill would authorize the appropriation of such amounts as may be necessary to enable the Commissioner of Education during a 5-year period to make grants to State education agencies, nonprofit organizations, State educational television commissions, and State-controlled 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.

S. 205 is identical to S. 12, 86th Congress, which passed the Senate on April 13, 1959. The purpose of the instant bill—to expedite the development of the educational uses of television—is one which this Department endorses. There is no necessity in this report to again review the progress in the development of educational television broadcasting. We recognize that, heartening as this progress has been, 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. We also recognize that a major obstacle to the accomplishment of this objective is the high initial cost of equipment and the shortage of funds for meeting such costs. Nevertheless, the

Department feels that there needs to be additional consideration of the entire problem in order to determine the most effective methods of providing Federal assistance for this purpose.

As you know, President Kennedy has recommended legislation to provide additional Federal assistance in meeting the urgent needs of public elementary and secondary schools and of higher education. We believe that the enactment of this legislation should have priority in terms of new Federal programs in the field of education. Meanwhile, our Department will give thorough consideration to additional proposals of obvious merit, such as that embodied in the instant bill. In our judgment, a number of important matters need additional consideration with respect to accomplishing the objectives sought in S. 205.

First, the National Association of Educational Broadcasters is undertaking to design an allocation plan for a nationwide system of educational television for submission to the Federal Communications Commission for the Commission's consideration. It is expected that this plan will be completed shortly and we would like to have the benefit of this effort and the findings of the Commission on it in order to coordinate the recommendations of this Department with that work. Second, we believe that further attention should be given to the role of the State in formulating a plan for statewide development of educational television, and to the role of possible regional arrangements between States. For reasons of efficiency, economy, and effectiveness, we believe that the planning and activating of educational television installations at least should follow a State pattern, and may need to be regional in character. Third, we feel that more attention needs to be given to securing effective commitments for operating funds once an installation is completed. And, finally, the Department would like to consider the Federal role in encouraging educational television in the broader context of measures designed to bring about more effective use of modern educational media and within the framework of more comprehensive Federal action to improve the quality of education.

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 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 President has stated in his message to the Congress of February 20, 1961, that he will ask the Congress to amend and extend provisions of the National Defense Education Act. A portion of that act is designed to foster research and experimentation and to disseminate information in the development and evaluation of television and other educational media. This Department, which has the principal responsibility for carrying out the vital administration commitments in the field of education, will carefully consider an appropriate course of action to provide adequately for the development and stimulation of various types of modern educational media including educational television. For the reasons set forth, however, we are unable to recommend favorable consideration of the instant bill.

Accordingly, we recommend against enactment of S. 205.

We are advised by the Bureau of the Budget that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

ABRAHAM RIBICOFF, *Secretary.*

COMMENTS OF THE FEDERAL COMMUNICATIONS COMMISSION ON S. 205, 87TH CONGRESS, A BILL TO EXPEDITE THE UTILIZATION OF TELEVISION TRANSMISSION FACILITIES IN OUR PUBLIC SCHOOLS AND COLLEGES, AND IN ADULT TRAINING PROGRAMS

S. 205 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.

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 the bill 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 bill further specifically provides that nothing therein shall be deemed to give 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 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 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 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 S. 205, but would defer to those responsible for its administration concerning the details of the bill.

Adopted: February 23, 1961.

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, February 7, 1961.

HON. WARREN G. MAGNUSON,
Chairman, Committee on Interstate and Foreign Commerce, U.S. Senate.

DEAR MR. CHAIRMAN: Your letter of January 12, 1961, requests our comments concerning S. 205, which is entitled "A bill to expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs."

In order to accomplish the purpose of the bill provision is made for the making of grants to State organizations to be used in the establishment and improvement of television broadcasting facilities. While an examination of the hearings held on previous similar bills indicates that legislation such as that contained in S. 205 would further the cause of education, the question whether grants of Federal funds should be made for such purpose appears to be a matter primarily for the Congress to decide. Accordingly, we have no comments to offer concerning the merits of the bill.

However, as a protection against waste or improper use of grant funds we suggest that a section be added to the bill requiring recipients of grants under section 3 to keep records which will enable audits to be made by the Commissioner and the General Accounting Office. Such records would also enable the Commissioner to see whether recipients have complied with the requirements of the act. Under the authority of this section the Commissioner would be expected to audit the books of each recipient of assistance leaving to the General Accounting Office the right to audit as many recipients each year as determined necessary by the Comptroller General. This could be accomplished by placing language in the bill as follows:

"RECORDS AND AUDIT

"Sec. — (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, paper, and records of the recipient that are pertinent to assistance received under section 3 of this Act."

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

○

REPORT OF THE

Committee on the Administration of the University
 The following report was presented to the Board of Trustees
 at their meeting on the 15th day of June, 1904.
 The committee has the honor to acknowledge the
 interest and assistance of the Board of Trustees
 in the preparation of this report.
 The committee has the honor to acknowledge the
 interest and assistance of the Board of Trustees
 in the preparation of this report.

Very respectfully,
 The Chairman,
 Committee on the Administration of the University