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95-123 POSTAL SERVICE AMENDMENTS ACT OF 1978

GOVERNMENT

AMENDMENTS

Storage

JAN 16 1970

HEARINGS

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS

OF THE

COMMITTEE ON COMMERCE,  
SCIENCE, AND TRANSPORTATION  
UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 3229

TO AMEND TITLE 39 OF THE UNITED STATES CODE TO IMPROVE  
THE ORGANIZATIONAL STRUCTURE OF THE UNITED STATES  
POSTAL SERVICE, TO PROVIDE AUTHORIZATION FOR FUNDS TO  
MAINTAIN THE PUBLIC SERVICE FUNCTIONS OF THE UNITED  
STATES POSTAL SERVICE, TO PROVIDE A REDUCED RATE FOR  
CERTAIN INDIVIDUALS, AND FOR OTHER PURPOSES

AUGUST 2, 1978

Serial No. 95-123

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Committee on Commerce, Science, and Transportation



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# CONTENTS

Opening statement by Senator Schmitt.....	Page 1
Text of S. 3229.....	3

## LIST OF WITNESSES

Bolger, William F., Postmaster General, U.S. Postal Service.....	36
Prepared statement.....	37
Questions of the Committee and answers thereto.....	39
Geller, Henry, Assistant Secretary for Communications and Information, Department of Commerce.....	26
Prepared statement.....	29
Questions of the committee and answers thereto.....	34
McLaughlin, John F., executive director of Postal and Allied Arenas, Harvard University Program on Information Resources Policy.....	52
Questions of the committee and answers thereto.....	55
Nyborg, Philip S., vice president and general counsel, Computer & Com- munications Industry Association.....	41
Prepared statement.....	41
Questions of the committee and answers thereto.....	51

## ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

Siddall, David R., legislative attorney, Congressional Research Service, Library of Congress, letter of August 8, 1978.....	79
Taptich, Edward P., counsel, Graphnet Systems, Inc., letter of August 3, 1978.....	80

1917

THE UNITED STATES OF AMERICA

DEPARTMENT OF THE INTERIOR

Geological Survey  
Washington, D. C.  
The following is a list of the  
publications of the Geological  
Survey for the year 1917.  
The list is arranged in  
alphabetical order of the  
author's name.  
The publications are  
classified into three  
classes: (1) Professional  
papers, (2) Bulletin  
papers, and (3) Miscellaneous  
papers.  
The list is printed by  
the Government Printing  
Office, Washington, D. C.

ALPHABETICALLY LISTED BY AUTHOR

1. *Geological Survey of the United States*, by the  
Geological Survey, Washington, D. C., 1917.  
2. *Geological Survey of the United States*, by the  
Geological Survey, Washington, D. C., 1917.



# POSTAL SERVICE AMENDMENTS ACT OF 1978

WEDNESDAY, AUGUST 2, 1978

U.S. SENATE,  
COMMITTEE ON COMMERCE,  
SCIENCE, AND TRANSPORTATION,  
SUBCOMMITTEE ON COMMUNICATIONS,  
*Washington, D.C.*

The subcommittee met at 10:10 a.m. in room 235, Russell Senate Office Building, Hon. Harrison Schmitt, presiding.

## OPENING STATEMENT BY SENATOR SCHMITT

Senator SCHMITT. The hearing will come to order.

It's safe to say that the Postal System in one way or another is in trouble. It operates at a loss with service complaints increasing every day. It is the cause of a major proportion of the mail Senators and Representatives receive which complains about Government services and Government waste. The daily news reports bring evidence of fresh troubles which are familiar to all of us. All of this at a time of technological explosion in communications technology; all of this at a time when the private sector seems ready, willing and able to gradually assume responsibilities for most if not all communications services if Congress can provide a proper legislative framework, where there is a proper mix of refereed competition and regulated monopoly. The technological barriers between transmission of voice, data, mail, and phone that existed when the 1934 Communications Act became law have disappeared with the advent of the space age. Satellites, microwave systems, light tubes, computers, microelectronics, digital techniques, television, and many other technological marvels of this century have created a new communications base for our civilization.

Our hearing today must be in the context of this environment and in the context of this new environment Congress must soon provide an entirely new framework for communications services, including mail, an environment in which technological barriers have disappeared and in which the potential for future services is beyond our imagination.

Today the Communications Subcommittee considers S. 3229, the Postal Service Amendments Act of 1978. Our consideration, however, is limited to those provisions of the bill which concern electronic message systems commonly referred to as ESM. Section 10 of the bill, entitled "The Mail and Communications" establishes a seven member task force appointed by the President primarily to study and make recommendations about the development and application of new technologies to mail and other Postal Service operations. Section 4,



which we will consider peripherally, requires the Postal Service to undertake a comprehensive program of research and development in connection with improved methods of Postal Service, including electronic mail.

All of us are well aware of the problems the Postal Service has encountered in recent years. Fortunately, we are not called upon to solve all these problems today, although one day we must solve them. However, the questions that we address are fundamental to public interest.

I hope that we can explore such issues as whether the Postal Service should own and operate a complete electronic message system; who would regulate such a system; whether a postal monopoly rather than private sector competition should provide electronic message facilities and services. Most importantly, we must consider how "mail" services should be viewed in relation to all other modern communications services, the boundaries between which are becoming ever more diffuse.

Our answers to these questions may shape the future not only of our mail service but may well impact broadly on other methods of delivering communications.

[The bill follows:]



**S. 3229**

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**IN THE SENATE OF THE UNITED STATES**

JUNE 23 (legislative day, MAY 17), 1978

Mr. GLENN (for himself, Mr. STEVENS, and Mr. JAVITS) introduced the following bill; which was read twice and referred jointly to the Committees on Governmental Affairs and Commerce, Science, and Transportation, with instructions that the Committee on Commerce, Science, and Transportation consideration be limited to section 10, and that when the Committee on Governmental Affairs orders the bill reported, the Committee on Commerce, Science, and Transportation must report

---

**A BILL**

To amend title 39 of the United States Code to improve the organizational structure of the United States Postal Service, to provide authorization for funds to maintain the public service functions of the United States Postal Service, to provide a reduced rate for certain individuals, and for other purposes.

- 1 *Be it enacted by the Senate and House of Representa-*
- 2 *tives of the United States of America in Congress assembled,*
- 3 That this Act may be cited as the "Postal Service Amend-
- 4 ments Act of 1978"

## REDUCED RATES FOR INDIVIDUALS

SEC. 2. (a) (1) Subchapter II of chapter 36 of title 39, United States Code, is amended by adding at the end thereof the following new section:

**“§ 3629. Reduced rate for certain mail matter of individuals**

“(a) Notwithstanding the provisions of this subchapter or of subchapter III of this chapter, the rate of postage established under such subchapters for qualified mail matter (as defined in subsection (d) of this section) shall be established in accordance with subsection (b) of this section.

“(b) If the rates for the class of mail that is maintained under section 3623 (d) of this title for the transmission of ordinary letters sealed against inspection are adjusted under subchapter II or subchapter III of this chapter after the date of enactment of this section and before October 1, 1982, so as to exceed 15 cents for the first ounce and 13 cents for each additional ounce or fraction of an ounce, the Postal Service shall establish a classification for qualified mail matter (as defined in subsection (d) of this section) and shall establish the rates for such classification at 15 cents for the first ounce and 13 cents for each additional ounce or fraction of an ounce.

“(c) (1) Except as authorized by this section, no



1 person shall mail any matter at the rates prescribed pur-  
2 suant to subsection (b) of this section.

3 “(2) Any person who violates paragraph (1) shall be  
4 subject to a civil penalty not to exceed \$500 for each  
5 violation.

6 “(3) The Postal Service shall have authority to assess  
7 a civil penalty under paragraph (2). The Postal Service  
8 shall provide any person alleged to have violated paragraph  
9 (1) with written notice of the decision to impose a civil  
10 penalty and the charges upon which such penalty is based.  
11 The Postal Service may, and upon timely request by the  
12 person alleged to have violated paragraph (1) shall, order  
13 a hearing on the charges pursuant to sections 554 and 555  
14 of title 5.

15 “(4) The decision of the Postal Service to impose a  
16 civil penalty, whether or not pursuant to a hearing under  
17 paragraph (3), shall be final and conclusive unless it is  
18 appealed to any court of appeals of the United States within  
19 15 days after service of the decision upon the person. The  
20 court to which it is appealed shall have jurisdiction to  
21 review the decision in accordance with section 706 of title  
22 5, and chapter 158 and section 2112 of title 28, except that  
23 the facts underlying a decision to impose a civil penalty  
24 shall not be subject to trial de novo by the court. Issues

1 which became final and conclusive because no appeal was  
2 taken to a court of appeals, and issues which were raised or  
3 might have been raised in a court of appeals, may not be  
4 raised as a defense to a suit by the Postal Service for col-  
5 lection of a civil penalty.

6 “(d) For purposes of this section, the term ‘qualified  
7 mail matter’ means domestic letter mail—

8 “(1) of the class that is maintained under section  
9 3623 (d) of this title for the transmission of ordinary  
10 letters sealed against inspection;

11 “(2) prepared in accordance with such reasonable  
12 mail preparation requirements as the Postal Service may  
13 prescribe by regulation; and

14 “(3) sent by an individual.

15 For purposes of this subsection, the term ‘individual’ does  
16 not include a corporation, company, business, association,  
17 partnership, professional entity, proprietorship, institution,  
18 or governmental unit or any similar entity.”.

19 (2) The table of sections for subchapter II of chapter  
20 36 of title 39, United States Code, is amended by adding at  
21 the end thereof the following new item:

“3629. Reduced rate for certain mail matter of individuals.”.

22 (b) (1) Section 2401 (b) of title 39, United States  
23 Code, as amended by this Act, is amended by striking out  
24 “and 3626” and inserting in lieu thereof “3626, and 3629”.



1 (2) Section 3627 of title 39, United States Code, is  
2 amended by striking out "or 3626" and inserting in lieu  
3 thereof "3626, or 3629".

4 ORGANIZATION OF THE POSTAL SERVICE

5 SEC. 3. (a) Section 202 (a) of title 39, United States  
6 Code, is amended by striking out the third sentence and  
7 inserting in lieu thereof the following: "The President shall  
8 from time to time designate one of the members of the Board  
9 to serve as Chairman."

10 (b) (1) Section 206 of title 39, United States Code, is  
11 amended to read as follows:

12 "§ 206. Specific duties of the Board of Governors

13 "(a) The Board shall—

14 "(1) prescribe such rules and regulations as the  
15 Board finds necessary to insure that the Postal Service—

16 "(A) adopts (after consideration of the recom-  
17 mendations of the Postal Rate Commission under  
18 section 9 of the Postal Service Amendments Act  
19 of 1978) a system of accounts for the identification  
20 of costs, and

21 "(B) makes, keeps, and preserves such other  
22 accounts, records of cost-accounting procedures, cor-  
23 respondence, memoranda, papers, books, studies,  
24 and other records as appropriate for the carrying out  
25 of the functions of the Postal Service under this title;

1       “(2) require the accounts of the Postal Service to  
2       conform to generally accepted accounting principles and  
3       insure the adequacy of any audit conducted under sub-  
4       section (b), (d), or (e) of section 2008 of this title;

5       “(3) make available to the public following the  
6       close of each fiscal year information, in a manner readily  
7       understandable to the public, relating to the revenues  
8       received and costs incurred in connection with each  
9       class and subclass of mail and type of mail service (in-  
10      cluding information on the effects, if any, resulting from  
11      the application of section 3622 (b) (2) (B) of this  
12      title);

13      “(4) insure the adequacy of the Postal Service’s  
14      audit and analysis of service performance for each  
15      class and subclass of mail and type of mail service;

16      “(5) review the consumer functions of the Postal  
17      Service to insure that—

18          “(A) the interests of the general public in  
19          postal operations are adequately represented, and

20          “(B) complaints and inquiries received from  
21          the general public are satisfactorily investigated,  
22          resolved, and responded to within a reasonable  
23          period of time;

24      “(6) direct the Postal Service in the development



1 of comprehensive and long-range planning strategies for  
2 providing postal services;

3 “(7) insure the coordination of the policies and  
4 programs of the Postal Service, including research into,  
5 and development and implementation of, new tech-  
6 nologies in postal operations, with other agencies of the  
7 Government and persons outside of the Government; and

8 “(8) monitor activities within and outside of the  
9 Government which may affect the Postal Service and  
10 its role.

11 “(b) (1) The Chairman may appoint such personnel as  
12 may be necessary to carry out the provisions of this section  
13 and the responsibilities of the Governors under this title.  
14 Such personnel shall be employed under the Board but may  
15 serve in the headquarters of the Postal Service in the District  
16 of Columbia or in offices of the Postal Service in each of the  
17 Postal Service regions.

18 “(2) Any officer or employee appointed under para-  
19 graph (1) shall be paid at rates of compensation, and shall  
20 be entitled to programs offering employees' benefits, estab-  
21 lished under chapter 10 or chapter 12 of this title, as  
22 appropriate.”.

23 (2) The table of sections for chapter 2 of title 39,  
24 United States Code, is amended by striking out the item re-

1   lating to section 206 and inserting in lieu thereof the follow-  
2   ing new item:

“206. Specific duties of the Board of Governors.”.

3                   APPROPRIATIONS AND ANNUAL REPORT

4       SEC. 4. (a) Section 2401 of title 39, United States Code,  
5   is amended to read as follows:

6   “§ 2401. Appropriations

7       “(a) There are appropriated to the Postal Service all  
8   revenues received by the Postal Service.

9       “(b) There are authorized to be appropriated to the  
10   Postal Service each year a sum determined by the Postal  
11   Service to be equal to the difference between the revenues  
12   the Postal Service would have received if sections 3217,  
13   3403-3405, and 3626 of this title and the Federal Voting  
14   Assistance Act of 1955 had not been enacted and the esti-  
15   mated revenues to be received on mail carried under such  
16   sections and such Act.

17       “(c) (1) As reimbursement to the Postal Service for  
18   costs incurred by it in the establishment and maintenance as a  
19   public service of a comprehensive nationwide system for the  
20   regular and effective delivery of mail matter, and in recogni-  
21   tion of the value of such system to the Nation and the public,  
22   there are authorized to be appropriated to the Postal Service  
23   for each of the fiscal years ending September 30, 1979,  
24   through September 30, 1982, the sum of \$920,000,000.



1       “(2) In any fiscal year for which funds authorized un-  
2 der paragraph (1) are appropriated, the Postal Service  
3 shall expend part of such funds (in such amounts as it de-  
4 termines necessary) to carry out a comprehensive program  
5 of research and development in connection with improved  
6 methods of postal service including, but not limited to, meth-  
7 ods of electronically sending and delivering letters and oth-  
8 er mail matter.

9       “(d) The Postal Service, in submitting any budget  
10 which includes requests for the appropriation of funds au-  
11 thorized under subsection (c) of this section, shall include  
12 with such budget a report detailing by function—

13           “(1) the expenditure of funds appropriated under  
14 subsection (c) of this section during the immediately  
15 preceding fiscal year, and

16           “(2) the proposed expenditure of funds during the  
17 fiscal year for which appropriations are requested.

18       “(e) (1) The Postal Service shall present to the Com-  
19 mittee on Governmental Affairs of the Senate, the Commit-  
20 tee on Post Office and Civil Service of the House of Repre-  
21 sentatives, and the Committee on Appropriations of each  
22 House of Congress, at the same time it submits its annual  
23 budget under section 2009 of this title, sufficient copies of  
24 the budget of the Postal Service for the fiscal year for which

1 funds are requested to be appropriated, and a comprehensive  
2 statement relating to—

3 “(A) the plans, policies, and procedures of the  
4 Postal Service designed to comply with all the provi-  
5 sions of section 101 of this title;

6 “(B) its plans, including contingency plans, for  
7 the period covering the fiscal year for which appro-  
8 priations are requested and the next 2 fiscal years for—

9 “(i) reductions in service on a nationwide or  
10 substantially nationwide basis,

11 “(ii) capital improvement programs or proj-  
12 ects with an estimated cost of \$20,000,000 or  
13 more,

14 “(iii) borrowing under the authority of section  
15 2005 of this title,

16 “(iv) establishing, consolidating, or discon-  
17 tinuing post offices or postal facilities,

18 “(v) personnel levels, and

19 “(vi) requesting changes in the rates or fees  
20 charged for the various classes and subclasses of  
21 mail and types of mail services;

22 “(C) postal operations generally, including data  
23 on the speed and reliability of service provided for  
24 the various classes and subclasses of mail and types  
25 of mail service (whether by physical or electronic



1 means), mail volume, productivity, trends in postal  
2 operations, and analyses of the impact of internal and  
3 external factors upon the Postal Service;

4 “(D) a listing of the total expenditures and obliga-  
5 tions incurred by the Postal Service for the most recent  
6 fiscal year for which information is available, an estimate  
7 of the total expenditures and obligations to be incurred  
8 by the Postal Service during the fiscal year for which  
9 funds are requested to be appropriated and, to the extent  
10 practicable, during the next two fiscal years, and the  
11 means by which these estimated expenses will be  
12 financed;

13 “(E) actions taken to carry out the duties of the  
14 Board under section 206 of this title; and

15 “(F) such other matters as the committees may  
16 determine necessary to insure that the Congress is fully  
17 and currently consulted and informed on postal opera-  
18 tions, plans, and policies.

19 “(2) (A) The Postal Service shall prepare a plan for  
20 establishing a research and development program for which  
21 amounts are required to be expended under subsection (c)  
22 (2). Such plan shall be submitted not later than January 15,  
23 1979, to the Committee on Governmental Affairs of the  
24 Senate and the Committee on Post Office and Civil Service  
25 of the House of Representatives.

1     “(B) The Postal Service shall after the close of each  
2     fiscal year for which funds are expended to carry out the  
3     research and development program established under sub-  
4     paragraph (A) submit to such committees a report on the  
5     activities conducted under such program during such year.

6     “(f) The failure of the President to request the appro-  
7     priation of any part of the funds authorized by this section  
8     may not be deemed to be a failure of appropriations.

9     “(g) The rates established under chapter 36 of this  
10    title for zone-rated parcels formerly entered under former  
11    chapter 67 of this title shall not be more than 10 percent  
12    less than the rates for such mail would be if the funds author-  
13    ized under subsection (c) (1) of this section were not  
14    appropriated.”.

15    (b) Section 2003 of title 39, United States Code, is  
16    amended by striking out subsection (f).

17                                   POSTAL RATE COMMISSION

18    SEC. 5. (a) The third sentence of section 3601 (a) of  
19    title 39, United States Code, is amended to read as follows:

20    “The Commissioners shall be chosen on the basis of their pro-  
21    fessional qualifications or demonstrated knowledge in postal  
22    affairs, communications, law, economics, engineering, ac-  
23    counting, finance, or regulatory affairs (including rate  
24    setting). A Commissioner may be removed by the President  
25    only for cause.”.



101 (b) (1) Section 3604 (d) of title 39, United States  
 2 Code, is amended to read as follows:

3 “(d) There are authorized to be appropriated to the  
 4 Commission such sums as may be necessary to carry out its  
 5 functions.”.

6 (2) The second sentence of section 3604 (e) of title 39,  
 7 United States Code, is amended to read as follows: “For pur-  
 8 poses of title 5, any individual appointed under this section  
 9 shall be treated as an officer or employee within the meaning  
 10 of sections 2104 and 2105 of title 5, except that such indi-  
 11 vidual may be appointed without regard to the provisions of  
 12 title 5 governing appointments in the competitive service and  
 13 may be paid without regard to the provisions of chapter 51 or  
 14 subchapter III of chapter 53 of title 5, relating to classifica-  
 15 tion and General Schedule pay rates.”.

16 (3) Section 3604 (e) of title 39, United States Code,  
 17 is amended by adding at the end thereof the following new  
 18 sentence: “However, the Commission is subject to the  
 19 Budget and Accounting Act, 1921 (31 U.S.C. 1).”.

#### 20 PERMANENT RATES AND CLASSES OF MAIL

21 SEC. 6. (a) Section 3622 of title 39, United States  
 22 Code, is amended to read as follows:

23 “§ 3622. Rates and fees

24 “(a) (1) From time to time the Postal Service shall  
 25 request the Postal Rate Commission to submit a recom-



1 mended decision on changes in a rate or rates of postage or  
2 in a fee or fees for postal services if the Postal Service  
3 determines that such changes would be in the public interest  
4 and in accordance with the policies of this title. The Postal  
5 Service may submit such suggestions for rate adjustments  
6 as it deems suitable.

7 “(2) The Postal Service shall, at the same time as a  
8 request is made under paragraph (1), submit to each com-  
9 mittee referred to in section 2401 (e) (1) of this title a  
10 copy of such request and accompanying data with respect  
11 to the revenue need which prompted such request.

12 “(b) (1) Upon receiving a request, the Commission  
13 shall make a recommended decision on the request for  
14 change in rates or fees in each class or subclass of mail or  
15 type of mail service in accordance with the policies of this  
16 title and the requirements of paragraphs (2) and (3) of this  
17 subsection.

18 “(2) (A) Each class or subclass of mail or type of mail  
19 service shall bear the postal costs that are attributable to  
20 that class, subclass, or type.

21 “(B) For the purposes of establishing attributable costs  
22 under subparagraph (A) in connection with a recommended  
23 decision on any request submitted by the Postal Service  
24 under this section after the date of the enactment of the  
25 Postal Service Amendments Act of 1978 and before Septem-



ber 30, 1982, if the Commission determines that attributable costs exceed 60 percent of the total estimated costs, the attributable costs of each class, subclass, or type shall be reduced to an amount that is determined by multiplying the attributable costs of that class, subclass, or type by a fraction whose numerator is 60 and denominator is a whole number equal to the percentage of total estimated costs determined to be attributable.

“(3) Costs not attributed under paragraph (2) of this subsection shall be apportioned among each class or subclass of mail or type of mail service in accordance with the following factors:

“(A) the establishment and maintenance of a fair and equitable schedule;

“(B) the relative demand for each such class, subclass, or type;

“(C) the value of the mail service actually provided each such class, subclass, or type to both the sender and the recipient, including but not limited to the collection, mode of transportation, and priority of delivery;

“(D) the effect of rate increases upon the general public, business mail users, and enterprises in the private sector of the economy engaged in the delivery of mail matter other than letters;

“(E) the available alternative means of sending

1 and receiving letters and other mail matter at reason-  
2 able costs;

3 “(F) the degree of preparation of mail for delivery  
4 into the postal system performed by the mailer and  
5 its effect upon reducing costs to the Postal Service;

6 “(G) simplicity of structure for the entire schedule  
7 of, and simple, identifiable relationships between, the  
8 rates or fees charged each such class, subclass, or type;

9 “(H) the educational, cultural, scientific, and in-  
10 formational value to the recipient of mail matter; and

11 “(I) such other factors as the Commission deems  
12 appropriate.”

13 (b) (1) Section 3626 (a) (2) of title 39, United States  
14 Code, is amended to read as follows:

15 “(2) the rates for mail matter under former sec-  
16 tions 4359, 4421, 4422, and 4554 (a) shall be equal,  
17 on and after the first day of the eighth year following  
18 the effective date of the first rate decision applicable  
19 to that class or kind, to the rates which would have  
20 been in effect for such mail if this subsection had not  
21 been enacted, except that the revenues received from  
22 rates for not more than 250,000 pieces of each issue of  
23 a publication under former sections 4359, 4421, and  
24 4422 which are subject to the highest per piece rate  
25 applicable to such class or kind shall not, on and after



1 the first day of the eighth year following the effective  
2 date of the first rate decision applicable to that class or  
3 kind, exceed the postal costs attributable to mail under  
4 former section 4359 (excluding all other costs of the  
5 Postal Service), and the reduction authorized by this  
6 paragraph shall be applied by reducing the per piece  
7 charge otherwise applicable to not to exceed 250,000  
8 pieces of each issue.”:

9 (2) Section 3626 of title 39, United States Code, is  
10 amended by adding the following new subsection at the  
11 end thereof:

12 “(e) In the administration of this section, the rates for  
13 mail matter specified in former section 4554 (a) (1) or 4554  
14 (b) (2) (A) of this title, and teaching guides, maps, or  
15 other interpretative material prepared solely for use with  
16 such mail matter, when mailed between a publisher or a dis-  
17 tributor and a school, college, university, or public library,  
18 shall be the rate currently in effect for such mail matter under  
19 the provisions of former section 4554 (b) (1) of this title.”.

20 (3) Section 3683 of title 39, United States Code, is  
21 amended—

22 (A) by striking out subsection (b), and

23 (B) by striking out “(a) Notwithstanding” and  
24 inserting in lieu thereof “Notwithstanding”.

## 1 POSTAL SERVICES AND COMPLAINTS

2 SEC. 7. (a) Section 3661 (b) of title 39, United States  
3 Code, is amended by adding before the period at the end  
4 thereof the following: “, and shall notify the committees  
5 referred to in section 2401 (e) (1) of its action and the  
6 reasons therefor”.

7 (b) Section 3661 (c) of title 39, United States Code,  
8 is amended by adding at the end thereof the following new  
9 sentence: “The Commission shall transmit a copy of its  
10 advisory opinions, together with its assessment of the effects  
11 on the Postal Service, mail users, and the general public, to  
12 each committee referred to in section 2401 (e) (1) of this  
13 title.”.

## 14 SIZE AND WEIGHT LIMITS

15 SEC. 8. Section 3682 of title 39, United States Code,  
16 is amended to read as follows:

## 17 “§ 3682. Size and weight limits

18 “The Postal Service may establish size and weight  
19 limitations for mail matter in the same manner as prescribed  
20 for changes in classification under subchapter II of this  
21 chapter.”.

## 22 COST ATTRIBUTION STUDY

23 SEC. 9. (a) The Postal Rate Commission shall study  
24 alternatives to the method of attributing or apportioning  
25 postal costs among each class or subclass of mail or type of



1 mail service set forth in section 3622 (b) of title 39, United  
2 States Code, as amended by section 6 (a) of this Act. The  
3 Commission shall, after such study, provide for the prepara-  
4 tion of a recommended system of accounts by which the  
5 costs of the United States Postal Service can be identified  
6 and associated with the class or subclass of mail or type of  
7 mail service, or with the public service function of the Postal  
8 Service. The Commission shall report its findings and recom-  
9 mendations to the Congress no later than September 30,  
10 1980. The report of the Commission shall include—

- 11 (1) such recommended system of accounts, and  
12 (2) the Commission's estimates of the effects of the  
13 alternatives studied on postal volumes, revenues, rates,  
14 and fees in terms of both overall postal services and each  
15 class or subclass of mail or type of mail service.

16 (b) The Postal Service shall cooperate with the Com-  
17 mission in the conduct of the study under subsection (a)  
18 of this section and shall provide the Commission with any  
19 information the Commission reasonably deems necessary  
20 to carry out that study.

21 (c) In the conduct of its study under subsection (a)  
22 of this section, the Commission is authorized to conduct  
23 such proceedings, including hearings, as it deems warranted,  
24 without regard to the provisions of sections 556 and 557 of  
25 title 5, United States Code.

## 1 THE MAIL AND COMMUNICATIONS

2 SEC. 10. (a) Notwithstanding any other provision of  
3 law, each department and agency of the Government shall  
4 assist the United States Postal Service, insofar as practicable  
5 and on a reimbursable basis, in carrying out its responsibil-  
6 ities under sections 2401 (c) (2) and 2401 (e) (2) of title  
7 39, United States Code.

8 (b) There is hereby established the Task Force on the  
9 Mail and Communications (hereinafter in this section re-  
10 ferred to as the "Task Force") composed of seven in-  
11 dividuals whom the President may designate, one of whom  
12 shall be designated as Chairman of the Task Force by the  
13 President, and such representatives of the Postal Service as  
14 the Chairman of the Board of Governors of the Postal  
15 Service may designate.

16 (c) The Task Force shall—

17 (1) advise and assist the Board of Governors in  
18 carrying out its functions under paragraphs (6), (7),  
19 and (8) of section 206 of title 39, United States Code;

20 (2) advise and assist the Board of Governors and  
21 the Postal Service in carrying out the Postal Service's  
22 duties under sections 2401 (c) (2) and 2401 (e) (2) of  
23 title 39, United States Code;

24 (3) study and formulate advisory recommenda-  
25 tions with respect to the development and application



1 of new technologies to mail, mail delivery, and other  
2 postal service operations, as well as the future of the  
3 mails as part of the communications network serving  
4 the people of the United States. Such studies shall in-  
5 clude the interrelationship between the mails and—

6 (A) traditional communications services such  
7 as transmission of messages by wire, radio, or tele-  
8 vision, or intangible forms other than the mail, and

9 (B) newly developing services such as elec-  
10 tronic message and electronic funds transfer sys-  
11 tems; and

12 (4) formulate advisory recommendations to insure  
13 that communications services, including those of the  
14 Postal Service, are developed and provided in an  
15 informed and coordinated fashion that responds to  
16 developing needs and changing communications systems  
17 and technologies.

18 (d) The Task Force may secure directly from any  
19 department or agency of the United States information and  
20 assistance necessary to carry out its duties under this section.  
21 Each department or agency is authorized and directed, to  
22 the extent permitted by law and within the limits of avail-  
23 able funds, to furnish information and assistance to the Task  
24 Force.

25 (e) (1) Except as provided in paragraph (2), mem-

1   bers of the Task Force each shall receive as compensation  
2   the daily equivalent of the annual rate of basic pay in effect  
3   for grade GS-18 for each day (including traveltime) during  
4   which they are engaged in the actual performance of duties  
5   vested in the Task Force.

6       (2) Members of the Task Force who are full-time offi-  
7   cers or employees of the United States shall receive no addi-  
8   tional pay on account of their service on the Task Force.

9       (3) While away from their homes or regular places of  
10   business in the performance of service for the Task Force,  
11   members of the Task Force shall be allowed travel expenses,  
12   including per diem in lieu of subsistence, in the same manner  
13   as persons employed intermittently in the Government serv-  
14   ice are allowed expenses under section 5703 of title 5, United  
15   States Code.

16       (f) There are authorized to be appropriated, without  
17   fiscal year limitation, such sums as may be necessary to  
18   carry out this section.

19       (g) Section 2003 of title 39, United States Code, as  
20   amended by section 4 (b) of this Act, is amended—

21           (1) in subsection (b) thereof—

22               (A) by striking out “and” at the end of para-  
23               graph (5),

24               (B) by striking out the period at the end of



paragraph (6) thereof and inserting in lieu thereof  
a comma and "and", and

(C) by adding at the end thereof the following  
new paragraph:

"(7) amounts appropriated under section 10 (f) of  
the Postal Service Amendments Act of 1978."; and

(2) by adding at the end thereof the following new  
subsection:

"(f) Amounts deposited into the Fund under sub-  
section (b) (7) shall be withdrawn by the Postal Service  
only for the payment of expenses incurred by the Postal  
Service in providing office space, clerical personnel, supplies  
and equipment, and such other items as the Postal Service  
finds necessary for the Task Force on the Mail and  
Communications.".

#### EFFECTIVE DATE

SEC. 11. The provisions of this Act, and the amend-  
ments made by this Act, shall take effect on October 1, 1978,  
except that the provisions of section 2401 (d) of title 39,  
United States Code, as amended by section 4 of this Act,  
and the provisions of sections 3604 (d) and (e) of title 39,  
United States Code, as amended by section 5 (b) (1) of  
this Act, shall not apply to any budget or request for ap-  
propriations submitted prior to the date of the enactment  
of this Act.



Senator SCHMITT. Senator Packwood, would you care to make a statement?

Senator PACKWOOD. No statement, Mr. Chairman.

Senator SCHMITT. Since the statements that have been submitted complement each other it would be useful to have all of our witnesses come to the table, and hear their testimony and then treat the group as a panel for the question period. If there's no objection, we will do that. Will the remainder of the witnesses please come forward: Mr. Geller, Mr. Bolger, Mr. Nyborg, and Mr. McLaughlin. Mr. Geller, who is the Assistant Secretary for Communications and Information, U.S. Department of Commerce, will be our first and leadoff witness.

Gentlemen, first of all, I want to welcome you to this hearing and I have been looking forward to it for some time. I hope that, if possible, you will summarize your testimony; the entire submission will be made part of our record.

**STATEMENT OF HENRY GELLER, ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, DEPARTMENT OF COMMERCE**

Mr. GELLER. Thank you, Mr. Chairman. I will just briefly go over some highlights of my testimony.

We do welcome the opportunity to testify because we believe this is a very important communications policy issue. The administration is now reviewing the issue and we support the provision of S. 3229 establishing a task force to study the interrelationship between traditional mail service and electronic telecommunications service.

We urge, however, that the task force be directed to report its recommendations to the Congress and to the executive branch rather than simply to the USPS. I would like to emphasize that we don't hold any brief for any particular task force, either the one in the bill or any other one. What we are urging is that this issue should be studied, that a report should be issued, and, above all, that the Congress and the Executive, with advice from the USPS, should decide the permissible USPS activities in this area of electronic message service, we stress that this decision should be made by the Congress.

How you get the basic information—be it through OTA or your own hearings or through commission studies—is a matter obviously for your judgment. I should note again that we at NTIA are also studying the issue. We are conducting proceedings on it. We have been doing so for 6 months and we will be glad to be as helpful to you as possible.

In the interim period before Congress and the administration can address the fundamental policy issues involved, the Postal Service should continue to conduct research and development on the electronic message service system. But it should not be authorized to implement an operational system or conduct market tests using actual mail other than those tests that have already been contracted for. (As to this last point we refer to the announced 1979 experiment with COMSAT.) We recommend this because we believe that otherwise Congress and the administration may be presented with a fait accompli before they have a chance to resolve the basic policy issues that are involved.

We commend the Postal Service for the research it is doing in this area. We know it has developed facsimile receiving periods with speed



approaching 10 pages per second. These new services, it could be argued, are just another means of mail delivery similar to use of railroads or airlines. In our view, however, the electronic services are fundamentally different than physical delivery service.

We think, therefore, that if the USPS moves toward electronic services it is entering a new and different business.

Now, last year testimony was presented to the Congress that postal involvement in electronic services could proceed in three progressive incremental stages. In the National Research Council report, these stages were called Generations I, II, and III. Generation I would be the use of electronic communications only between postal installations, with physical delivery from the postal installation. Generation II would be mailgram; that is, using electronic links between the sender of the communications and the Postal Service, with the input—the pickup—being done electronically but with the delivery still being physical. In generation III electronic links would exist between the Postal Service and both the sender and the addressee, with electronic input and electronic output.

The NRC report stated that no problems would be posed by the USPS's entry into generations I and II. The report saw no legal or policy problems there. But at the same time, the report stated that generation III did raise very difficult policy and legal concerns and that a study should be conducted and resolutions decided by Congress before such a step is taken.

However, our analysis indicates that there may be no discrete three stages. From what we now know—and it is preliminary because the report will not be out until the fall—it appears that the system that the USPS has under study is an integrated system that does not naturally divide into the three discrete generations that I have discussed. In other words, it seems that, once the system is introduced, it will be capable of performing all electronic functions and, if operated at its maximum efficiency, it will offer all three generations of services.

Therefore, it appears to us that, before any major investment is made in any of the three generations Congress should establish basic policy—should pass its legislative judgment.

As we understand it, the proposed system is designed to provide sophisticated signaling, routing, and switching and to be accessible to many different types of terminals and electronic signal forms. It will cover 95 percent of the population at an investment estimated to be between \$1.5 and \$2 billion. Also, it will be used for operations such as printing, addressing envelopes, stuffing, and sorting.

In addition, it appears that it could function independent of the physical delivery network. Although it would interconnect with that network at key points, it could stand alone.

There's one other matter that we want to stress about the system now under study. Some misconception may be present as to Postal Service use of common carrier transmission plants. As we understand it, the Service intends to get its transmission facilities from the private sector. The argument has been put forth that, because of the Postal Service's reliance on the private sector for transmission, its services will not be competitive with the private sector. We call that a misconception because the electronic communication industry does far more than just provide transmission plants. It provides full communication



service and, as an example, I cite the RCA Q-fax service facsimile from New York City to Tokyo. That's in operation commercially today and it's identical to the proposed USPS-COMSAT experiment that would link London and five other international cities next February. RCA financing is, of course, drawn from risk capital, and the USPS obviously is a quasi-governmental operation. This potential competition between a Government entity, the Postal Service, and the private telecommunications industry raises a host of policy issues.

First, entry of the USPS into all electronic delivery systems represents a major change for the United States. The legislative record indicates that Congress has chosen to rely on private enterprise to serve the needs of the public for the transmission of intelligence by electrical means. Now the Congress obviously can change that if it so desires, but in doing so, it ought to determine whether such a big switch would represent sound policy.

In reaching that judgment, consideration ought to be given to the benefits and the disadvantages. We have listed some examples of these, but our list is by no means exhaustive. As regards possible benefits, we point to new printing and envelope stuffing for multiple addressed bulk mailers; this might become available at lower costs because of economies in combining physical and electronic functions. Also, some 40,000 post offices be established, making electronic services more accessible to all citizens. And the Postal Service might be able to generate sufficient revenues via its electronic system to provide some support to its traditional mail delivery networks.

On the other hand, you might find the taxpayers stuck with a bad investment. Consider the potential problems stemming from cross-subsidization. The Postal Service, with its tax subsidies and monopoly revenue, and that would retard the growth of new and innovative services in the private sector. And, finally, regulatory oversight poses a very difficult problem. The FCC now has comprehensive jurisdiction over telecommunications carriers and a serious question would arise if the Postal Service went in: Should this one large carrier be exempt from FCC jurisdiction?

Let me mention a number of policy issues that we think ought to be addressed by the Congress. Is there likely to be discrete Generations I, II and III— or, practically speaking, is there more apt to be just one system encompassing all three? Has the private telecommunications sector been meeting—or will it meet—public demands for innovative telecommunications services or will it be necessary for the Postal Service, as a quasi-governmental entity, to provide services to the public? If the primary purpose of the Postal Service involvement in telecommunications is to provide additional revenues to maintain current levels of service, will the effort be successful? If the USPS has to compete against private firms such as A. T. & T., IBM, Telenet, would a direct subsidy be more cost-effective to the Government? Can questions of cross-subsidization of postal monopoly services be adequately resolved so that fair competition can occur between the USPS and the private sector? Should the Postal Service be required to interconnect its facilities with those of private communication common carriers? This last is of some urgency, Mr. Chairman, because interconnection is generally mandatory within the telecommunications common carrier industry.



Finally, since the trend in the telecommunications industry is toward competition and regulation, should the Postal Service be subject to full competition in electronic service as a result of allowing its competitors to deliver electronic messages physically upon customer request without regard to the private express statute restrictions.

Proposals pending before the FCC argue that Western Union's operation in the telecommunications area should end and that the entire message area should be opened to all competition. At the moment, a telegram is exempt from the private express statute. Should this extend to everybody? We believe that the task force, or whatever vehicle the Congress decides upon, can provide significant assistance in advising Congress on the proper role of the Postal Service in electronic message communication.

As I said, NTIA has been working in this area for over a year. We are preparing a report. We intend to have open debate in order to assist us in our analysis and in formulating our position on these issues, and we would, of course, provide Congress and any other task force or anybody else with whatever assistance we can in this field.

We want to stress to you again the importance of Congress and the Executive establishing, by legislation, national policy on the Postal Service role in the electronic message service marketplace. We think that this is the type of decision that should be made only after full and open debate, with consideration of all the disadvantages and policy issues I have mentioned. We commend the subcommittee for holding this hearing and taking a productive first step in that important policymaking process.

Senator SCHMITT. Thank you, Mr. Geller. We will have some questions for you in a moment.

[The statement follows:]

STATEMENT OF HENRY GELLER, ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, DEPARTMENT OF COMMERCE

I welcome the opportunity to testify before this Subcommittee today on a very important communications policy issue—the role of the United States Postal Service (USPS) in the electronic message market. Your timely involvement in this issue gives you the opportunity to help define the substantive direction of the public dialogue which we believe should be conducted on this fundamental policy question.

The Administration is now studying this issue. Because we believe it merits the most careful scrutiny, we support the provision of S. 3229 establishing a Task Force to study the interrelationship between traditional mail service and electronic telecommunication service, and we urge that the Task Force be directed to report its recommendations to Congress and the Executive. These recommendations should include a definition of the role of the USPS in the electronic message market.

We believe that the Congress and the Executive, with advice from the USPS, should decide the parameters of permissible USPS activities in electronic message service in light of the Nation's total communications needs and opportunities.

Legislation is clearly required to make this type of basic policy decision and to resolve potential conflicts. Reports from the Task Force and other interested entities will provide Congress and the Administration with necessary background information to make informed judgments after open debate on the matter.

In the interim period, before Congress and the Administration can address the fundamental policy issues involved, the Postal Service should continue to conduct research and development on the Electronic Message Service System, but should not be authorized to implement an operational system or conduct market tests using actual mail other than those that have already been contracted



for (i.e., the announced 1979 experiment with COMSAT). Otherwise, Congress and the Administration may be presented with a fait accompli before they have a chance to resolve the basic policy issues involved. These issues can and should be resolved with much less friction and with less cost to the taxpayer if they are taken up as early as possible.

As the Subcommittee knows, technology is moving rapidly in the area of electronic message service. Both private industry and the USPS are making significant progress in planning and implementing systems and services. The Subcommittee is generally familiar with telecommunications developments in the private sector, but there may be several areas where clarification of the USPS's possible role is desirable.

The Postal Service is to be commended on its research and development with regard to its proposed electronic system. It has done more than just take advantage of current electronic technology in the paper handling portions of the system. Contracts with Pitney-Bowes have resulted in facsimile receiving terminals whose speed approach ten pages per second.

The new service might be viewed as being one of many postal advances using technology (e.g. railroads and airlines) to good advantage in order to speed the mail. However, electronic services are fundamentally different from physical delivery services. The involvement of the USPS in electronic telecommunications with no physical delivery is not merely an incremental improvement on its traditional business, but would appear to be different and new business.

A year ago, testimony was presented to Congress<sup>1</sup> that postal involvement in electronic services could proceed in three progressive, incremental stages, and that a policy decision could be made after the first two steps as to whether to go forward with the third. These stages were called Generations I, II, and III, and were projected to have the following characteristics:

Generation I—electronic communications only between Post Offices (with physical delivery from the postal installation, if desired).

Generation II—the use of electronic links between the sender of communications and the Postal Service for the input or "pick-up" of messages, with physical delivery of the message by the USPS.

Generation III—the use of electronic links between the Postal Service and both the sender and the addressee for both pick-up and delivery of messages.

The NRC Report stated that USPS entry into Generations I and II would pose no serious policy or legal issue. It asserted that Generation I is similar to the USPS's use of a new and speedier method of moving mail between its postal installations; and that Generation II is a natural melding of electronics for input with the USPS's mission of physical delivery (e.g., a macro-Mailgram type service). It believed that Generation III raised the difficult policy and legal concerns because it constitutes USPS entry into the all-electronic world; there would be no difference between it and other telecommunications carriers.

Subsequent to the above analysis, NTIA has followed the progress in the Postal Service's system development. The report of the Postal Service's prime contractor (RCA) will not be available until this fall. Therefore we can only make preliminary comments at this time. However, from what we know from the postal authorities, it appears that the system is an integrated system that does not naturally divide into the three discrete generations set out earlier. In fact, once the system is introduced, it seems that it will be capable of all electronic functions and that if it is to be used at its maximum efficiency, it will be used for all three generations of services. It can be analogized to an automobile. The transmission built into it has the capability for driving in three or four gears, but, for efficiency, in practical terms, use of the highest gear is inevitable. Thus, Congress and the Executive Branch may not have the option of waiting until intra-Post Office or electronic input services, with physical delivery develop, before it decides whether end-to-end electronic services are appropriate. Once the taxpayers' investment in the system has been made, there will be a natural tendency to use it to its maximum capacity.

The system is designed to provide sophisticated signal processing, routing, and switching, and to be accessible to many different types of terminals and electronic signal formats. These include facsimile, magnetic tape and disc equipment, and any other electronic equipment that comes into common commercial or home

<sup>1</sup> See testimony of Louis T. Rader in Hearing on Electronic Communications and the Postal Service before the Subcommittee on Energy, Nuclear Proliferation, and Federal Services of the Committee on Governmental Affairs, U.S. Senate, 95th Cong. 1st sess. 3 (1977).



use. The customer's signals will be evaluated and accepted in Postal Service computers that will route them to the destination computer. The system will cover about 95 percent of the population at an investment estimated between \$1.5 and \$2.0 billion. The system can also be used for operations such as printing, addressing, envelope stuffing, and sorting.

Another aspect of the system that was not quite as apparent several years ago is its functional independence from the physical delivery network. While it will interconnect with the physical delivery network at key points, it can stand alone. Thus, over time, the physical delivery function could be phased out, or alternatively, the electronic system could be divested from or spun off of the physical delivery system. Similarly, there is no technological reason why other electronic systems could not interconnect with the Postal System for physical delivery purposes.

Finally, there seems to be some misconception that the Postal Service use of common carrier transmission plant means that their services will not be competitive with the private sector. The electronic communications industry does far more than just provide transmission plant; it provides full communications services. For example, the RCA Q-fax service (facsimile from New York City to Tokyo), which is in operation commercially today, is essentially identical to the USPS experiment proposed to London and five other international cities next February. RCA financing is, of course, from risk capital. Other corporations are also offering or planning to offer various types of electronic message services.

The potential competition between a government entity—the Postal Service—and the private telecommunications industry raises a host of practical, policy issues. First, entry of the USPS into all electronic delivery systems represents a major change for the United States. The legislative record establishes that Congress has chosen to rely on private enterprise to serve the needs of the public for the transmission of intelligence by electrical means. Congress can, of course, change that judgment if it believes that it would be sound policy to do so.

The Task Force and other interested entities, including NTIA, should, therefore, be addressing that fundamental issue, and specifically the issue of the benefits and detriments from the development of a USPS electronic message system. As possible, but by no means exhaustive examples, we cite the following benefits or detriments that might be associated with such a system:

#### POSSIBLE BENEFITS

New service offerings, including printing and envelope stuffing for multiple address bulk mailers, might become available at lower costs because of economies in combining physical and electronic functions.

The availability of Post Office might make electronic services more accessible to all citizens than private systems would.

The Postal Service might be able to generate sufficient revenues on its EMS system to provide some support to its traditional mail delivery networks.

#### POSSIBLE DETRIMENTS

The Postal Service might not be able to compete effectively against private industry and thus the taxpayers might be stuck with a bad investment.

The Postal Service might be able to engage in predatory actions against its competitors because of its tax subsidies and its monopoly revenues, thus retarding the growth of new and innovative services in the private sector.

Regulatory oversight of electronic telecommunications would be fragmented with the Federal Communications Commission having jurisdiction over only the private carriers.

The legislative history should explicitly direct the Task Force to consider benefits and detriments along the above lines and the following policy questions, with recommendations to the Congress concerning them:

Is the discrete Generations I, II, and III scenario likely or feasible or rather is a USPS electronic message system apt to encompass all three as a practical matter?

Has the private telecommunications sector been meeting or will it meet public demands for innovative telecommunications services or is it necessary for the Postal Service as a quasi-governmental entity, to provide services to the public, including residential customers that would otherwise go unprovided?

If the purpose of the Postal Service involvement in telecommunication is primarily intended to provide additional revenues to maintain current levels of service, will the effort be successful if the USPS has to compete against private firms? Would a direct subsidy be more cost effective to the government?



Can questions of cross subsidization from postal monopoly services be adequately resolved so that fair competition can occur between the USPS and the private sector?

Should the Postal Service be required to interconnect its facilities with those of private communications common carriers since interconnection is generally mandatory within the common carrier industry?

Since the trend in the telecommunications industry is toward competition and deregulation, should the Postal Service be subject to full competition in electronic message service by allowing its competitors to physically deliver electronic messages, upon customer request, without regard to Private Express Statute restrictions?<sup>2</sup>

We believe that the Task Force can provide significant assistance in determining the proper role of the Postal Service in electronic message communications. This would be in addition to the assistance to be provided in developing the Research and Development program and plan (specified in Section 4 of S. 3229). The Task Force should provide recommendations to Congress on how to resolve the problem areas by setting a policy that would best allow this Nation's communications needs and opportunities to continue to change and expand.

NTIA is preparing a report outlining and analyzing policy issues concerning the USPS involvement with electronic communications. We intend to stimulate and obtain open debate to assist our analysis and formulation of positions on these issues. We shall, of course, provide Congress and the Task Force with whatever assistance we can in this field.

In conclusion, Mr. Chairman, I would once again stress the importance Congress and the Executive establishing, by legislation, national policy on the Postal Service's role in the electronic message service marketplace. I would also reiterate that to facilitate such a legislative decision, the proposed Task Force must be given a clear mandate to study the policy issues and report to Congress and the Executive on its conclusions. NTIA will continue to make this issue a high priority in its program and will participate actively with the Congress and with the Task Force.

This Subcommittee's recognition of the problem, as evidenced by these hearings, is a productive first step in the process. I hope that the Subcommittee will continue to play an active role with regard to electronic message issues because the outcome of the process is of great consequence to the American public.

#### LEGISLATIVE RECORD

##### *Historical background*

The history of the USPS may well contain some answers to the USPS problems concerning electronic alternatives to conventional mail. That history indicates a clear and consistent dichotomy: Postal Service control over the physical delivery of material (letters) from sender to recipient but the reservation to the private enterprise sector of the transmission of information or messages by electronic means.

#### EARLY HISTORY LEADING TO TWENTIETH CENTURY

The Postal Service has considered the problem of electronic mail for over 130 years, ever since the invention of the telegraph. The 1845 telegraph line between Washington and Baltimore was operated by the Post Office Department, which urged at that time that the government run the telegraph system. While the Congress did not then respond, a provision in the telegraph legislation of 1886 (Post Roads Act) authorized the government to purchase existing telegraph plants after 1871.

Postmaster-General John Wanamaker in 1892 proposed, in effect, a Mailgram service: postal telegraph messages would be collected and delivered by the Postal Service, with long-distance telegraph service provided by private companies under contract to the Postal Service. (Wanamaker even suggested that the postal telegraph system might someday offer a facsimile service.) None of these proposals made headway, however, because of Western Union's then-powerful private monopoly (with revenues in 1890 of \$20 million, one-third of the postal system's revenues). And in 1947, Congress repealed the Post Roads Act.

The Post Office Department did have one brief period of electronic operation in 1918 when the government, as a wartime measure, took control of the telephone and telegraph systems. But this episode ended with the war, and the next ex-

<sup>2</sup> Western Union is permitted to deliver telegraphs as an exception to the Private Express Statutes.



periment did not occur until 1959, when the Post Office tested "Special Mail." This was a facsimile experiment between Washington and Chicago in which government agency mail was transmitted using facilities supplied by private carriers. Western Union strongly protested against this intrusion of government into the private electronic sphere, and in early 1961, the Kennedy Administration terminated the experiment because, "... the very limited research and development funds should be applied on other high priority projects."

#### THE ACTS RELATING TO PRIVATE SECTOR TELECOMMUNICATIONS

The telephone and telegraph eventually received their own scheme of regulation. In the 1910 Regulatory Enactment, Congress gave the Interstate Commerce Commission jurisdiction over these interstate communications, although the Commission largely failed to exercise this control. And in 1934, Congress enacted a comprehensive statutory scheme for the regulation of interstate and foreign communications services by wire, cable, and radio and of all persons engaged therein. The Communications Act of 1934 sets forth the broad policies and standards governing the regulation of these services and entities and specifies the processes to be followed in implementing its authority. The Act reserves to the states the regulation of intrastate electronic communications matters. The Act ends the last vestige of postal control over telegraph companies, with its provision in Section 601(b): "All duties, powers and functions of the Postmaster General with respect to telegraph companies and telegraph lines under any existing provision of law are hereby imposed upon and vested in the Federal Communications Commission."

It thus appears that the Congress, while making the traditional mail services the sole responsibility of the Post Office Department, has historically relied on private enterprise to serve the needs of the public for the transmission of intelligence by electrical means; and this policy was codified in the 1910 Regulatory Enactment and the Communications Act of 1934.

#### THE USPS AUTHORITY TO ENGAGE IN ELECTRONIC MAIL SERVICES UNDER THE 1970 POSTAL REFORM ACT

The argument for USPS authority to engage in EMS stems largely from the rather broad provisions of the Postal Reform Act (PRA) of 1970. This Act contains provisions supporting the application of new technologies to increase the benefits that the nation derives from the operation of the Postal Service:<sup>3</sup>

1. . . . Provide prompt, reliable, and efficient services to patrons . . .
2. . . . Give the highest consideration to the requirement for the most expeditious collection, transportation, and delivery of important letter mail.
3. . . . Receive, transmit, and deliver . . . written and printed matter . . . and provide such other services incidental thereto as it finds appropriate to its functions and in the public interest.
4. . . . Provide for the collection, handling, transportation, delivery, forwarding, returning, and holding of mail . . .
5. . . . Provide, establish, change, or abolish special nonpostal or similar services. . . .
6. . . . Promote modern and efficient operations and should refrain from . . . engaging in any practice . . . which restricts the user of new equipment or devices which may reduce the cost or improve the quality of postal services. . . .
7. . . . Have all other powers incidental, necessary, or appropriate to carrying on its functions or the exercise of its specific powers.

These provisions support a dual approach to USPS authority in electronic mail: (1) it is a more modern and efficient way to accomplish the Postal Service's existing mission; or (2) it is a new "special nonpostal or similar service" to postal service.

There is no question concerning the authority of USPS to substitute electronic transmission of information for a segment of the mail stream (a function analogous to the World War II "V-Mail" service). Under this scheme, letters would be converted to electronic signals at the post office nearest the sender for transmission

<sup>3</sup> The specific sections of the Postal Reform Act of 1970 from which these benefits derive are as follows: No. 1, 39 U.S.C. 101(a); No. 2, 39 U.S.C. 101(e); No. 3, 39 U.S.C. 403(a); No. 4, 39 U.S.C. 404(1); No. 5, 39 U.S.C. 404(b); No. 6, 39 U.S.C. 2010; see also 39 U.S.C. 101(g); 401(5), 403(b), 404(3); No. 7, 39 U.S.C. (10). Provision No. 5 is further clarified in H.R. Rep. No. 91-1104, 91st Congress, 2d Session, 1970.



to the recipient's nearest post office, where it would be converted to hard copy for delivery.

There would also appear to be little legal question about cooperative ventures between USPS and the electronic carriers or large mailers, whereby the electronically transmitted information would enter the mail stream at a post office to the recipient (called Generation II in the NRC Report). Mailgram is of course an obvious example of such a cooperative venture—a most successful one (as shown by its growth from 370,000 messages in 1971 to about 24 million in 1975). See *United Telegraph Workers, AFL-CIO v. FCC*, 436 F. 2d 920 (District of Columbia Cir.), 1970.

The remaining issue is whether the USPS could emulate the electronic carriers, including the value-added networks (e.g., Telenet or Tymshare), and provide duplicating electronic message services directly from the sender to the recipient (the so-called Generation III mentioned in the NRC Report). Here, the NRC Report found that a serious legal issue would be presented, because the legislative history of the 1970 act contains no indication that the USPS was given authority to challenge the value-added networks or AT&T and its competitors. That issue cannot be said to be definitively resolved, and only the courts could supply a final answer.

#### QUESTIONS OF THE COMMITTEE AND THE ANSWERS THERETO

**Question 1.** Postmaster General Bolger said in his testimony that if people leave USPS because of EMS, the people left to be served by USPS would have very expensive mail costs. Do you agree or disagree, and why?

**Answer.** The actual impact of EMS on the mail volume is difficult to forecast. There are many variables involved in such a forecast, including the ability of the Postal Service to hold down costs (primarily labor costs), its success in improving or maintaining service quality, and its ability to respond with other attractive marketing inducements, such as attempting to "recapture" mail volume by interconnecting physical delivery network with EMS vendors. One can assume however, that if the Postal Service costs continue to escalate and volume is lost (either to EMS or to other alternatives), the cost per unit of mail will go up and this will have to be covered by either the ratepayer or the taxpayer. The degree to which this will happen, as noted, depends very much on how successful the U.S.P.S. is accomplishing its fundamental goals, i.e., running an efficient, productive mail service. The Postal Service itself appears to have no accurate estimate of what the impact of EMS might be.

**Question 2.** What additional information do you feel is needed—from whatever source—before an informed public policy on electronic message services can be developed?

**Answer.** (a) To what extent will the electronic mail services presently being offered or planned by the USPS be competitive with current or planned offerings of commercial telecommunications firms? To what extent will the USPS offer unique services? Stated differently, has the private telecommunications sector been meeting or will it meet public demands for innovative telecommunications services or is it necessary for the Postal service to provide services to the public, either to business or residential customers, that would otherwise go unprovided?

(b) If offered in a competitive environment would the Postal Service's EMS revenues be sufficient to provide sufficient cross-subsidization of physical delivery service? If the purpose of the Postal Service involvement in telecommunications is primarily intended to provide additional revenues to maintain current levels of service, will the effort be successful if the USPS has to compete against private firms? Would a direct subsidy be more cost effective to the government?

(c) Can questions of cross subsidization from the postal monopoly service be adequately resolved so that fair competition can occur between the USPS and the private sector? If the USPS entered electronic telecommunications, what would be the consequences to the regulatory scheme envisioned in the Communications Act of 1934, as amended?

(d) What benefits would flow to the postal Service if it limited its participation in electronic message services to joint ventures with telecommunications common carriers? Would these benefits be enhanced by a Postal policy of interconnecting with any firm that desired to offer a joint service? Would there be a requirement of such interconnection?

(e) To what extent will competitive EMS services impact on Postal physical mail revenues? To what extent will the degree of impact be dependent on the ability of the USPS to keep its costs of service down and its quality of service up?



(f) The private delivery of telegraph messages has been traditionally allowed as an exception to the Postal monopoly. What would be the impact of allowing a similar exception for EMS messages to ensure full and fair competition?

In any event, since the trend in the telecommunications industry is toward competition and deregulation, should the Postal Service be subject to full competition in electronic message service by allowing its competitors to physically deliver electronic messages, upon customer request, without regard to Private Express Statute restrictions?

*Question 3.* As a potential benefit from USPS involvement in EMS, both you and Mr. McLaughlin cite the possibility that postal involvement might result in a universality of service, which would not be provided by a competitive marketplace. Does it really make sense to subsidize a second electronic message system, to achieve universal service, when we already have one in the switched telephone network? If we are going to be in the business of subsidizing universal service, isn't the phone service enough—combined with traditional mail service?

*Answer.* If EMS becomes a universal service it will probably access the home by means of the telephone network. This will be true whether EMS is provided by the Postal Service, private industry, or a combination of the two. The telephone network is the only universal electronic message network in existence today and will probably remain the only universal electronic network for the foreseeable future. The main deterrent to the growth of EMS in the home market is the cost of a home terminal. The cost of home terminals, like all other electronic equipment, is falling, however, and it can be expected that developments such as in the home computer market, View Data-type operation, or the video game market will eventually result in an affordable home terminal.

The Postal Service's physical delivery network is the other universal communications message service in our nation. It is very unlikely that the USPS will or could establish a duplicative electronic system. What the Postal Service must determine is how to best use its mail network to interface with electronic services. It could do this by interconnecting with common carriers in joint ventures, reselling common carrier transmission capacity as a value-added carrier, or leasing private lines to send material between its offices. Choosing among these options is the Postal/EMS policy dilemma.

Either a Postal EMS service or competitive private EMS services may evolve into universal services in the future. Whether this happens will depend more upon the nature of consumer demand and the cost of equipment than who provides the service.

*Question 4.* It has been suggested (Dennis Woywood, RCA, House Hearings on Postal Research & Development, April 13, 1978) that postal involvement in EMS might stimulate rather than depress the industry by instituting substantial government procurement and, thereby, driving down prices and attracting equipment manufacturers. This has happened in other high technology industries, notably the aircraft industry. Does it seem reasonable that this might happen in EMS?

*Answer.* The suggestion of Mr. Woywood (RCA) that Postal involvement in EMS might stimulate the EMS equipment market is dubious. Further, the analogy to the aircraft industry is misleading because of significant differences between the two markets. Designing and building aircraft for the private market is risky because the investment costs are extremely high and the market is restricted to a limited number of customers, i.e., the airline companies. As a result there are very few aircraft manufacturers. Thus, aircraft manufacturers benefited from being able to modify military designs for commercial use.

The electronics market, on the other hand, is different. There are many suppliers and many purchasers. The cost of research and development is much less prohibitive. In addition, the market is characterized by a rapidly evolving technology and declining costs.

For example, the TKS-80 home computer being sold by Radio Shack for \$600 would have cost approximately \$20,000 only ten years ago. A second example would be medium scale mainframes used for scientific computing. What would have cost more than \$1 million ten years ago can now be bought as a mini-computer for \$70,000 or less. Whatever the role of the Postal Service might be in EMS, it would be only one of many purchasers of electronic equipment. This market is being driven by many forces other than EMS. For example, the home computer and the home entertainment industries are not relying on EMS applications for use of their equipment, but EMS use might be a by-product; ViewData also is driven mainly by other objectives than EMS. Given the dynamic nature of the electronic equipment market it is doubtful that the USPS could spur it to more



impressive results. Indeed, it could be that if the industry had reason to believe the government was about to enter the EMS market, the uncertainty of the implications of this action might end to dry up sources of investment rather than stimulate them.

Senator SCHMITT. We'll go next to Postmaster General Bolger.

# STATEMENT OF POSTMASTER GENERAL WILLIAM F. BOLGER, U.S. POSTAL SERVICE

Mr. BOLGER. Thank you, Senator. If you will enter my entire statement in the record I will summarize it very briefly.

We agree with what we understand to be the general goals of section 10 of S. 3229. However, we believe the formal task force is not necessary to accomplish these goals. Both the public and the private sectors already are providing valuable help to the Postal Service on communications technology and related matters. We believe this needed teamwork can be effective without a formal advisory committee or other formal body.

As a matter of fact, I think it might be a little premature to formalize it at this point in time, but I do think the various Government agencies, including Mr. Geller's organization, NASA, and others, should be used as advisory people to the Postal Service as we try to identify what role the U.S. Postal Service will have, if anything, in electronic transmission communications.

We have a small role now in mailgram and we are to branch out in other demonstration efforts and other test efforts, but we have not assumed a position that the Postal Service should have a monopoly in electronic transmission of communications. Indeed, we might play a unique role, the unique role of having the capability of delivering a hard copy, at least in the initial stages of electronic transmission and communications, that might come about. We have said repeatedly, and I repeat again today, we don't know what our role is and the management of the Postal Service firmly believes that if the private sector would be ready, willing, and able, that the Government most likely should stay out of this; but very frankly, we don't see any evidence that the private sector is ready, willing, and able to move into this area and serve everybody, at least not at this time. So we assume the role of staying smart, trying to get smarter in this activity, and to see where we should be going.

Again, I say we have no objection at all to the intent and the goal as we see section 10. It's a question of how we structure it. We just don't think it's necessary to formalize that structure at this time.

I might add that I recognize the need for the Postal Service to get more involved and at a different level of involvement in our research and particularly these new technologies. As a result, I announced to the Board of Governors yesterday at our monthly meeting that our Research and Technology Department would be elevated to senior management Postal Service headed by a Senior Assistant Postmaster General, and this would be effective August 26.

I would be prepared to try to answer any questions you may have.

Senator SCHMITT. Thank you, Mr. Postmaster. Have you selected a head of that group?

Mr. BOLGER. Yes; his name is Frank Summercamp. He's been a career employee for about 35 years. He's been involved primarily on the operational management role. We are looking at our immediate



need in research and the advancement of technology and going into the automated fields with the conventional mail system as we bring along whatever we're going to do in demonstration efforts on electronic transmission in communications. I think in the electronic effort we are at a stage where in the next several years before electronics really gets large or larger we are going to need more automation in the Postal Service to handle conventional mail. So our stress will be on both. Our main stress will be on the automation efforts and we will be bringing electronics along, at least the development of demonstrations.

Senator SCHMITT. Thank you. We will have some more questions in a minute.

[The statement follows:]

STATEMENT OF POSTMASTER GENERAL WILLIAM F. BOLGER, UNITED STATES  
POSTAL SERVICE

Mr. Chairman, we are here today at your request to testify on section 10 of S. 3229, the proposed Postal Service Amendments Act of 1978. Section 10 proposes to create a Task Force on the Mail and Communications, to study and advise the Postal Service about technological and other developments and to help coordinate with other agencies and the private sector.

The proposed Task Force would consist of 7 members appointed by the President together with such representatives of the Postal Service as the Chairman of its Board of Governors may select. The President could appoint either Federal officials or private citizens or both.

Section 10(a) also would require all Federal agencies to assist the Postal Service, on a reimbursable basis and without regard to limitations in their organic legislation, to perform certain duties proposed elsewhere in the bill. These duties relate to budgeting, planning, and reporting to Congress with regard to Postal Service research and development activities.

We agree with what we understand to be the general goals of section 10. However, we believe that a formal task force is not necessary to accomplish these goals. Both the public and the private sectors already are providing valuable help to the Postal Service on communications technology and related matters. We believe this needed teamwork can be effective without a formal advisory committee or other formal body.

Certainly there is no question that it has become increasingly important for the Postal Service to benefit from new ideas in keeping its services in tune with public needs. We are not a self-contained and unchanging operation. The Postal Service is an important facet of a national communications system that is growing and changing with increasing speed. We must keep in close touch with technological and other developments and we have been working to do so.

ASSISTANCE FROM THE PUBLIC SECTOR

We think that other Federal instrumentalities with expertise in the communications field can be an important resource for the Postal Service. In the last few months, I have met with representatives of both NASA and the National Telecommunications and Information Administration of the Department of Commerce to exchange views and ideas. As a result of the NASA discussions, several of its technicians are now providing us assistance in various research and development activities. Discussions that could lead to a larger role for NASA are continuing.

Since 1969, one continuing focus of our efforts has been the possibilities for a domestic postal electronic message service. We developed an integrated long-range plan for these efforts in 1974. Contributing to the work under this plan are contracts with three Federal agencies.

The Institute for Telecommunications Science in Boulder, Colorado, an arm of the National Telecommunications and Information Administration of the Department of Commerce, is helping to analyze some of the work of our private contractors and is also contributing several studies of its own.

The National Bureau of Standards in the Department of Commerce is providing support by developing mathematical models for analysis of what an electronic message service network should look like and what implications it would have for the postal system as a whole.



The Naval Ocean Systems Center in San Diego, California, is providing support in evaluating requirements and proposals for high-speed scanner machinery, which would be needed in converting written messages to electronic impulses.

As announced on March 28 of this year, we are planning to test an international electronic message service in cooperation with the federally-chartered Communications Satellite Corporation (COMSAT). The test service will use satellites to transmit messages between the United States and overseas locations.

The one-year contract calls for development of a system plan for the service and a one-month operational test using demonstration mail. It also provides for joint planning by the Postal Service and COMSAT for a proposed field trial of a pilot system. A decision on whether to proceed with the field trial will be made before the expiration of the present contract.

We regard this effort as part of our commitment to serve the growing need in today's society for less costly, more reliable, and more rapid exchanges of information, particularly in international communications.

Our international program with COMSAT will provide us with information on how potential users will react to an actual working system. The experience we gain from it will give us important knowledge to aid in our thinking about a domestic electronic message system.

#### ASSISTANCE FROM THE PRIVATE SECTOR

In obtaining help and advice from experts in the public sector, we have not neglected to use the many valuable resources available from private industry.

We already have several years' experience with one service that takes advantage of electronic transmission technology available from the private sector. This service, of course, is Mailgram, which is provided in conjunction with Western Union. Mailgrams continue to grow in popularity with the public. During FY 1977, we carried some 28,376,000 of them.

In the early stages of our current long-term program to explore the potential for a domestic postal electronic message system, we are relying heavily on assistance obtained by contract from the private sector. In planning the program, we have sought guidance from the National Research Council, a mixed public and private membership group, and from Arthur D. Little, Inc. The overall plan calls for five distinct phases of roughly 3 years each:

1. Concept.
2. Validation.
3. Full Systems Development.
4. Design and Production.
5. Implementation.

Before major commitments are made for each succeeding phase, the results of the previous work will be evaluated to determine how to proceed.

The initial concept phase is scheduled for completion this coming October. It involves preparing a comprehensive analysis of the various technical, market, and other factors that we need to know in order to make tentative plans and choices among alternatives. For this phase, the major effort has been a system definition and evaluation study. RCA has assisted us with this study under a 2-year contract. Other technical aid from the private sector during the initial phase has come from Pitney Bowes and from Fairchild Camera and Instrument.

Another program which we are now investigating with private sector help is an advanced electronic message service which we would call Electronic Computer Originated Mail. ECOM would be designed to meet a two-day delivery service standard throughout the 50 United States, except for certain very remote and unpopulated points.

A mailer with large volume requirements—a business firm, for example—would generate the text of its messages and its address lists electronically in computer form on its own computer equipment. It would then transmit this material to the Postal Service's contractor, which would transmit the messages over its communications network to designated post offices. There the messages would be printed out, put in envelopes, and delivered by the Postal Service with regular first-class mail. Our current estimates are that a service of this type could be provided at fees ranging from 30 cents to 55 cents for a one-page message, depending on the monthly volume of the individual mailer.

We have received a proposal from Western Union for a test and evaluation contract for the ECOM concept and are now exploring the specific proposal with that company.



In summary, we believe we are already getting good help from knowledgeable sources both in and out of Government. Accordingly, we do not believe that the enactment of section 10 of S. 3229 is necessary.

This concludes our prepared text. We would be pleased to answer your questions

#### QUESTIONS OF THE COMMITTEE AND THE ANSWERS THERETO

*Question 1.* In your prepared testimony, you referred to discussions with NASA and the fact that several of its technicians are now providing the Postal Service assistance in various research and development activities. Could you please provide more details on NASA's participation? Exactly what is NASA's participation? Exactly what is NASA doing? What do you anticipate will be NASA's role in the future?

*Answer.* There have been several meetings and extended discussions between USPS and NASA personnel, at both the management and technical levels. Technical information developed at the Goddard Space Flight Center has been made available to the Postal Service.

At the present time we are still in the process of identifying areas of common interest with NASA and it is not possible as yet to predict what role NASA would have in future phases of the development of any Electronic Message Service program that might be conducted by the Postal Service.

*Question 2.* You said if people leave USPS because of EMS that the people left to be served by USPS would have very expensive mail costs. Why?

*Answer.* It is generally considered that the operation of the postal system is characterized by economies of scale because of relatively high fixed or system costs. Like most utilities, the Postal Service also tends to combine relatively more profitable services with relatively less profitable services. For example, the marginal cost of delivering a machine-addressed letter with a permit imprint between major business offices generally will be less than that of delivering a hand-addressed letter with a postage stamp between suburban or rural homes. It is further generally accepted that the most likely portions of the mail stream to be diverted to private EMS or other electronic services tend to be communications involving business transactions which fall more within the relatively profitable rather than the relatively unprofitable category. If the Postal Service were to lose a large portion of business transaction mail to private competition—whether involving transmission in electronic or tangible form—the prices of the remaining services provided by the mail system could be expected to have to rise dramatically in order to cover fixed costs. These matters were explored in somewhat more detail in Statutes Restricting Private Carriage of Mail and Their Administration, A Report by the Board of Governors to the President and the Congress, Pursuant to Section 7 of the Postal Reorganization Act, House Post Office and Civil Service Comm. Print No. 93-5, 93d Cong., 1st Sess. (1973); and in the Report of the Commission on Postal Service, volumes 1 and 2 (1976). Copies of these materials are enclosed for your information.

*Question 3.* Do you think Congress has given the Postal Service policy guidance concerning your involvement in EMS? If so, who and when?

*Answer.* Congress has not given the Postal Service specific policy guidance addressed expressly to EMS. However, Congress has provided certain overall directions which seem generally relevant to the monitoring and exploratory efforts which the Postal Service has been conducting with regard to new developments in communications technology and services. A number of provisions of law require the Postal Service to "promote modern and efficient operations and [to] refrain from . . . any practice . . . which restricts the use of new equipment or devices which may reduce the cost or improve the quality of postal services"; to "give highest consideration to the prompt and economical delivery of all mail"; and to employ "[m]odern methods". 39 U.S.C. 2010, 101(f). To achieve these goals, the Postal Service is authorized broad powers to determine the character of postal or non-postal services and the kinds of equipment, facilities, contractual services, and other assistance needed. 39 U.S.C. 401(3), (5), (6), (10); 403(a), (b); 404(1), (3), (6); 411; 2008(c). Legislative history shows that Congress envisioned "a national postal service that is forever searching for new markets and new ways by which the communications needs of the American people may be served." H.R. Rep. No. 91-1104, 91st Cong., 2d Sess. 20 (1970). To meet this responsibility, "[t]he Postal Service is empowered to engage in research and development programs directed toward the expansion of present postal service and the development of new services responsive to the evolving needs of the United States." *Id.* at 9. All of these directions have been deliberately stated in broad terms that have not been intended to fix decisions on EMS or any other individual type of program.



*Question. 4.* As a potential benefit from USPS involvement in EMS, both Mr. McLaughlin and Mr. Geller cite the possibility that postal involvement might result in a universality of service, which would not be provided by a competitive marketplace. Does it really make sense to subsidize a second electronic message system, to achieve universal service, when we already have one in the switched telephone network? If we are going to be in the business of subsidizing universal service, isn't the phone service enough—combined with traditional mail service?

*Answer.* This is a complex question which seems to have several different aspects. First is the matter of subsidies. The Postal Service has expressed no desire to receive subsidies in the form of appropriations to help finance any services it might offer using electronic technology. We have not supported proposals to designate even research and development efforts in this area as a taxpayer-supported venture. Our policy has been that we should be exploring whether there is a market for additional service using electronic technology that the postal system might be in the best position to supply.

We also do not believe there is any basis to the fears expressed by some of the witnesses during your hearings that the Postal Service could compete unfairly with private suppliers of electronic communications services through cross-subsidies from mail operations. Purely on a practical level, experience in other countries where mail and telephone services have been combined and cross-subsidies permitted suggests that such subsidies run only in the other direction. In this country, present law prohibits cross-subsidies among postal services; each type of service is required to bear all of the costs attributable to the provision of that service. Prices for these services are developed through evidentiary proceedings before the Postal Rate Commission, an institution of which the witnesses expressing fear of cross-subsidies seemed completely unaware.

We do not know why it should be necessary at this point to assume that universality of service for an EMS-related service should require taxpayer subsidies. The first-class mail service provided by the Postal Service is capable of paying its own way while providing universal service. Although the Postal Service currently receives a proportionately small public service subsidy contribution to its annual budget in the amount of \$920 million, a self-sufficient first class service to all communities could be provided without that supplement, with some reduction in the convenience of delivery.

We are not prepared to rule out the possibility that the Postal Service might be able to offer a contribution in the field of EMS services that would not develop from private firms which seek to maximize profits rather than break even and which generally lack our experience in providing a universal service. The availability of private parcel delivery services has not completely satisfied public needs for such services, judging from some 300 million pieces of parcel post still sent by the Postal Service each year, many from household to household.

With regard to the matter whether private individuals and communities outside the greater metropolitan areas need any addition to telephone and traditional mail service, we do not think anyone knows at present what the demand for EMS services may be as these services develop and become a greater part of national life. Part of our effort has been to continue to explore that question and stay abreast of what the public seems to need as its thinking progresses in response to new options not previously considered.

*Question 5.* It has been suggested (Dennis Woywood, RCA, House Hearings on Postal Research and Development, April 13, 1978) that postal involvement in EMS might stimulate rather than depress the industry by instituting substantial government procurement and, thereby, driving down prices and attracting equipment manufacturers. This has happened in other high technology industries, notably the aircraft industry. Does it seem reasonable that this might happen in EMS?

*Answer.* At this time, the Postal Service has made no commitment to any particular form of involvement in Electronic Message Systems (EMS). Without definition of the scope of any Postal Service involvement, it is difficult to respond to the question presented. We assume that Mr. Woywood's comments were in the context of a hypothetical Electronic Message Service System (EMSS) which his employer, RCA Corporation, has been studying under contract with us. Such a system, if fully developed, would require a significant capital investment.

We assume that equipment suppliers would welcome the opportunity to compete in supplying the components of such a system, and that their participation would reduce prices. The extent to which such competition would exceed similar competition if the Postal Service did not enter the market is, of course, a subject of conjecture. We think it could be a reasonable guess that Postal Service partici-



pation on a considerable scale would involve the expenditure of resources which would not occur in this area without our participation.

Senator SCHMITT. Now, Mr. Philip Nyborg, vice president and general counsel, Computer & Communications Industry Association.

# STATEMENT OF PHILIP S. NYBORG, VICE PRESIDENT AND GENERAL COUNSEL, COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION

Mr. NYBORG. Thank you, Mr. Chairman. My name is Philip Nyborg, and I am vice president and general counsel of the Computer & Communications Industry Association. I appreciate the opportunity to appear before this subcommittee to present testimony on an issue of critical importance to the data processing and communications industries and, I believe, to our Nation at large.

I will present a brief oral statement, but I would ask that our entire written statement be made a part of the record.

Senator SCHMITT. That will be done with all of them.

[The statement follows:]

## STATEMENT OF PHILIP S. NYBORG, VICE PRESIDENT AND GENERAL COUNSEL COMPUTER & COMMUNICATIONS INDUSTRY ASSOCIATION

Good morning Mr. Chairman, members of the Subcommittee. My name is Philip Nyborg, and I am Vice President and General Counsel of the Computer and Communications Industry Association. I appreciate the opportunity to appear before this Subcommittee to present testimony on an issue of critical importance to the data processing and communications industries and, I believe, to our nation at large.

Our Association represents 55 member companies with combined annual revenues in excess of \$2.75 million and employing more than 100,000 people. Our individual member firms range in size from under \$1 million in annual sales to something in excess \$300 million. Their products and services cover a wide range of goods and services in the data processing and data communications industries—computer mainframes, memories, tape and disk drives, printers, terminals, data entry devices, software and services such as time sharing, third party leasing, systems consulting, and data communications equipment and services.

The Association was formed just over six years ago, in many respects out of the founders' frustration with the lack of competitive conditions in the computer industry. This sense of frustration persists, for the antitrust laws have not ensured effective competition in either the data processing or communications industries. As a result, today our members must contend also with a government-sanctioned communications monopoly, AT&T.

*S. 3229 authorizes almost \$1 billion for postal service research in electronic message services (EMS), yet no public policy determination has been made regarding the role of competition or the relationship of EMS to our national scheme of communications regulation.*

The legislation before this subcommittee, S. 3229, is designed to improve the United States Postal Service (USPS). Among the bill's provisions are the mandates for USPS to study the development and application of electronic technology to mail delivery and, importantly, to spend its annual \$920 million "public service" appropriation "in such amounts as it determines necessary to carry out a comprehensive program of research and development in connection with improved methods of postal service, including . . . methods of electronically sending and delivering letters and other mail matter."

This provision represents only minimal improvement over the deleted section of H.R. 7700, the House version of this bill, which would have required USPS by 1980 to spend \$300 million of R&D of electronic message systems, but potentially raises the ceiling to "such amounts as [the Postal Service] determines necessary." It also raises the specter of a second government sanctioned and regulated monopoly—the USPS—intruding into the data processing marketplace in which small, independent equipment and service companies must try to compete.



*There has already been substantial private sector entry into the electronic message services marketplace, although such entry is greatly impeded by regulatory uncertainty and inconsistency. Three regulatory domains independently impact this service area: the Postal Service, The Federal Communications Commission and The Banking Regulatory Agencies.*

The entrance of USPS into the electronic message systems (EMS) market poses critical questions of national policy regarding regulation and competition which must be addressed before appropriating large and specific amounts of money to USPS for the development of EMS systems.

As a prelude to examining these questions, it is necessary to consider the context of the current regulatory scheme, the effects new technologies have had on this scheme, and the consequent policy issues raised.

Advances in electronics, and particularly in computing have opened a new frontier in communications—electronic message systems (EMS). In this new communications frontier, a sense of regulatory predictability must exist to ensure optimal growth and development. This environment is presently lacking, since there are essentially three Federal regulatory domains which independently affect digital communications generally, and electronic message systems specifically. Each of these domains has been created by a separate statutory framework which for the most part predates the invention of the first computer.

First, there is the Federal Communications Commission (FCC) and the underlying Communications Act of 1934. Initially, the FCC was created to deal with voice telephone and telegraph in one bureau and radio in another. Second, we have the United States Postal Service and the underlying Private Express Statutes. Pursuant to the Constitutional power of the Federal government to establish a postal system, these laws were enacted to give the Postal Service a monopoly in the carriage of letters, and periodicals. Third, there is the Federally-regulated banking domain which is itself a complex tripartite structure in which national banks are regulated by the Comptroller of the Currency, Federal Reserve Banks by the Federal Reserve Board, and savings and loan institutions by the Federal Home Loan Bank Board.

The services provided (that is, those services contemplated by the underlying statutes) in each of these three domains were initially easily distinguishable. Voice telephone, telegraph, radio, the conveyance of letters, and the movement of banking paper were sensible distinctions.

The foregoing, however, describes only Federally-regulated industries. The private competitive sector provides a fourth domain, which is non-regulated. The definitional problems here are exemplified by the FCC's current "Computer Inquiry," which is the Commission's second effort to draw a distinction between regulated communications and unregulated data processing.

The blurring of distinction between computer and communications technologies, and the shift from paper-based to electronic services, has caused three significant sets of overlaps in regulatory jurisdiction among the FCC, the Postal Service, and the banking regulatory agencies. And, in addition to the regulatory issues, there exist critical competition issues. Let us look first at the regulatory problems, and private sector and regulated offerings which have evolved in this environment.

The FCC has historically had Jurisdiction over Electronic Communications Services which may shift demand from the postal service; such services have included long distance voice telephone, telegraph or electronic message services. The FCC has viewed EMS services as competitive, allowing multiple entry into the market and as a result, there have been a number of new high technology service offerings through the private sector.

First, there are services of regulatory concern to both the FCC and the Postal Service. One of the earlier examples of this was long distance voice telephone service competing for markets traditionally served by mail. In this case, while there was clearly a substitution effect, the Postal Service obviously could make no claim that the replacement telephone conversation was a form of mail. Nonetheless, in 1945, 35 percent of all messages were transmitted by the Postal Service, 65 percent by the telephone industry. By 1973, these figures shifted to 20 percent of all messages handled by the Postal Service, and 80 percent handled by the telephone industry.

Telegraph service has also been a matter of interest to both the FCC and the Postal Service. As late as 1923 Congressmen were proposing that the government through the Post Office assert monopoly powers over all forms of electrical communications, although in 1941 the Domestic Telegraph Merger Act granted Western Union a de facto monopoly over the domestic telegraph business. Postal regulations, as well as the postal legislation recently approved by the House of Representatives, specify that a telegram does not constitute a letter or mail.



There is also Western Union's Mailgram service, which is a joint effort between Western Union (as a record carrier) and the Postal Service. Mailgram revenues are now about \$60 million, and Western Union has also formed a subsidiary, Western Union Electronic Mail, which provides additional services for Mailgram customers. The latter is not part of the tariffed offering of the parent.

It is useful here to diverge briefly, to discuss a term which is, in CCIA's view badly misused. That term is "electronic mail" and it is inappropriate for two reasons. First, it is, as pointed out by Marc Porat at the 1978 Airlie House conference on telecommunications policy, analogous to the term "horseless carriage" in that it names a dynamic new technology in terms of a technology which is becoming partially obsolete. Second, the term presupposes that such services are within the domain of the Postal Service and the Private Express Statutes. While continuing to use the term "mail" for mail, I will use the term "electronic message services" to describe digital communications between human beings, which may be either point to point or switched, and which may represent character encoded information or facsimile.

A number of innovative private sector companies are presently offering electronic message services. Scientific Time Sharing (STS), which provides a computer time sharing service, has offered an electronic message system for several years. STS has filed with the FCC under Section 214 of the Communications Act for authority to offer its message processing system as a resale common carrier. The Computer Corporation of America has offered its Computer Message Transmission System software since 1975. This system is offered both as a time sharing service and as a turnkey package for intra-corporate installation. Telenet Communications has been acting for some time as a network for electronic message systems, including the "Hermes" software offered by Bolt, Beranek and Newman; more recently, Telenet has received FCC authorization to introduce its own electronic message service. Both Hewlett Packard and Wang, offer electronic message systems which are a combination of hardware and software. Tymnet has been offering its Ontyme service as a resale common carrier since July 1977, and Southern Pacific Communications has filed a tariff for an experimental switched facsimile service. Finally, a number of organizations have sophisticated internal electronic message systems, including Citibank, Cook Industries, AT&T, and the Department of Defense (pioneers of ARPANET).

The entry of the corporate giants into electronic message services has not yet occurred significantly, although such entry is imminent by IBM (through Satellite Business Systems) and potentially by AT&T through its Advanced Communications System, formerly known as the Bell Data Network.

While both the postal service and the National Commission on electronic fund transfers have recognized that electronic fund transfers, a type of electronic message service, will shift demand from first class mail, the role of the postal service remains unresolved.

The recent report of the Postal Commission cited an Arthur D. Little estimate that by 1985 23 percent of all first-class mail will have been diverted to electronic communications, and noted that financial transactions were the most vulnerable to such diversion. These diversions would occur not only with respect to checks, but also to mail associated with checks such as bills, invoices, and receipts. The report estimated total first-class mail diversion due to electronic fund transfer systems to be 1.9 billion pieces by 1980 and 6.5 billion pieces by 1985.

Although there was testimony by a high level Postal Service official before the National Commission on Electronic Fund Transfers to the effect that the development of EFTS "would divert valuable mail and revenues from a postal system already beset by financial problems," there is no significant discussion of this issue in the final report of the National Commission on Electronic Fund Transfers. One is left to question the outcome, should the Postal Service press the claim that most EFT is within the private express statutes and therefore subject to Postal Service regulation.

The National Commission on Electronic Fund Transfers has addressed the issues of competition and regulation, with respect to banking electronic message systems, and concluded: First, that all interested parties should be allowed to compete; and second, that the communications aspect of electronic fund transfer systems should be subject only to FCC regulation, if such regulation is necessary at all.

The final report of the National Commission on Electronic Fund Transfers (NCEFT) does devote considerable attention however to the third regulatory overlap which I wish to address, that between electronic banking and the Federal Communications Commission. In Chapter 10 of its report, the EFT Commission notes technological advances in computer and communications technology, which it



described as the infrastructure of electronic funds transfer systems, and declares "it is no longer certain which services should be regulated as communications services. . . . [n]owhere is the problem more evident than in existing and emerging EFT systems." The Commission observes:

"EFT is developing in a market environment in which unregulated data processing companies compete, to a degree, with regulated communications carriers. Thus it is virtually impossible to determine *a priori* whether an EFT network or service will be subject to both financial and communications regulation."

The EFTS Commission's primary recommendations in this area were that:

All interested parties should be allowed to compete in the EFT terminal and system marketplace.

Only the underlying communications transmission and distribution (transparent) facilities used with the EFTS systems should continue to be regulated (and then only as long as such regulation is considered necessary by appropriate state and Federal agencies).

In essence, the Commission recommended that EFT systems providers should not be regulated as communications carriers, although they should be permitted to utilize communications carrier services as well as data processing services where necessary.

*While the issue of regulatory jurisdiction relating to electronic message services is both important and complex, its resolution must be based on a more fundamental, threshold question: Whether it is in the public interest to permit monopoly intrusion into the now-competitive electronic message service marketplace.*

My remarks thus far have addressed issues of regulatory jurisdiction with respect to services which are impacted by regulation by some governmental agency. I have characterized the USPS as a regulator although it is different from the FCC, of course, in that it also operates the service it regulates. I would now like to focus now on an even more important question, namely, whether a particular service should be subject to regulation at all. The issue is not merely whether the Postal Service should become a resale carrier or whether existing carriers might enter joint ventures with the Postal Service; it is, fundamentally, whether such new and innovative services should be provided competitively by the private sector with minimal Federal regulation or even in the total absence of regulatory intervention.

In 1975, the USPS requested the National Research Council to undertake a study of electronic message systems with the objective of recommending "appropriate research, development and applications of this new technology for the nation's mail service."

The report distinguished between three classes of electronic message systems:

Generation I, in which all mail will be handled physically except for selected electronic links between major postal installations.

Generation II—in which mail would be converted to electronic messages at postal installations near the originator and be converted into hard copy at a postal installation near the recipient; this is essentially the Mailgram type of service.

Generation III which would be a *completely electronic transmission* in which hard copy may or may not be produced; the information flows from originator to recipient only in electronic form. Generation III mail, according to the report, could involve existing distributions networks or the development of a new *distribution network*.

The report recognized that it is not necessary and may not be desirable that the USPS own and operate a complete message system. While taking the position that regulatory issues related to Generations I and II could be dealt with under existing regulatory procedures, the report also recognized that "Generation III will undoubtedly raise difficult and complex national policy issues concerning competition and regulation." Accordingly, the report concluded that the Congress should at the earliest opportunity address the adoption of a policy on electronic message services that best serves the nation, the alternative being a test in court.

Despite this early recognition and clear recommendation by NRC, this legislation would fund the Postal Service to move forward with the development of its own EMS system, without such national policy issues having been determined by either the Congress or the courts.

In his remarks introducing S. 3229, Senator Glenn stated, "No attempt has been made in this bill to prejudice the broad policy questions yet to be made, such as the possibility of Postal Service entry into large scale use of electronic transmission systems." But to mandate the Postal Service—a \$17 billion regulated monopoly—to enter the development of a system for the heretofore competitive EMS market-



place, without a thorough investigation of the policy issues, would set monopoly as our national electronic communications policy in the EMS area by fait accompli.

It is recognized that this legislation simultaneously establishes a task force to look into the place of mail in our national communications structure. But Postal Service research is presently developing a prototype EMS system, and the funding proposed in Section 4 of this Bill would clearly permit it to continue on this course prior to a resolution of the competitive issue. This not only has a chilling effect on private ventures, it establishes a de facto policy with full Congressional knowledge.

The Postal Service itself has questioned whether it should be in this competitive marketplace. As John J. Wise, Assistant Postmaster General for Research and Development, pointed out in testimony before the House Post Office and Civil Service Committee, last year: "I don't think there's unanimity of opinion in the Congress, or press, or among the American people about the competitive aspects of [EMS]. If private industry can do it, shouldn't they? I'm asking a rhetorical question. I'm not proposing one way or the other. As we proceed some of these things are becoming clearer."<sup>1</sup>

Indeed, they are becoming clearer. Former Postmaster General Benjamin Bailar seems to have answered Mr. Wise's rhetorical question two months later. In hearings before the Senate Subcommittee on Energy, Nuclear Proliferation, and Federal Services, he remarked:

Mr. BAILAR. I personally feel that the Postal Service should go into electronic mail only when certain conditions are met:

First off, there is a public need to be filled, where there is a financial return to it, [and] only if private industry is not willing or able to go into it. I don't think the Postal Service ought to move into electronic message systems or electronics fund transfers if private industry is willing and able to do it.

Senator GLENN. You were quoted as saying the electronic network is a fundamentally different business where the Post Service has nothing to offer. You said, "If we jumped in, we would be acting in a predatory manner."

Mr. BAILAR. That is a correct quote.<sup>2</sup>

And yet, the Postal Service is going forward with the development of its prototype electronic message system. The USPS is currently developing this system in its research facility in Rockville, Maryland, and expects to have it ready for testing in 1981. Further, it is going forward with a million dollar experiment which will test an electronic message service in a joint effort with COMSAT. The service is to transmit messages between the U.S. (probably New York or Washington) and five or six other countries. The project calls for a one month demonstration in February 1979, followed by a one year field trial to determine market potential. In a related interview, Postmaster General William Bolger stated that the Postal Service is currently considering how it might usefully become involved in electronic transmission systems within the United States.

Public policy considerations do not support postal service foreclosure of part of the competitive electronic message service market.

Senator Edward Kennedy (D-Mass.) has recently affirmed an extraordinarily important principle in reintroducing his Competition Improvements Act (S. 2626) in the present session of Congress. The Bill would complement various reform efforts related to particular regulated industries and would identify areas where regulation is no longer appropriate. While recognizing that some areas within the economy legitimately require regulation, the Bill would make it mandatory that an agency contemplating an action which would substantially affect competition must first to make a finding that:

(1) Such action is necessary to accomplish an overriding statutory purpose of the agency;

(2) The anticompetitive effects of such action are clearly outweighed by the significant and demonstrable benefits to the general public; and

(3) The overriding statutory purpose cannot be accomplished in substantial part by alternative means having lesser anticompetitive effects.

It is useful to apply the analysis of the Competition Improvements Act to the Postal Service debate. Is such action necessary to accomplish an overriding statutory purpose of the agency? We believe it is clear that the electronic movement of information is not within the Postal Service's present statutory mandate. How-

<sup>1</sup> Briefing, "Research and Development Into Electronic Mail Concepts by the USPS," Before the Subcommittee on Postal Personnel and Modernization, House Committee on Post Office and Civil Service, 95th Cong., 1st Sess. 16-17 (1977).

<sup>2</sup> Hearings, "Evaluation of the Report of the Commission on Postal Service," Before the Subcommittee on Energy, Nuclear Proliferation, and Federal Services, Senate Committee on Governmental Affairs, 95th Cong., 1st Sess. 70 (1977).



ever, even if the Congress were to grant the Postal Service a statutory mandate which encompassed electronic message services, are the anticompetitive effects of such action outweighed by the public interest? There is, of course, a public interest in the efficient universal distribution of mail, although USPS need not develop its own EMS facilities in order to achieve this objective.

Finally, can the objectives of the Postal Service be achieved by alternate means having less anticompetitive effects? Here, the Kennedy legislation introduces and extremely important principle: even recognizing the financial difficulties of the USPS, it is not justifiable to sacrifice a competitive market (EMS) solely to keep the Postal Service financially viable. As former Postmaster General Bailar pointed out in his testimony, "I [don't] think the Postal Service should move into some area for the sake of maintaining the Postal Service in its present size and scope, if private industry is willing and able to fill those functions."<sup>3</sup> Additionally, the Report of the Commission on Postal Services recommended that: "The Postal Service must have flexibility to meet changing circumstances and changing needs of the public. Postal services that become obsolete, especially as the result of diversion of mail to electronic communications, should not be continued."<sup>4</sup>

There is no justification for placing the burden of a service which benefits the nation at large, the physical distribution of mail, upon a particular competitive marketplace, such as that for electronic message systems. Congress now recognizes the principle that the nation at large should bear the burden of the operation of nationwide mail delivery by awarding the Postal Service an annual "public service" appropriation, set at \$920 million in the present legislation. Extending the postal monopoly to include electronic mail under the guise of "efficient, inexpensive, universal delivery" to the exclusion of competitive firms would shift the burden of nationwide delivery from where it is now—and where it belongs, upon the nation at large onto a single competitive marketplace. This would represent an abrupt about-face from current policy.

Even beyond policy considerations, the electronic movement of information is not within the Postal Service's statutory mandate.

The Private Express statutes grant the Postal Service monopoly in the carriage of mail by making it a criminal offense to establish a private express for the "conveyance of letters." A "letter" in current Postal Service regulations, is defined as "a message directed to a specific person or address and recorded in or on a tangible object." As noted earlier, however, a telegram is not a letter within the current regulations, and H.R. 7700 would strengthen the exclusion for telegrams by incorporating the present regulation into the statute.

With respect to the transmission of messages by telephone or electronic communication links, an Assistant General Counsel of the Postal Service has issued a ruling as follows:

A letter is a message directed to a specific person or address and recorded in or on a tangible object. . . . A message, while being sent by telephone or electronic communications links, is not regarded as recorded in or on a tangible object. Therefore, while being so transmitted, the message is not considered a letter within the meaning of the statutes and regulations and the Private Express Statutes and regulations do not apply.

If a message transmitted by telephone or electronic communication links is at some time reduced to a "hard" copy [the] . . . copy could, depending upon the nature of the message and the method of carriage, become subject to the Private Express Statutes and regulations if it is privately carried over post routes. . . .

One can conclude on the basis of these definitions that an end-to-end (that is, Generation III electronic message service) is not within the scope of the Private Express statutes. One can further conclude, however, that the electronic link in Generation I and II services is similarly not within the scope of the Private Express statutes.

This has two important ramifications:

(1) The electronic link in a Generation I and II services, and all Generation III services, with respect to the Private Express Statutes, are open to competition.

(2) While the Postal Service does have a monopoly in the physical movement of letters, it has no explicit statutory authority to transmit (convey) electronic messages. This conclusion applies both to the end-to-end electronic transmission in a Generation III service as well as to the electronic link in a Generation I or II service.

It is recognized that there are those, including some within the Congress and the Executive Branch, who would disagree with these conclusions. The point is that

<sup>3</sup> Report of the Commission on Postal Service, p. 6.

<sup>4</sup> Id., note \*\*\* at 71.



these issues have never been authoritatively decided either by the courts or by the Congress through more definitive legislation. A public policy determination needs to be made, and it must be made prior to Postal Service entry into electronic message systems.

### A PUBLIC POLICY PROPOSAL FOR ELECTRONIC MESSAGE SYSTEMS

Our Association would like to offer a proposal with respect to the very important public policy determinations which must be made relating to electronic message systems. This proposal is broken down into a series of points although each has the same fundamental objectives: that the Postal Service monopoly should not be extended beyond the point necessary to implement a nationwide mail service; that customer needs beyond those of basic mail service can be best served by the efficiencies inherent in a competitive marketplace; that where electronic communications services are involved, we should not have duplicative, inconsistent or unnecessary regulation; and that where underlying transmission facilities are involved for electronic communications, we should not have duplication of facilities in non-competitive areas.

First, the monopoly granted to the Postal Service in the private express statutes should not be extended to encompass the transmission of electronic messages.

All Generation III electric message services, and the electronic link in Generation I and II electronic message services should be open to competition. This should be the case whether or not such services might shift demand, as did long distance voice telephone, from the Postal Service.

The fundamental rationale underlying this position, which I will elaborate upon later is that it is not necessary to extend the postal monopoly in order for Postal Service to avail itself of the cost efficiencies of new electronic technology.

But equally important is a very real fear that if the postal monopoly were extended to electronic message services, there would be strong economic incentives for the Postal Service to define such services as broadly as possible. Historically, the Postal Service's definition of a "letter" has been highly revenue-driven; once given a mandate in electronic message services, the Postal Service could well assert the claim that most forms of business data communications were a form of electronic message services and, therefore, within the Postal Service monopoly.

Second, the Postal Service should not be an underlying provider or developer of electronic message systems terminal equipment, switching devices, transmission services or entire EMS systems.

I use the term "underlying" in the same sense in which it is used in the common carrier industry with respect to transmission services, to distinguish firms which provide underlying facilities from those which may purchase and resell the use of such facilities or an enhanced service.

Third, any Postal Service participation in electronic message service should exclude the offering of competitive data processing services.

The history of communications common carrier regulation is pervaded by the issue of cross-subsidy and the Federal Communications Commission has spent a substantial amount of its regulatory life attempting to insure that monopoly communications services do not subsidize competitive communications or data processing services. Given the opportunity and the enormous economic incentives for carriers to effect such subsidies, this represents a very serious problem in regulatory enforcement, as well as a major anticompetitive force.

Although the Postal Service monopoly is in mail rather than electronic communications, the opportunity and incentive to subsidize competitive data processing services would obviously exist. Further, we have seen in the communications industry that electronic message services offerings such as AT&T's proposed Advanced Communications System, have enormous potential for offering data processing services and for providing opportunities to subsidize such services through monopoly carrier revenues. Regulatory history has also shown that a requirement to offer competitive services through a separate subsidiary does not eliminate the problem of cross-subsidy. For these reasons, we believe it of upmost importance that the Postal Service be restricted from the offering of any kind of data processing service, whether directly or through a separate subsidiary.

Fourth, and very important, whether a given electronic system, service or piece of hardware were subject to regulation or not should be solely determined by the Federal Communications Commission.

This point contemplates continuation of existing pro-competitive FCC policies, and I stress that it is not a call for additional FCC regulation. Rather, it is a



suggestion that if a regulatory issue must be resolved with respect to electronic services or equipment, that only the FCC should have jurisdiction, not the Postal Service or any other Federal agency.

The merits of this aspect of our proposal have already been embraced with respect to banking systems by the National Commission on Electronic Fund Transfers, which recommended: that bank regulatory institutions should not have jurisdiction over communications services; that only underlying transmission services should continue to be regulated by the FCC and then only where necessary and appropriate; that EFT systems should not be classified as communications common carriers; and that terminal equipment should be totally deregulated except for compliance with the FCC registration program.

The rationale for FCC jurisdiction is very straightforward: as electronic message services shift the demand from the Postal Service, there are no good policy grounds for creating a second regulatory regime to deal with questions already addressed by the FCC relating to other electronic communications services. In particular, this includes the FCC's major policies in three key areas, which have been carefully developed over the past two decades. These are:

The extent to which competition can be introduced into the communications industry, and the relationship between monopoly and competitive services in such an industry structure;

The policy requiring equitable access to all common carrier facilities, including interconnection with other carriers as well as access directly by subscribers.

The relationship between regulated communications services, and non-regulated data processing services.

It is specifically intended in our proposal that the Postal Service, like any other entity wishing to offer underlying transmission facilities or resale communications services, would, make application to the FCC. And the FCC, accordingly, would consider such service applications within the context of its overall policies and its statutory objectives for our national communications system.

Let me briefly outline some of the regulatory factors which might be taken into account in the FCC's analysis of EMS services.

Even if the Postal Service is not permitted to be an underlying producer or developer of electronic message systems, there remains a very difficult set of questions regarding the Service's role as an operator of an electronic message service. Allowing the Postal Service to procure electronic message services for the electronic link in a generation I or II service is attractive in the sense that the utilization of such technology could help the efficiency and, therefore, the financial situation of the Postal Service. And one might argue that so long as the basic service being enhanced was mail service, that is, the movement of paper letters, and so long as such enhancements were procured from competitive firms, the anticompetitive impact of such Postal Service entry into the electronic services market would be minimal.

However, the problem in this approach is that it raises very serious regulatory and competitive questions in the transition from Generation II services to Generation III, or end-to-end, electronic message services.

It is generally recognized in the common carrier industry that the system of local distribution represented by the Bell operating companies and the independent telephone companies is the heart of monopoly telephone service. There is very little disagreement that this aspect of common carriage exhibits "natural monopoly" characteristics. It does not make sense to string more than one wire into each home or to have duplicate transmission wire and switching devices in every community. For the same reasons, it would not make sense to allow the Postal Service to establish or build underlying local distribution facilities as demand shifts from the paper local distribution system (the labor force of letter carriers) to an electronic system. So clearly, there are strong grounds in the local distribution area to restrict the Postal Service from being a monopolist or competitor with respect to underlying local distribution facilities.

There are also strong grounds for precluding the Postal Service from being a manufacturer of terminal equipment for end-to-end electronic message services. The FCC has concluded, after lengthy and careful deliberation, that the terminal equipment market should be entirely open to competition. It is possible, however, that the Federal Communications Commission's registration program for terminal equipment could include provisions for registration of a basic, standard electronic message service terminal. And, similar to the situation with telephone terminals, the registration program might specify a set of minimum characteristics for an inexpensive, widely available EMS terminal, while vendors could offer more sophisticated terminals as well.



The remaining question of who provides local distribution services for electronic message services is ultimately the most difficult. The options, of course, are the private sector or the Postal Service. And the result, I submit, will be heavily contingent on whether our policy toward electronic message systems requires universal service. If it does not, then clearly the private sector is the appropriate vehicle to provide the service.

*There is a need for both policy and technical research relating to the place of electronic message systems in our national communications structure. Governmental development of prototype EMS hardware or systems, however, should not be funded under any circumstances; and even if the subcommittee disagrees with this latter conclusion, the expenditure of substantial Federal funds on prototype hardware and systems development is clearly premature in light of the policy and technical issues which are currently unresolved.*

While it is our position that S. 3229 should be consistent with the broad and fundamental principles which I have outlined, it is clear that the Task Force on Mail and Communications, which is proposed by Section 10 of this Bill, should be the vehicle for resolving the major policy issues which must be addressed in this area.

We believe it is equally clear, however, that the Postal Service should not have carte blanche in the interim to spend hundreds of millions of dollars in a comprehensive program of research and development which includes, at their discretion and without limitation, electronic services.

To fund Postal Service research and development at, potentially, a billion dollar level—which it could well total over the years—in the absence of major policy determinations relating to electronic message services, is to place the Postal Service in a very difficult dilemma. Either it must adopt an almost aimless research design which would be unlikely to achieve useful results, or it must adopt a research design which would prejudice major policy questions. Either alternative is clearly undesirable.

At the very least, given the major unresolved policy questions involved, this enormous amount of Federal funding could be misspent in areas which have little to do with the Federal government's ultimate role in electronic message systems. But beyond this, it would seriously prejudice the resolution of the underlying policy issues. If this research program is allowed to go forward in its proposed form, Congress will ultimately be faced with the argument that unless the de facto policies which have been presumed in the Postal Service's multi-million dollar research program are in fact adopted, this enormous Federal investment will have been wasted. Or alternatively, the argument will be that the Congress, in approving such major funding and in leaving the disposition of these funds to the discretion of the Postal Service, in fact gave tacit Congressional approval to a Postal Service-determined policy and program in the electronic message service area.

We would, however, wish to offer an affirmative proposal for research which could be conducted in the current context of unresolved policy and technical issues. This proposal is based on a categorization of research and development relating to electronic message services into three distinct categories:

Policy research addressing the fundamental competitive and regulatory issues of the type which I have described.

Technical research relating to the technical options which are available with respect to electronic message services, and the way in which such options might be utilized by the Postal Service.

Prototype hardware and prototype system development for components of an EMS system or for an entire EMS system.

Based on these distinctions, we would propose the following approach to Federal research relating to electronic message systems.

There should be no Federal funding for the development of prototype EMS hardware or of a Prototype Electronic Message system.

It is our position, as stated, that the Postal Service should not be an underlying provider of electronic message systems. In this context, it would be inappropriate at any stage for the Postal Service to develop prototype equipment or a prototype system.

Notwithstanding our own position, however, it would clearly be premature for the Postal Service to go forward with hardware or system development, since there has not yet been a public policy determination on this issue in an authoritative forum.

Postal Service research of any kind should embrace existing principles of related public policy.



These principles are essentially those which I have outlined: that the monopoly grant given to the Postal Service does not extend into the electronic movement of information; that it is inappropriate for the Postal Service to be a manufacturing entity or an underlying EMS service provider; and that any electronic services contemplated by the Postal Service shall be within the constraints of Federal Communications Commission policy relating to communications common carriers. The implications of this latter point are that the Postal Service lacks authority to be either an underlying common carrier or a resale common carrier, and that the Postal Service should be prohibited from duplicating monopoly local distribution facilities for electronic communications. Finally, on policy grounds analogous to those for monopoly communications carriers, the monopoly Postal Service should not be permitted to engage in competitive data processing services of any type.

It is neither necessary nor appropriate to build an internal capability in the Postal Service to conduct technical research relating to electronic message systems.

Technical research relevant to Postal Service activities could usefully address such questions as the manner in which the Postal Service might contract with communications carriers to provide the electronic link in Generation II services, and the technical limitations and options relating to the local distribution aspect (Post Office to recipient) of Generation III services. However, high quality research of this nature is available from either the private sector or from the recently-established National Telecommunications and Information Administration. It would be both redundant and wasteful to establish such a research capability within the Postal Service itself.

Policy research relating to electronic message systems should be performed by the task force established in section 10 of this bill and not directly by the Postal Service.

Many governmental and private entities beyond the Postal Service are directly involved in the provision or regulation of electronic message services. The basic policy questions relating to electronic message services should, therefore, be addressed from the broader perspective of the proposed Task Force on the Mail and Communications.

For the same reasons, we believe the Subcommittee should consider giving responsibility for technical research relating to electronic message services to the Task Force as well. If this latter option were adopted, then the research funding made available in Section 4 of the Bill should instead be made available to the Task Force, for the purpose of obtaining such research under contract.

As already noted with respect to technical research, the National Telecommunications and Information Administration could be a resource for policy research as well.

The task force on mail and communications should be established, but its composition should be balanced and should be specified in the present legislation.

As I have outlined in this testimony, electronic message services relate broadly to multiple regulatory jurisdictions within the Federal government, as well as to the private sector which is moving forward with innovative new service offerings. We believe it is of great importance, therefore, that the Task Force be balanced in a manner such that all relevant policy options will be carefully considered. We would propose that this Bill specifically enumerate the Members of the Task Force as follows:

- Federal regulatory agencies (for representatives in total) consisting of:
  - The Postal Service (one representative).
  - The Banking Regulatory Agencies (one representative).
  - The Federal Communications Commission (one representative).
  - The National Telecommunications and Information Administration (one representative).
- Private sector representatives (four in total) consisting of:
  - Resale common carriers (one representative).
  - Data processing equipment companies (one representative).
  - Data processing service companies (one representative).
  - A representative consumer group (one representative).

Finally, in order to ensure that competitive options are fully considered, we would recommend that private sector industrial members of the Task Force (resale carriers, and data processing service and equipment companies), in addition to contributing to the overall report of the Task Force, produce a separate report outlining their collective ability to respond to the EMS marketplace.



## CONCLUSION

These points, Mr. Chairman, constitute our specific proposals relating to S. 3229. I will be happy to provide further details either in answering your questions or for the record.

In summarizing, I would emphasize that we do not wish to restrain the Postal Service from operating more efficiently through the use of technology. It is our strong belief, however, that the Postal Service should not move forward in this area in the absence of a prior Congressional determination of the fundamental issues of national telecommunications policy which are at stake.

Thank you.

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QUESTIONS OF THE COMMITTEE AND THE ANSWERS THERETO

*Question 1.* In your prepared testimony, you argue that the Postal Service's potential involvement in EMS has a chilling effect on private ventures. However, at another point in your testimony, you cite a number of private companies that are already in the EMS business. There seems to be a contradiction here. Can you reconcile it? Can you provide any evidence of the chilling effect?

Answer. There is no contradiction here, in that the thrust of our testimony is that there would be a larger number of competitive EMS offerings but for the existing context of Federal regulatory uncertainty.

It is difficult to submit strict evidence of the chilling effect of the present regulatory environment, since non-entry is rarely documented in FCC or other regulatory proceedings. However, a recent major report conducted for the Federal Communications Commission concluded the following with respect to the FCC itself.<sup>1</sup>

Based on the interviews conducted during the course of this project, it is our judgment that considerable confusion exists in the minds of EMS service providers and users (both existing and potential) on the implications of past FCC decisions for EMS; in some cases, this appears to have retarded market activity. The confusion is, in part at least, the result of having to consider not one, but a series of FCC rulings. Among those noted by our interviewees were: The First Computer Inquiry; The Specialized Carrier Decisions beginning with MCI; Carterfone; Packet Communications and subsequent value added services; The Dataspeed 40/40 Decision(s); The Ruling in Resale and Sharing; Registration; SBS Approval; The Second Computer Inquiry.

Clearly, the logic of this conclusion applies equally to the additional uncertainty provided by potential jurisdiction of both the Postal Service and the Electronic Banking Community; in the case of the Postal Service, of course, jurisdiction entails market entry. As a matter of basic logic, we believe it is apparent that an entrepreneur and its potential financial backers will be deterred to some degree by the additional risk associated with (1) the prospect of Federal regulation by one or more agencies, (2) the unknown specific substance of such regulation, and (3) in the case of the Postal Service, actual market entry.

*Question 2.* As a potential benefit from USPS involvement in EMS, both Mr. Geller and Mr. McLaughlin cite the possibility that postal involvement might result in a universality of service, which would not be provided by a competitive marketplace. Does it really make sense to subsidize a second electronic message system, to achieve universal service, when we already have one in the switched telephone network? If we are going to be in the business of subsidizing universal service, isn't the phone service enough—combined with traditional mail service?

Answer. The universal service issue with respect to EMS is a fundamental one. We cannot intelligently address the issues relating to how EMS service is to be provided in our country without knowing in advance whether universality of service is to be a goal. If universal service is not established as our national policy for EMS, then there is little justification for Postal Service entry into this field.

We presently have a universal service policy in two areas: voice telephone and traditional mail. These services are provided, respectively, by a de facto monopoly (AT&T) and a de jure monopoly (the Postal Service). The question which the Congress must consider is whether this status quo should be changed.

Given universal service in these basic services, it would seem that more sophisticated services such as EMS or data processing could well be provided solely

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<sup>1</sup> Kelba Bowen Associates, Electronic Message Systems: The Technological, Market and Regulatory Prospects, report to the Federal Communications Commission, April 1978, p. 189 (emphasis supplied).



on a competitive basis. The primary virtue of this approach, of course, is that the service is not provided in areas where it is not economically justified.

Further, there is no good evidence for assuming that competitively-provided EMS would not provide near-universal service. If the service were sufficiently useful, and the price sufficiently low, we could expect to see EMS services as ubiquitous as, for example, television.

Finally, as noted in our testimony, whether or not EMS is to be a universal service, it would be undesirable for the Postal Service to build underlying facilities for such a service. Particularly in the area of local distribution, we already have a transmission network in place in the AT&T and independent telephone operating companies.

*Question 3.* It has been suggested (Dennis Woywood, RCA, House Hearings on Postal Research & Development, April 13, 1978) that postal involvement in EMS might stimulate rather than depress the industry by instituting substantial government procurement and, thereby, driving down prices and attracting equipment manufacturers. This has happened in other high technology industries, notably the aircraft industry. Does it seem reasonable that this might happen in EMS?

Answer. There is no reason to believe that Postal Service involvement in EMS would stimulate the equipment industry any more than private sector involvement of the same scale. It is clear that both private industry and communications common carriers are desirous of entering the EMS marketplace at this time, to the extent that such service offerings are not vulnerable to displacement by later Postal Service entry as a monopoly provider, or subject to competition from services which might be subsidized by monopoly Postal revenues.

With respect to the market for EMS services, in contrast to related equipment, it seems highly doubtful that Postal Service entry would stimulate other EMS service offerings.

In contrast, if the Congress were to resolve the public policy issues related to Postal Service involvement in EMS, and in doing so, either preclude or clearly delimit any Postal Service role, we believe that it would be a major stimulus for private EMS service providers to move forward with further offerings.

Senator SCHMITT. Thank you, Mr. Nyborg.

Our fourth and final witness of the panel is Mr. John McLaughlin, executive director of the program on information resources policy at Harvard University. Welcome, Mr. McLaughlin. Your entire statement will be included in the record if you wish to summarize.

#### STATEMENT OF JOHN F. McLAUGHLIN, EXECUTIVE DIRECTOR OF POSTAL AND ALLIED ARENAS AT HARVARD UNIVERSITY'S PROGRAM ON INFORMATION RESOURCES POLICY

Mr. McLAUGHLIN. Thank you, Senator.

I think all the other witnesses are known to members of the committee. I should explain where I come from.

Senator SCHMITT. We know you come from Harvard.

Mr. McLAUGHLIN. Right.

Senator SCHMITT. Having been at that institution myself, that's sufficient credentials.

Senator FORD. That's only one opinion.

Mr. McLAUGHLIN. Being a Princeton man myself—let me start.

We conduct a policy research program which is supported by 70-some organizations who have diverse and conflicting stakes in information policy. Our supporters include the Postal Service, National Telecommunications and Information Administration, and Computer and Communications Industry Association, as well as A.T. & T., IBM, Southern Pacific, the communications workers and a host of others with interests in the subject of electronic message services.

Between 1964 and 1977 I was an employee of the U.S. Postal Service, the last 5 years of that time serving as Director of the Office of Strategic Planning.



I am testifying today in a personal capacity, not as a representative of Harvard, our program, or any of its supporters.

For today's session, I have been asked by the subcommittee staff to address the future market for EMS services given the presence or absence of USPS ventures in this area. At the risk of making some silly prognostications, I will attempt to give my own version of future developments in this field.

Before speaking of the future, however, let me make an observation about the present. I believe that there is a tendency, in some circles to talk of Electronic Message Services as something just emerging. For better or for worse, however, we are not starting this discussion with a blank slate. Over the past century we have seen the development of a universal electronic message service called the telephone system. Not only A.T. & T. but also Southern Pacific, Western Union, Tymshare, MCI, the Federal Reserve Board and others are operating a variety of systems which one would classify as electronic message systems. Thus, while we may talk of introducing new technologies or revising regulatory ground rules, we must remember that there are substantial institutions already playing in the EMS field.

What differentiates the future from the present is our expectation that the market for electronic message systems will grow dramatically. The reason for that demand I think has very little to do with the availability of the technology, but it stems from the importance of information as a basic resource.

Information today must be considered like energy, materials, people and capital, and like these other resources, it's a valuable commodity in itself, but more importantly, it is the resource which allows civilization to integrate and plan and manage the use of all those other resources.

Every major institution in this country is devoting more and more of its resources to acquiring, processing and transmitting information. According to widely accepted figures, information activities account for more than half of our gross national product and more than half of our work force. Thus, whether we are ready for it or not, we have moved into the information age.

The profitability and survival of many institutions depends increasingly upon their ability to manage the information resources they need to manage their business. Many, if not most, organizations have become aware of this fact. As a result, there are companies willing to spend tremendous amounts of money to purchase or to have access to electronic systems which will either reduce the cost of their information activities or which will provide them with more accurate, more complete or more timely information. And, to make information cheaper, more accurate, more complete or more timely, one needs bigger and better electronic message services. Thus, the demand for EMS is here and growing.

Not surprisingly, there also exists a host of companies anxious to supply this market. There are traditional suppliers like A.T. & T. and Western Union who would love to offer new services sometimes based upon new technologies. And there are specialized common carriers, vendors of value-added services and others who would like to expand their present services or to offer new ones.

The current shortcomings of new EMS services are not due to a lack of demand, or a lack of supply, or a lack of capital, but to legal



and regulatory problems. Assuming eventual resolution of the political issues at stake, electronic message services will proliferate.

Now how does this general outlook change with Postal Service involvement in the EMS business? The answer—or answers—to that question depends upon the ground rules which are established for USPS entry.

In thinking about those ground rules, I believe we should consider the institutional nature of the Postal Service. In recent years we have heard much of its problems and liabilities, including its traditional public service obligations. But, let's not forget its assets. For example, USPS has a monopoly on \$7 or \$8 billion worth of business as defined by the Private Express Statutes. Last year it received from Congress approximately \$15 billion in direct operating subsidies. Effectively if not technically, it enjoys the full faith and credit of the U.S. Government in financial markets. It holds the power of eminent domain and it possesses police powers—and a sizable police force. It also enjoys freedom from Federal, State and local taxes. What we are describing here is not your typical corporate competitor, but a Government agency.

Not surprisingly, a lot of people get very uneasy when confronted with the possibility of competing against Government agencies—and when we consider this list of advantages, I think we can understand why. A self-aggrandizing and unchecked Postal Service could introduce chaos in the future market for EMS services.

I personally consider many of these fears to be unfounded or overstated, but I understand them and recognize them to be one more uncertainty in a business where explosive technology and regulatory, judicial and legislative decisions are making life uncertain to begin with. I believe that Congress has the opportunity at this time to develop some principles and ground rules for Postal Service involvement in electronic message services that would eliminate some of the uncertainties both for the Postal Service and the vast community of potential competitors in the EMS field.

I would start, for example, with the premise that USPS should not be excluded from the field, *a priori*. Postal problems are too important and too complex, and technology is too vibrant and too promising, so as to categorically and arbitrarily keep USPS from exploring new opportunities for cost reduction or the generation of new revenues. I think that there is a chance—not an overwhelming one but a significant one—that USPS can evolve a systems concept using new technologies that will alleviate its current financial ills without doing harm to the Nation's economic and social fabric.

Such an EMS concept must, of course, meet a variety of tests:

Will it be beneficial economically to the Nation as a whole, not just USPS?

Will it provide improved services, at a politically and socially acceptable cost, to people who would not otherwise have access to a market responsive system?

Are the social gains inherent in a postal operated EMS sufficient to offset the innovation and management competition to be expected from the free play of market forces?

These are difficult questions of political economy which the committee has seen before in debates on telephone, broadcasting, cable, et cetera. They are as basic and as important as similar debates on



airline, trucking, or rail transportation. Or, for that matter, not that much different from those on national health insurance or tax policy.

Given their political nature, they should be resolved in a political forum—with the best social, technological, political, and economic ammunition available to all concerned. That forum is not L'Enfant Plaza, as I am sure that Mr. Bolger and his recent predecessors would agree. Nor, given the complexity of the issues involved, is that forum necessarily limited to the postal committees of the Congress.

Thus, while I believe that the Postal Service should be allowed and even encouraged to engage in research and testing concerning EMS alternatives, I think that Congress—and the White House—should exercise definitive and final judgment as to any capital commitment that USPS might make toward the deployment of an operational system.

If USPS wants to deploy such a system, they should be required to come before Congress to explain the economic and social advantages that justify their entry into this field. That would be a high hurdle and tough test for USPS, but given the importance of the public policy issues involved and given the unique institutional advantages that accrue to the Postal Service as a Government agency, I don't think it's unwarranted. If USPS can convince the Congress that they are better suited to provide certain services than A.T.&T., IBM, Western Union, and all of the other players from the private sector—more power to them.

Thank you, Mr. Chairman, for your kind invitation to express my views on this important issue.

[The following information was subsequently received for the record:]

#### QUESTIONS OF THE COMMITTEE AND THE ANSWERS THERETO

*Question 1.* Postmaster General Bolger said in his testimony that if people leave USPS because of EMS, the people left to be served by USPS would have very expensive mail costs. Do you agree or disagree, and why?

*Answer.* I am inclined to agree with Postmaster General Bolger. While the documentary evidence is less than overwhelming, there appears to be reason to believe that the U.S. Postal Service may enjoy economies of scale, particularly in the delivery function. If we assume that the local letter carrier will continue to deliver mail to every household and business six days each week, but EMS diverts a measurable proportion of the volume handled by USPS, Postal revenues will decline more than postal costs. Given such a situation, USPS would be required to raise postage rates for those who continue to use conventional postal services or to seek ever larger subsidies.

It should be noted that the type of electronic message services offered—and thus the types of diversion which occur—affect this outlook. It is seldom recognized or acknowledged, for example, that USPS does not “deliver” something like half of all first class mail: Most large firms, for instance, collect their mail at the post office. If a near-term EMS diverts mail volume that normally flows between such firms (a likely occurrence), postal revenues would decline proportionate to every piece of mail diverted, while postal costs would remain almost unchanged.

*Question 2.* I understand that you have a great deal of knowledge about the Postal Service generally. Would you care to comment on the recent postal service offering in the field of Express Mail, a field in which the Postal Service entered a competitive market? Is it your opinion, in particular, that the rates that the Postal Service is charging for Express Mail are reflective of their costs, or is cross-subsidy from their monopoly services going on there?

*Answer.* Given the fact that I departed the Postal Service almost one and one-half years ago, and given the fact that revenue and cost analysis data normally are reported with a lag of upwards of a year, I cannot claim any information concerning possible specific cross-subsidization of Express Mail service.

It should be noted, however, that the existence of a cross-subsidy to Express Mail would not be surprising. The Postal Service, like many public utility func-



tions, incurs a high proportion of costs which are joint or common to all or many of its services. The allocation of such joint and common costs to individual services necessarily becomes an arbitrary and "political" process. There is no pure or easy way of deciding whether such allocation decisions result in "too much" or "too little" being assigned to specific service such as Express Mail.

It is my understanding that after examination and hearings, the Postal Rate Commission has recommended a schedule of rates for Express Mail based upon their conclusion that the service is not being subsidized by other postal services. Those parties who disagree with the Postal Rate Commission can litigate its findings. Since Congress has established the Postal Rate Commission, its guidelines for recommending rates and a judicial appeal process for re-examination of the Commission's findings, I believe it might be premature to second guess their conclusions at this time.

*Question 3.* You state that, "Congress has the opportunity at this time to develop some principles and groundrules for Postal Service involvement in Electronic Message Services that would eliminate some of the uncertainties both for the Postal Service and the vast community of potential competitors in the EMS field." Do you have any specific suggestions as to what those rules should be?

Answer. In my testimony of August 2 I implied some general principles and groundrules that Congress might wish to consider. More specifically:

First, and foremost, any Postal Service effort to provide an operational EMS should require prior approval of the concept by Congress. Adoption of such a tenet would allow for the fullest public examination debate of a USPS effort.

Secondly, I believe that any Congressional approval of a USPS EMS should specifically stipulate what degree of monopoly protection—if any—would be allowed such a system and the accounting groundrules governing possible cross-subsidization between EMS services and existing monopoly services.

Thirdly, I would suggest that Congress establish some limits as to the funds, timing, and extent of any Postal Service "testing" of electronic services. Such limits should be liberal and reasonable but finite. (In this regard, incidentally, I do not consider that another short-term deadline such as May 1, 1979 is very reasonable). I would be inclined to consider—given the scope of a meaningful effort—that any "test" exceeding \$"X" million, "Y" years, or "Z" metropolitan areas might be considered as an "operational" system rather than a test.

It is my impression, by the way, that Mr. Bolger agreed explicitly with the first two of these items during the hearings and also recognized the potential for abuses concerning the third.

*Question 4.* As a potential benefit from USPS involvement in EMS, both you and Mr. Geller cite the possibility that postal involvement might result in a universality of service, which would not be provided by a competitive marketplace. Does it really make sense to subsidize a second electronic message system, to achieve universal service, when we already have one in the switched telephone network? If we are going to be in the business of subsidizing universal service, isn't the phone service enough—combined with traditional mail service?

Answer. These are the most interesting, most important, and least answerable of this set of questions.

If the telephone system provided—or was allowed to provide—all of the services that an electronic message system provided—and if "we" were subsidizing it ("we" being some taxpayers and/or some classes of users)?—I would believe that one system might well be sufficient. For better or for worse, however, the telephone system does not, and under current groundrules, perhaps cannot provide all of the services that an electronic message system might provide. And, if the telephone system were to provide more of these services, I am less than confident that we could assume the continuation of traditional mail service as currently understood (for the reasons discussed in my first response).

I believe that Mr. Geller and I both were suggesting that something approaching "universal" service in communications contributes to the essential infrastructure of our national economy. The ability to "contact" someone (by mail if not by phone) on the first try—more or less—is a critical ingredient in our daily way of life. Over the years Congress has attempted to assure such certainties of life and commerce by a multitude of means including subsidies to the Postal Service, REA loans, AMTRAK and CONRAIL funding, and the construction of the Interstate Highway System.

If Congress felt comfortable with the idea that a single transportation medium could provide universal service most efficiently, presumably all Federal "subsidies" could go to just highways, just rail, just air, just marine, just rapid transit,



etc. Presumably, however, there are disadvantages to leaving all commercial transportation subject to the vagaries of truckers, teamsters, and the ICC. Communications must be viewed similarly.

*Question 5.* It has been suggested (Dennis Woywood, RCA, House Hearings on Postal Research & Development, April 13, 1978) that postal involvement in EMS might stimulate rather than depress the industry by instituting substantial government procurement and, thereby, driving down prices and attracting equipment manufacturers. This has happened in other high technology industries, notably the aircraft industry. Does it seem reasonable that this might happen in EMS?

*Answer.* I agree with Mr. Woywood that postal involvement in EMS might stimulate industry activity through large USPS procurements of hardware and services. I tend to question, however, both the importance and desirability of such government stimulus when considered as a goal in itself.

As I noted in my testimony, the telecommunications and computer industries are booming, including those elements concerned with EMS. Telephone industry revenues exceeded \$40 billion in 1977. Spending for computer equipment, software, and services probably exceeded \$30 billion. If we consider the research and development and investment spending of these and a number of related industries, it appears that USPS would have to spend billions on EMS to provide a measurable stimulus to the overall industry.

Postal spending, of course, could influence the direction and nature of the industry. Looking at the analogy to the aircraft industry, however, one might question the long term value of such efforts. The "stimulus" by government to develop new generation aircraft caused Lockheed to develop the C5-A and the L1001, but it also resulted in the Federal "bailout" of Lockheed. Seattle, Cocoa Beach, Florida and a host of other communities around the nation demonstrate some of the perils and vagaries of such stimulus.

Senator SCHMITT. Thank you, sir.

By your remark that the discussion would not be limited to postal committees, I presume you agree with including the Subcommittee on Communications. The committee thanks you for your testimony.

I would like to ask one or two questions just to make sure we have all the essential information for the record, and then I will yield to Senator Ford for his questions and then I will probably have some more.

Other than Mr. Geller's suggestion that the task force outlined in section 10 of the bill, S. 3229, report also to the President and Congress, do any of you have specific changes in the wording of section 10 that you would like to recommend at this time?

Mr. BOLGER. Not specific changes with me, Senator, but we are still looking at this being less than a formal task force and we would like to recommend some specifics and we will get it to the committee.

Mr. GELLER. It may be that the task force called for in section 10 would not be the most appropriate mechanism for studying this particular issue. That task force is to advise the USPS on a number of technical issues that have nothing to do with the electronic message service and how that service might interface with the private sector. If you use a task force concept—and this is a matter for the judgment of the subcommittee and the Congress—you may need to form another task force reporting to the Congress and to the Executive, leaving the section 10 task force to deal with the USPS. In other words, you might want two task forces. A lot of engineers and technicians might be placed on the section 10 task force because their professional advice would be best suited for the issues other than the one involved here.

For this particular issue of policy you might involve economists, political scientists, and engineers. Also, you might wish to factor in



industry people, as recommended by both the private sector and the postal sector.

Senator SCHMITT. Do you feel that the study that is about to begin or has begun in the Office of Technology Assessment and which is apparently looking at a variety of electronic communications systems might be the forum for this?

Mr. GELLER. I have raised this idea with my people and we agree that this is a possibility. Congress has created the OTA and if you believe you will get the necessary information from that agency, there's no need to set up a separate task force. As I said, we are studying it also, using our own procedures and policies, and we intend to extend to the Congress whatever help it requests. In short, we are not saying that you have to have a separate task force; OTA is a possibility.

Senator SCHMITT. Well, if you have a specific recommendation or alternative recommendations, the committee would appreciate that.

Mr. GELLER. We would be glad to supply you information on how a task force—or other mechanism—could be structured to deal with this issue.

Senator SCHMITT. Mr. Nyborg.

Mr. NYBORG. Senator Schmitt, with respect to section 10, we have made specific recommendations in the text of our testimony. The main point, as outlined at length in our testimony, is that there are at least three regulatory domains involved in this issue—the FCC, the Postal Service, and the banking regulatory agencies—and there are many parts of the private sector involved as well.

Therefore, if there is to be a task force as proposed in section 10, I would share Mr. Geller's remarks that it's less important where that task force is as long as there is a qualified body to study this issue to make a determination. But we have recommendations on the composition of the task force—the four regulatory representatives, the four private sector representatives should include on the regulatory side, a representative from the FCC, a representative of the banking regulatory agencies, or perhaps the now terminated National Commission on Electronic Funds Transfer, a representative of the Postal Service, and although not a regulator per se, the National Telecommunications and Information Administration.

On the private side we would envision a representative from the resale common carrier industry—that is, those that do not provide underlying facilities, from the data processing equipment field, from the data processing services field, and a representative consumer group. Further, in terms of specific language, we would propose that the private sector part of this panel produce a separate report outlining its ability to respond to the EMS marketplace in order to insure that all things are considered.

We also have a proposed change to section 4. I will reserve that if you wish to discuss it separately.

Senator SCHMITT. I was going to make that my next question.

Mr. McLAUGHLIN. Well, as much as academics love task forces and study groups and whatever, I tend to concur with Mr. Bolger's basic position I think having witnessed in 16 years in Washington many task forces and study commissions.

Basically, I think eventually Congress is going to have to decide the issue. You have OTA as an arm and the administration has NITA as



an arm, and I think it would behoove the Postal Service to eventually refine a position that they want to sell and then it's up to the administration and Congress to use their technical arms to decide whether or not it's worth doing.

Senator SCHMITT. Mr. McLaughlin, there is some merit to what you say. I have here a list which I will include in the record of nine studies of the Postal Service and electronic mail and it's an impressive list of studies.

1. Report of the Commission on Postal Service—April, 1977.
2. Electronic Message Systems for the U.S. Postal Service—National Research Council—1976.
3. The Postal Crisis: The Postal Function as a Communication Service, O.T. Publication—77-13, January, 1977.
4. Electronic Message Systems: The Technological, Market and Regulatory Prospects—Kalba Bowen Assoc.—April, 1978.
5. EFT and the Public Interest—Report of the National Commission on Electronic Funds Transfers.
6. Electronic Alternatives to the Postal Service—Geller and Brotman (1977).
7. Impacts of Electronic Communications Systems on the U.S. Postal Service—A.D. Little—February 15, 1977.
8. The Post Office: Business Opportunities and Technology for the 1980's—National Research Council—1975.
9. Changing the Private Express Laws: Competitive Alternatives to the U.S. Postal Service, January 1977.

Senator SCHMITT. I'm not sure personally whether one more study will contribute a great deal, but the purpose of these hearings and our eventual markup is to make that decision. But your suggestion that our eventual markup is to make that decision. But your suggestion it's going to take much more than that I think is clear and I think it's generally understood and agreed to by the committee.

Now what about section 4? Would you like to continue your remarks with respect to section 4? Are you familiar with section 4?

Mr. McLAUGHLIN. Yes, I am, and I am much more comfortable with that than I was with the H.R. 7700 language which would specifically at an earlier point in the draft propose specific amounts be spent by the Postal Service in this field. I don't think that makes sense and I think whether or not research and development funds are appropriated or whether they are spent from the postal revenues will depend very much upon the kind of system that one conceptualizes, and if it's a system similar to that developed or proposed by RCA under contract to the Postal Service, which is something that is designed to benefit very specifically a group of mail users, it probably should be those rate payers who pay for the research and development. They are going to have a new, better, cheaper product supposedly if you put that system in place.

Senator SCHMITT. Let me rephrase my question because I think section 4 would have been viewed by you with some concern, given your testimony, and basically it does seem to establish some or have some legal and policy implications if in fact it is approved by Congress.

In particular, it would mandate a portion of the Postal Service budget to be spent on methods of electronically sending and delivering letters and other mail matter.

Mr. McLAUGHLIN. Well, unless you are ready to prohibit the Postal Service from doing anything in this field, which I think would be premature at this point, it's almost impossible to delimit the range of



research and development. I find it analogous to the present data processing inquiry at FCC of where do you cut off communications from computation. And I think in this case it is very difficult to say that you will only do research and development on a very small piece of an EMS.

Senator SCHMITT. But at the very least, Mr. McLaughlin, you believe that the bill should be clear, or at least the legislative history clear, that a basic policy decision has not been made beyond the fact that research and development should be conducted?

Mr. McLAUGHLIN. I think that should be very specific.

Mr. BOLGER. I think our research in this field as far as money expenditures is concerned should be modest. We have kept them modest. We believe they should be that way and, first of all, we don't have the money to go out on a big venture and I don't think it should be appropriated at this time from the taxpayers. I frankly think it would be unwise for us unless we knew there was a real market there to produce a return on investment to even consider investing hundreds of millions of dollars in the current rate payers money into an unknown field, and we are not going to do it.

I think it's appropriate, if we got into that type of thing, for us to come back to the Congress of the United States who has oversight responsibilities of the Postal Service, which we welcome, and have a discussion of this before we venture into that type of activity.

Again, we are trying to identify our role. We don't know what it is yet. We probably won't for some time. If we ever got into a role that saw us investing in multihundreds of millions of dollars or billions of dollars, I think it would be appropriate that the public issue be addressed first before we went down this road.

We are often identified as a public corporation, a quasi-public agency, whatever it is. Just for the record, I'd like everybody to know the law says that we are an independent agency of the U.S. Government. We know our position on this and we intend to be an independent agency of the U.S. Government. It's awfully important that people don't get that twisted.

Senator SCHMITT. Thank you.

Mr. Nyborg, would you care to comment on section 4 and this legal and policy issue?

Mr. NYBORG. Yes, I would, Senator.

As a preliminary, I would like to categorize three kinds of research that we can perceive—three mutually exclusive categories—policy research, technical research and, third, distinct from technical research per se, the development of prototype equipment or prototype systems. While we recognize that policy research should be conducted, we believe that should be outside of the Postal Service because the issue is broader than the Postal Service.

We believe that technical research should be conducted; we might debate where that research should be, but we agree that it should be conducted. We feel strongly that the Postal Service should not at any point be developing prototype equipment and hardware because of our view that it is inappropriate for them to be an underlying provider or an equipment manufacturer.

Even if you disagree with our fundamental position, it is at least premature to go into the prototype equipment and systems area, and



it is an area where very large amounts of money can be spent. We would hope to see specific language in section 4 that would perhaps allow the Postal Service into technical research but exclude them for the present from developing prototype hardware or prototype systems.

Further, given Mr. Bolger's comment just preceding mine, I think it would make sense to have a reasonable dollar limit on that research. As the legislation reads right now, they are authorized to spend their entire public service appropriation in this area, 900 and some odd million dollars. An entry at that scale would have very major impact and would have a very heavy chilling effect on private competitive ventures which might be thinking about entering this field as well.

Finally, the latter question of large expenditures, brings up the question of the manner in which the Postal Service contracts with outside firms and with outside suppliers.

Some of our members have brought to our attention a competitive bidding problem in the way the Postal Service is approaching this area. In particular, I refer to an AMSAT proposal for the domestic link in what is now the Comsat-Postal Service experiment. These firms were essentially informed, as I understand it from their counsel—and we would be happy to submit further details for the record—that the Postal Service would sole source the domestic link to Western Union. We think it's very important that there be an opportunity for private industry to participate on a competitive basis in whatever the Postal Service does.

Mr. BOLGER. May I comment on that, Senator?

Senator SCHMITT. Certainly. Mr. Nyborg, if you would submit any letter to us on that subject, we would appreciate it.<sup>1</sup>

Mr. BOLGER. I think the gentleman is referring to our possible venture into the electronic computer originated mail system which is a bulk electronic transmission system. They were considering going on a sole source basis in an effort with the Western Union but only after we contacted and had meetings with a number of organizations, and some that we invited into meetings that didn't care to participate, and nobody was ready, willing, and able to venture into this at this time, at least this is what we had been informed by these people.

When we get through with the limited period of time we're going to involve ourselves in the sole source contract with Western Union, it will be open for competitive bidding and the letter contract that I'm getting ready to sign now and the more formalized contract we'll sign later will be open ended so we will not have—Western Union will not be married to us, so to speak, forever in this venture, but just for a limited period of time, and then it will be open for competitive bidding.

Our policy always is that if competitive bidding is available, if we can get the contractor to do the work, we are going competitive. We are solely against sole source if we can avoid going sole source.

Senator SCHMITT. We will also appreciate your comments on this if you think the record needs to be expanded. Would Western Union, if they become a sole source contractor in this initial stage, be prevented from bidding on it later?

Mr. BOLGER. They would not be prevented. They would have the same offering as anybody else would have.

<sup>1</sup> See p. 80.



[The following information was subsequently received for the record.]

USPS ELECTRONIC MAIL CONTRACTS (ROUGHLY CHRONOLOGICAL ORDER)

Title	Contractor	Amount
Concepts phase of electronic handling of mail.....	Philco-Ford.....	\$212, 000
Electronic mail system—system design support studies (renewable).....	ITS.....	898, 000
Systems development and evaluation.....	RCA.....	2, 528, 000
Printing and paper handling equipment.....	Pitney-Bowes.....	2, 724, 000
Technology assessment and telecommunications.....	A. D. Little.....	750, 000
Survey of technologies applicable to electronic message handling systems.....	do.....	95, 000
System planning models (renewable).....	NBS.....	145, 000
Electrooptical technical cooperative study.....	A. D. Little.....	15, 000
NOSC support services (renewable).....	Naval Ocean Systems Command.....	1, 650, 000
Long-term technical planning.....	NRC.....	186, 000
Electronic transfer systems.....	Quantum Science Corp.....	20, 000
Engineering development model test plan.....	Computer Science Corp.....	104, 000
NTIA support services interagency agreement.....	Department of Commerce.....	25, 000
Scanner exploratory development model.....	Fairchild Camera.....	901, 000
Test, modify, and maintain printing and paper handling equipment.....	Pitney-Bowes.....	1, 458, 000
International electronic message system development, implementation and test.....	Comsat.....	895, 000
Total (16).....		12, 606, 000

Note: Projects in procurement (4)—lab integration and evaluation system; technical requirements study; validation test bed planning; self-service message entry.

Senator SCHMITT. Mr. Geller, would you care to comment on section 4?

Mr. GELLER. Well, the Postal Service has been involved in electronic message system research and development since 1968. And there is the RCA contract that I've referred to. It seems to us appropriate for this research to keep going forward. The key is what you have said, Mr. Chairman—that while it's all right to plan for research there should be no significant commitment of funds to an electronic message system by the USPS without a legislative judgment that stipulates what will best serve the Nation.

Senator SCHMITT. Do you think section 4 can be interpreted as legislative judgment?

Mr. GELLER. I think you can handle it very simply through legislative history. This history would state the point with which all of us here—Mr. Bolger also—are in agreement: There should be no such significant funding commitment until the proposed system has been brought to the Congress and Congress has decided that the USPS is an agency of the Government. If there's legislative history to that effect, it shouldn't be necessary for Congress to try to cross every "t" or dot every "i" about how much control it has. The Postal Service should have flexibility, but it should hear very clearly the message that's been stated at this table. I think that the legislative history can be clear on that and that would suffice.

Senator SCHMITT. Thank you. Senator Ford.

Senator FORD. General, I was getting ready to ask you a question and I think Mr. Geller answered it. The Department has been involved in research as it relates to electronic mail since 1968. Dr. Geller also referred to work with RCA.

Mr. Bolger. Yes, sir.

Senator FORD. Is RCA married to Western Union?

Mr. BOLGER. No, sir, RCA is under contract with us to help us in this study. It's a very modest contract, a total amount of about \$2



million. I will supply the exact amount for the record. [See table on preceding page.]

Senator FORD. How many private operations have attempted to usurp your position as the Postal Service for rural free delivery?

Mr. BOLGER. None, sir, that I know of.

Senator FORD. They only want to get in on the cream; is that right?

Mr. BOLGER. I think the private sector, and probably rightly so, is looking where they can make a profit in our activities.

Senator FORD. How soon do you think the Postal Service will be in a position to make an effort to transmit some electronic mail?

Mr. BOLGER. We are transmitting it now. We have been for some time in a thing called mailgram. We are getting into the next step of that and that is electronic computer originated mail system that we will probably be working with late this fall. If we are talking about getting into billions of pieces of mail I think it's a long time before anybody will be ready for that and at least several years at least before anybody starts, and our own demonstration effort that we put up will be just that, a demonstration effort. I think it will be a couple years before we will be able to put it up. We won't know for sure where we are going on that until we complete the RCA contract which is due to be completed in September.

Senator FORD. A demonstration program for the transmission systems we are discussing here today, what would such a demonstration program look like? What are you talking about in total numbers and costs and that sort of thing?

Mr. BOLGER. There's no real limit. The cost is a limit, but you could go from one point to another and call that a demonstration and put up a network in 10 cities or 25 cities. There's no limit to what you want to do.

What you're trying to do is to do two things: demonstrate whether it's possible; and then, the other thing is demonstrate if there's any possible market for it. Nobody yet has developed that there is definitely a market for this type of activity, at least not any information that we have available.

Senator FORD. It has been objected that, in an EMS effort, you are usurping private enterprise, but no appetite has been developed so far for this type of transmission of the mail?

Mr. BOLGER. Senator, whether we're talking electronic transmission or communications or anything else, I don't think there's anything that the private sector is ready and willing and able to do serving everybody that the Government should do for them. I'm a firm believer that the private sector should have that opportunity if they are ready, willing and able to do it.

Senator FORD. Is there any privacy problem involved in the transmission of electronic mail?

Mr. BOLGER. I think there's less opportunity to keep the sanctity of the seal of electronic transmission communications. They have to be handled in assorted envelopes versus you writing a letter, sealing it yourself and sending it through and the next person that opens it is the addressee.

Senator SCHMITT. Would the Senator yield for a clarification? Did you say you think electronic mail has more potential for abuse in terms of privacy?



Mr. BOLGER. At the present time, yes, sir.

Senator SCHMITT. At the present time? What do you mean?

Mr. BOLGER. Well, in the primitive state it is in. I don't know where we can go in the future, whether you could take a—you might insert it yourself into some type of receiver and it could be converted, you get a hard copy back that can be converted into a digital language, transmitted, and received on the other end, and converted to hard copy and immediately enveloped, without human eyes seeing it. That is possible technologically.

But right now a mailgram is certainly not as private as a letter. It just isn't, because the clerk on the other end has the opportunity to see that exposed before it is sealed in an envelope.

Senator SCHMITT. But within the total capability of electronic communications, there is probably at least as much, if not actually greater, possibility of having secure transmissions electronically as an envelope sealed by hand, is that correct?

Mr. BOLGER. I think the potential is there, yes.

Senator SCHMITT. Even though we may not be there now, theoretically the capability is certainly there.

Mr. BOLGER. I am not that knowledgeable. I think possibly you are right, Senator.

Senator SCHMITT. Excuse me.

Senator FORD. There is a lot of theory about what we are trying to do. I am not sure though that in the real world we want it.

Mr. BOLGER. I am enjoying a unique experience here this morning. The last two or three times that I have been to a hearing on this I have been encouraged to spend more money, and now I am hearing I should spend less.

Senator FORD. You suggested that. I am for it. I believe you said that you have appointed Frank Summercamp?

Mr. BOLGER. That's right.

Senator FORD. He has 35 years experience in the Postal Service?

Mr. BOLGER. Yes, sir.

Senator FORD. How much experience does he have in this field?

Mr. BOLGER. I don't think he has a great deal of experience in this particular field. I think he understands what we need to do, where we need to go. He isn't a scientist by a long shot.

Senator FORD. Is he practical?

Mr. BOLGER. Yes, sir, he is very practical. Also what we need to do—there are two roles here. We have to get the next step of handling the conventional mail, getting from the mechanization which we have exploited to its maximum, and get to automation. That will be his major role. He is very skilled and knowledgeable in that regard.

Senator FORD. General, with your independent agency status, how was Mr. Summercamp appointed?

Mr. BOLGER. Mr. Summercamp was appointed by me.

Senator FORD. With no approval of the Board of Governors?

Mr. BOLGER. The Board of Governors approved his salary level, that is all.

Senator FORD. What will his salary be?

Mr. BOLGER. \$52,500.

Senator FORD. Mr. Nyborg, give me four or five companies that you represent in your association?



Mr. NYBORG. Telenet Communications Co., Scientific Time Sharing, Computer Corp. of America. Those three have all offered electronic message services of some sort.

Senator FORD. What others do you represent? It looks like you have a \$3 billion income operation there. I am interested to know who all they are.

Mr. NYBORG. Mainframe Computers, Amdahl Corp.; Peripheral Products, Storage Technology Corp., and a broad variety of others. There are several in the services and leasing area. Virtually the entire spectrum.

Senator FORD. You are objecting to the procedure there of the Postal Service traveling down the road which they are traveling. In one part of your statement you complain about A.T. & T. and their procedures, yet Mr. McLaughlin named off a good many companies that are in the field other than A.T. & T. Yet you knid of say that A.T. & T. is left out, in another part of your statement here, because they are getting ready to get into the field with somebody else. Is that correct?

Mr. NYBORG. I did say their entry into electronic message service was imminent through their proposed offering, now pending at the Federal Communications Commission (FCC) of advanced communications system.

Senator FORD. There was somebody else—I have been trying to find it in here—other than A.T. & T. getting ready to get into the electronic mail.

Mr. NYBORG. IBM is, through Satellite Business Systems, and some of the members I mentioned; there are several others, for example, Tymnet is getting in with its Ontyme service. There are, I would say, on the order of a dozen entries into the field at this time.

Senator FORD. Mr. Nyborg, is there any rule against moving into say a large corporation, by someone other than the Bell Telephone System with telephone equipment?

Mr. NYBORG. I am not sure I understand the question, sir.

Senator FORD. What you are talking about is monopoly. I understand that many operations now with telephone switchboard operation, are moving into major corporations, big commercial users, putting in sets to be operated by other than the Bell Telephone System. Is that correct?

Mr. NYBORG. That is correct, Senator. The FCC is pursuing a policy of introducing competition into the communications industry. Nonetheless, as of 1975, A.T. & T. had approximatley 94 percent of all telephone carrier operating revenues, despite the GTE companies and the 1,600 independents.

Senator FORD. Let me ask you another question. Is there any prohibition against say United Parcel Service coming in and taking the mail and operating in competition with the U.S. Postal Service?

Mr. NYBORG. Senator, I believe there clearly is, with respect to first-class paper mail. The intent of our testimony is that electronic services, as Mr. Geller pointed out, are different in kind; this is a different marketplace, and it is presently competitive.

Senator FORD. But the point you were making when you were objecting to the Postal Service getting involved in electronic mail, was that you have then eliminated private competition. The point



I am trying to make now is the Postal Service is the only one that has rural free delivery, and we are expecting the Postal Service to do certain things, and yet the private enterprise is moving in and creating some problems.

Now if this is going to be something that will serve all of the people, I would venture to say that the little that it spent for the experiments and the demonstration programs that are anticipated by the Postal Service is not going to hurt private enterprise. They have to contract with somebody. If they have open competition and open competitive bidding, then I don't see how private enterprise could object at all, if they are going to have their equipment used as a result of electronic mail. And apparently electronic mail is something just in the thinking stage. The Postal Service has been working on it for 10 years.

Mr. NYBORG. Senator, I would like to make two responses to that, if I may.

Senator FORD. Sure, you can make them 1(a) and 1(b).

Mr. NYBORG. 1(a) is a point from our testimony, where I quote former Postmaster General Bailar to the effect that he didn't think the post office should move into a service for the sake of maintaining the Postal Service in its present size and scope, if private industry is willing and able to fill those functions.

I think that fits well with what has been offered in the electronic message market.

Secondly, the report of the Commission on Postal Services concludes:

Postal services that become obsolete, especially as a result of diversion of mail to electronic communications should not be continued.

Now if the Postal Service is getting into this area, we feel that there are serious problems where you have a monopoly in the same market as competitive firms. We have faced this situation for years in the communications industry, the history of FCC regulation over the past 20 years has indicated that the problem of monopoly services subsidizing competitive services is very serious, and represents a very serious enforcement problem. It is one of the major issues that is being addressed in the rewrite of the Communications Act, as you well know. And it is one of the major issues that exists in the FCC computer inquiry.

The fear is that where a monopoly service and a competitive service exists within the same corporate family, the monopoly service can subsidize that competitive service, the competitive service can underprice other competitors, put them out of business, and when they are gone, the subsidized competitive service can call the shots on prices.

Mr. BOLGER. Senator, my predecessor, Mr. Bailar, has been quoted twice this morning, but it is out of context of the entire statement, which was part of testimony before the House Subcommittee on Post Office Operations and then later in a speech. To amplify on what Mr. Nyborg said, Mr. Bailar and I have said many many times that one of the reasons we have to stay knowledgeable in this field and conduct experiments is to make sure that all of the people in this country might have the opportunity, if they need this type of service. And until the private sector establishes that they are ready, willing and able, I think the Government has a role in this,



I think the Postal Service is the appropriate place in the Government to have that role.

Senator FORD. The point I am trying to make here is—and you said it much better than I could have—that we all have the same fear that you do, Mr. Nyborg, that we don't want the Federal Government to be in everything. But there is a situation where the Government has a responsibility to try to make things better, less expensive, if we can, cut down on the dang regulations if we can.

And I don't fault the Postal Service here for what they are trying to do.

Second, I don't fault you for representing your people here today, for the fear of taking away private enterprise. And I applaud you for that. But somewhere we have to find a balance. And I think the direction that the Postal Service is taking now is appraently an endeavor to find a proper balance.

Now if they can come up with the demonstration and it can be proven that private enterprise can do it cheaper and better, under the supervision of the Postal Service I don't believe they will object to that. And I hope Congress wouldn't object to that.

So what I am trying to do here is to help the Postal Service arrive at a point where they can make a determination in cooperation with others, because they are going to private enterprise for the hardware, software, whatever it might be. We are not in that kind of business.

So, Mr. Chairman, I don't have any further questions, but I do want to admonish the Postmaster General that a modest amount ought to be spent here, and, Mr. McLaughlin, I appreciate your support, and I hope somewhere along the way we can pull all of these studies together and come forward with a consensus. A consensus may not be perfect, it isn't always perfect, but at least is is a foundation on which to start.

They need a quorum in the Energy Committee, so I have to leave.

Senator SCHMITT. Thank you, Senator. We will continue with a few more questions to try to make sure that this committee's record is complete.

Senator SCHMITT. I would just say, before I begin the rest of the questioning, that I think the real issue in this area of communications, as well as others, is how the consumer will best be served. Will they be served best by a monopoly, or entirely competitive services, or some combination of the two?

If it is a combination of the two, is the monopoly associated with the Federal Government or not associated with the Federal Government? And I am speaking of the future, maybe 50 years from now.

How is this thing going to develop? What kind of legislative framework has to be established so the best system can, in fact, rise to the top?

Does anyone care to comment on that?

Mr. NYBORG. I would like to make one transitional point that addresses those issues, Senator Schmitt, and it related to Mr. Ford's comments.

I think a fundamental issue which the Congress will have to decide is whether they do intend to have nationwide universal service in electronic message services.



Certainly we would not dispute the existing Federal policy, in fact, we commend the policy for a universal system for the distribution of mail as we now know it.

I think the very difficult question the Congress must address is with respect to electronic message services, is: Do we need a similar policy for EMS?

I think one might argue that competitive marketplaces have very well served areas where there is a need for universal services, whether it be television or refrigerators, or any number of other things you find in virtually every home in the country.

I think that issue will very heavily bear on the ultimate market structure that we develop to deal with this. If there is not a universal need, I would submit that private industry can serve the markets that warrant this service.

Mr. BOLGER. In that respect, Senator, if there isn't a universal service rendered, what is left of the conventional mail service will be very, very expensive for the people that do not have electronic transmission message service available to them, very expensive, and that would be totally wrong.

Senator SCHMITT. The question is how do you provide for the transition. If, in fact, 50 years from now one envisions every home having an electronic message terminal, every business having a electronic message terminal, how do you get from now to then at the least cost and the least inconvenience to the public?

Mr. BOLGER. That is what needs study.

Senator SCHMITT. Now, Mr. Bolger, what do you feel, in terms of R. & D., the USPS can do that the private sector is not doing or won't do?

You say they are not fit, willing and able, and I am sure we can debate that. But R. & D. is going on, isn't that true?

Mr. BOLGER. Yes; As far as I am concerned, the Postal Service on its own cannot do a great deal. Our research and development in electronics, as in most new technologies, advancements of current technologies, we have worked with the private sector, other Government agencies and a great deal of it is under contract with the private sector, and we would continue to do that. We are not that smart about it, frankly, we do not have all of the people with all of the skills and all of the professionals that are needed. So we go out with a great deal of contracting.

I propose—we have contracts with NASA and other Federal agencies, and we would continue to do so. I think the combination of the private sector and all of the Federal agencies working together is the right way to go on this. And even the academics.

Senator SCHMITT. Mr. Geller, do you see anything, that can only be done within the Government at this stage on the research and development side? And a subsidiary question: Why should the Postal Service do it, which has, in a way, a vested interest? Why should not NTIA do the research?

Mr. GELLER. We are not a research organization. We study and try to formulate policy and we advise the Congress and the FCC. We have left research in telecommunications very largely to the private sector and that research is going full blast. There is no question that this is an area experiencing an enormous technological push. It is being propelled



by what is a revolution, both in computers, with their semiconductors, and in transmission modes—satellites and fiberoptics, for example. No dearth of research is observable in these areas.

One area in which Postal Service research clearly has served well is that of paper handling machines, as I mentioned. Somewhat the same may be true in printing as well. Mr. Bolger is more expert on this than am I. But I know that it has been doing research in this area—printing—and that is a step forward.

So far as the electronic part of the electronic message system goes, it seems to me that the private sector is moving very well. And so are our foreign competitors, such as Japan. So I wouldn't think any need exists for the Postal Service to intervene in electronics R. & D.

But there are other aspects of electronic mail where it could make a contribution.

Senator SCHMITT. A contribution, independent and clearcut, that will not be made by the private sector at this time?

Mr. GELLER. I think eventually the private sector might come in, but the Postal Service might hasten it. It hastened the paper handling process with paperhandling machines that now approach 10 copies per second. That development was fostered by USPS and done by a private firm, but under contract to USPS.

What is involved here to a great extent is not research and development in the technical sense. What is involved, rather—and I think Mr. Bolger would agree—is marketing, trying to figure out where opportunities may lie for the USPS, opportunities that are not being met by the private sector. I don't know if they exist. That is what the RCA contract and other contracts are about.

But I would agree with the trend of thinking evident in your questions, that the Nation might benefit by Postal Service entry in R. & D., if some research gap appears, if we detect something not being done by the private sector.

I would point out again that there seems to be agreement that the private sector can do and is willing to do most of the required research, and that therefore this need not necessarily be filled by a governmental organization.

Senator SCHMITT. Just so the record is clear, you said NTIA doesn't have research capability. I thought you did have research activities in Boulder.

Mr. GELLER. I am sorry about that. We certainly do perform research in spectrum. In Boulder, at the Institute of Telecommunications Sciences, we study how the spectrum might be better used. We focus sharply on the spectrum. Our research does not pertain to hardware, such as the development of fiberoptics, or of new computers, or of anything that would begin to approach EMS number 4. It is strictly limited to spectrum. It is a very important contribution; I don't mean to degrade it. Eighty percent of our work at ITS is done for other Government agencies—such as Defense and FAA—and this represents an important contribution, but entirely directed toward the spectrum.

Senator SCHMITT. Do you see any potential conflict of interest in this research with USPS, which has a potential future interest in getting into this field, if only in order to subsidize their other operations?

I am not saying that there is any, but it might be accused of it and in fact it might creep in. Do you think the country might be better served if that research were carried out under your umbrella?



Mr. GELLER. I think that, first, the Postal Service should make its own business judgment as to where its research is leading. It has been criticized, as you know, in the bulk mailing centers. I should think it would want to avoid going into something that would not be profitable. It would not, for example, want to enter into competition with A.T. & T. or SBS unless it discerns a sizable gap in service, where it could make a contribution.

Even when it makes such a decision—and this is what I keep emphasizing—the decision shouldn't be made only by the Postal Service. If that Service decides it would like to enter the electronics area, I think it ought to bring the question before the Congress.

We at NTIA, would certainly participate in the discussion. We would be critical and would offer our opinion, saying either that we recommend it or that we disagree with it.

But, in the end, I think the decision is one for the Congress to make.

Senator SCHMITT. But you are comfortable with the research being done within the organization that is going to have some future interest in the application of that research?

Mr. GELLER. Yes, for two reasons. First, the Postal Service has progressed far down the line in its research, and so it would be a mistake to halt them now. Second, USPS is very well motivated, as you just said, to do this research. I think that is a plus. Let them be motivated. Let them see whether the research leads them into electronics. The only caveat is that USPS should not be the agency that determines whether it will go into this field. The Congress should do that.

But it is desirable that they be highly motivated, that they try their damndest to develop their research and their business.

Senator SCHMITT. But in that environment, of course, it takes others to look over their shoulder and make sure the research is evaluated in the broader context.

Mr. GELLER. I couldn't agree with you more. In the end, it should not be the Postal Service's decision as to whether they should get into a given area of research. It is a decision for the Congress. And whether the Congress gets assistance from the task force or from NTIA—and we will be delighted to give such help to you—it should be a legislative decision.

But, for all that, it would not ill serve the Nation to have the Postal System studying these opportunities, pushing as hard as it can to find where it might service the public.

Now, we have no final answer on that now.

Senator SCHMITT. Mr. McLaughlin, do you have any comments on that?

Mr. McLAUGHLIN. Yes, part of it triggered by Senator Ford's questioning, and Mr. Geller's remarks right now.

I do think that there is some concern, going back to Mr. Geller's earlier remarks, about not worrying about crossing the t's or whatever, and relying on the legislative history in terms of establishing this hurdle of congressional approval at some future point for any postal entry on an operational basis.

I say that I think there might be some value in being legislatively specific on that point. One reason, of course, being that while Mr. Bailer and Mr. Bolger have been, I think, very scrupulous in trying to observe these policy issues of competition with private industry,



you know it is like Kahn at CAB, who says we are doing this now, but we still want to change the law, because I am not going to be here for the rest of my life.

I think in that regard that you know policy could change at the Postal Service at some point. And maybe you would have someone in there who was less committed to that philosophy.

But besides changing the personnel, I think there is also the concern in terms of Mr. Bolger's response in terms of, well, you can test at any level, and you can take a 2-city test and go to a 100-city test and an 80-city test and, lo and behold, at that point, you have an operational system.

So I think it may be desirable to develop some more specific criteria as to where a test ends off and operational deployment begins.

I would also caution in that regard that research and development is fine as long as people recognize the principle of cost. I do worry about if enough is spent, there is always a need to go back and justify having spent it. And the way you justify that, of course, is saying, well, it is successful, we need to do more, or, you know, now that we have done all of the R. & D., then we have to have something to show for it, so we have to go out and build a system.

All of this gets me back to the point that I think it would be nice to be more specific in this legislation.

Mr. BOLGER. Senator, if we went beyond a demonstration test, we now have a regulatory body called the Postal Rate Commission, and if we started on the venture of a new service, we would have to file with the Postal Rate Commission for an advisory opinion. Then it becomes a matter of public litigation before the Postal Rate Commission.

I don't know where we are going in this direction, but that is our current law; the law requires us to do that.

Senator SCHMITT. I would hope the policy would become much clearer and better defined before we have to get into that.

Mr. BOLGER. I just want to say a couple of things here. I would like to have a chance to get Henry Geller to explain this—

Mr. GELLER. I apologize. It is out of my field.

Mr. BOLGER. Second, research is a bad word for our Rockville lab.

Senator SCHMITT. Many of my constituents think it is out of the field of the Postal Service, too.

Excuse me. That was an unfair cut.

Mr. BOLGER. Research is something we really don't do. We are taking the known technologies and trying to see how they can be applied to the Postal Service.

Research I think, is an overstatement of our role. We don't do any scientific research at all.

I agree that if we ever started venturing, or any Government agency started venturing in a wholesale fashion into this type of activity, I think it is a public policy issue that needs to be addressed, by not only the Postal Service, but by the Congress, and by the Executive, there is no question in my mind when we get to that point.

Senator SCHMITT. Let me broaden the perspective. We have really focused on the question of electronic mail. But as I tried to say in my opening statement, there are really no barriers in the transmission of information any more, they are gone. The barriers that existed in 1934 are not there any more.



Do you think we are safe sitting here talking about the structure of an electronic mail system without policy guidelines from the Congress on how we are going to deal with this new technological environment in communications? The electronic network already exists. If you had the basic technology and economics, you could start stuffing mail on the wires today. And as light tubes come in and all sorts of wide band communications become the present rather than the future then a lot of this discussion becomes only one of whose turf we are talking about.

Mr. BOLGER. I think the horse is out of the barn already in many respects. I do think it is not just the Postal Service involved in this, I think the whole issue of electronic transmission has to be addressed.

I don't disagree with that at all. Our continuing role is to continue to get smart in this, to try to identify where we are going in the future. We are not jumping off, we have no plans to go into anything in an operational mode.

I don't foresee any plans until this whole public policy issue is addressed. I think it needs to be addressed, not just the Post Service involvement, but many many organizations in the private sector and also other Government agencies. What is their role? What is A.T. & T.'s role in this? Are they going to be the regulated monopoly that will provide this service, as they did the telephone system? Is it the Postal Service, or is it a conglomeration of many organizations that can do it?

I think that needs to be addressed as a public policy issue. But I don't think our limited activities as they are need to be stopped. I think they should go forward. I don't think we need any additional funding for that purpose. I think the modest expenditures we are going to make can continue and are an appropriate part of the present postal activity.

Senator SCHMITT. Mr. Nyborg, I have forced you to keep quiet. Do you have any comment? Particularly I am trying to direct you toward how the electronic mail question fits into a broader communications policy. Do you think it can be treated separately?

Mr. NYBORG. Our view is that it should be treated as part of the broad policy, but that we have a forum that has been looking at that policy for many years: that is the FCC.

Senator SCHMITT. Do you think the Congress should stay out of it then?

Mr. NYBORG. No; I certainly think the Congress should be the ultimate decider of the policy issues, just as they are in the Communications Act. I believe these issues are of such a magnitude that there should be statutory guidance from the Congress. And I think there is agreement across the entire table on that point.

I think the issue where we disagree is how far the Postal Service should go before those determinations are made.

Our concern, much as Mr. McLaughlin has outlined, is that where you have a test like the Comsat experiment that is going from an experiment to a test marketing phase, at the end of that, if the marketing results say that that system is the right one, you have got a system in place. You must then either dismantle it and let everybody else go in and build, or you have to argue that the test system is going to be the system.

It is that kind of phenomenon that we are concerned about, not only with respect to the Comsat system, but with respect to any



prototype, because we think that is where the big research dollars are going to be invested. If the Congress does forestall the consideration of these policy issues, they will be faced, I believe, with an argument several years from now that a multimillion-dollar investment has been made, and that unless the de facto policies assumed in the Postal Service research program are adopted, the investment will have been wasted.

So we conclude very strongly that a policy determination needs to be made now.

Mr. BOLGER. Comsat, Senator, is international in scope. We have no monopoly in the carriage of letters internationally, except as they affect the transmission across this country and its territories. So it is international in scope. Anybody that wants to venture into it may today. We just happened to go into this field.

Senator SCHMITT. Just for the record, I think it would be better to say Comsat is the U.S. representative in an organization that is international in scope.

Mr. BOLGER. That is right. But I mean the demonstration we are going to put up, even if we—

Senator SCHMITT. Are you working with Comsat?

Mr. BOLGER. Yes, with other nations.

Senator SCHMITT. Is Intelsat involved?

Mr. BOLGER. We have a contract with Comsat.

Senator SCHMITT. They are contracting with you on behalf of Intelsat?

Mr. BOLGER. Yes; that is their role working with the other nations.

Senator SCHMITT. Mr. Nyborg, you mentioned the facsimile system that is in place now between New York and Japan.

Mr. GELLER. I did, Senator. RCA has what is called Q-FAX. It is now operational between New York and Japan. It is a facsimile system very similar to what is being tested by USPS with Comsat.

Senator SCHMITT. Do you think it is necessary to run the USPS Comsat test?

Mr. GELLER. I have not studied the matter. I really don't know what they intend to get out of the test. I understand that in February of next year they will run the test for 1 month, and then do an actual demonstration, for the remainder of the year. I think it would be more appropriate for Mr. Bolger to answer this question. I am not an expert on what they hope to get out of the test.

Senator SCHMITT. Do you have any feeling, Mr. Bolger, of the comparison between the existing system between New York and Japan, and the test that you are going to run with Comsat?

Mr. BOLGER. I do not.

Senator SCHMITT. Would you ask your people to supply us a brief comparative summary for the record?

Mr. BOLGER. Certainly.

[The following information was subsequently received for the record.]

#### Q-FAX AND INTELPOST

Technically, Q-Fax and Intelpost have much in common. They are both digital facsimile services that allow the user to transmit internationally documents such as drawings, graphs, and typed and handwritten messages between properly equipped stations in this country and ones in a foreign country.



With respect to RCA-Globecom system, it is our understanding that they will transmit a message between their international Q-Fax Center, here in the United States, using high-speed sub-minute equipment to a similar center in Tokyo, Japan, with delivery being accomplished by leased tieline communication equipment, telephone, or messenger service.

The Intelpost program is one between the Postal Administrations of the participating countries and the United States Postal Service (see attachment 1). We and they will use postal facilities, equipment, and resources for the collection, processing, and delivery of the hard copy facsimile message. The electronic transmit/receive function of our system will be accomplished in seconds and will be integrated into the physical distribution system of the receiving country, and delivered by the traditional methods of mail delivery.

Our program is a demonstration test, and is an attempt by us and the participating countries to utilize advanced, but available technology to move international mail faster, more efficiently and in a cost effective manner.

## ATTACHMENT 1

### INTELPOST

*Intelpost.*—An International Electronic Message System.

*Participating Countries.*—England, France, W. Germany, The Netherlands, Belgium, Iran, Argentina.

*Participant.*—Decision Pending: Switzerland, Brazil, Venezuela, Egypt, Israel.

*Future Interested Participants.*—Have Discussed Program with These People: Japan, Canada, Australia.

Mr. NYBORG. On the domestic front, Southern Pacific Communications, which is an underlying carrier registered with the FCC, has filed an application under section 214 of the Communications Act for authority to offer a switched facsimile service.

Senate SCHMITT. Have they run the basic market research and technical research?

Mr. NYBORG. I don't know, sir. I would assume that they have done some preliminary work if they went that far.

Senator SCHMITT. I would assume so before they applied.

Mr. McLaughlin, did you have an additional comment about the overall policy issue?

Mr. McLAUGHLIN. Yes, Senator. I think the fact that this hearing is taking place today is a very healthy sign, a recognition that you can't look at the Postal Service without looking at the overall communications picture. I think that is significant progress.

I think what you may be talking about for the future is another chapter in the Communications Act rewrite.

Senator SCHMITT. Well, you may be absolutely correct. That is why this kind of discussion, using a specific service as an example, is a very important one in understanding the implications of a rewrite. Is a rewrite going to recognize that previous technological barriers no longer exist, and is it going to define the competitive versus non-competitive environments and how they interface?

I think that is the basic question before the Congress right now in telecommunications policy.

Mr. GELLER. I think we are all in agreement that any decision about the Postal Service should be made in the context of overall communications policy.

As I understand it, we even agree on the issue that might be phrased: can the private sector deliver these needs, or will it be necessary for a governmental agency to enter the picture.



We also agree, as far as I can see, that this type of decision should be made by legislation. The point Mr. McLaughlin has raised about how the legislation that you have before you should reflect this—whether it should be incorporated in this specific legislation or left to the legislative history—I still don't regard as crucial.

But certainly, even though you would not wish to specify how much money USPS must spend—this was, I think, a mistake in H.R. 7700 as it was first proposed—you could put a limit on its spending, so long as the limit was close to what it planned to spend in any event, such as the very modest amount Mr. Bolger said. I don't think there is any harm in that. But I don't think there is necessarily any need for it, either, because with the assurances you can receive with the reports on spending and on operations planning you can stay on top of the situation.

I would hope the decision in a field as dynamic as this could be made within a year. As I understand it, USPS has no plans to try a six-city test domestically before 1981.

Mr. BOLGER. Probably at the earliest, yes.

Mr. GELLER. It seems to me the decision ought to be made by Congress before then. It should be quite possible to draft language, either legislatively or use legislative history to reflect what I think is a consensus.

Mr. NYBORG. Senator, I would agree with Mr. Geller's description of the issues, the private sector versus the Postal Service, what they could and should do. But I would make a very important point on that score. I have tried to characterize the existing regulatory environment involving three major regulatory domains as having a chilling effect on the private sector offering of new services.

I would further argue that the prospect of Postal Service entry into this field is similarly having a chilling effect on the private sector offering. Imagine, if you will, a chief executive officer of a competitive firm, negotiating with Citibank to get financing for a venture in this area. The name of the Postal Service might well come up. The problem is that on the one hand we are saying the basic issue is what can the private sector do, but on the other hand the current situation is having a very negative effect on new private sector offerings.

Mr. BOLGER. I might add we didn't frighten A.T. & T. or ACS.

Mr. NYBORG. I refer to the \$50 million, rather than the \$38 billion entrant in this particular context.

Senator SCHMITT. I would like to make the record clear before we move on, and I will try to end this in just a few minutes. There will be a number of questions for the record though that have been stimulated by the discussion as well as the ones which are largely my fault we haven't gotten to.

But I want to be sure that the record is clear about the question of security, because if there is a psychological barrier to the implementation of electronic mail, it may center around that question of security.

Can an electronic signal be as secure for truly private communications as a letter in a sealed envelope? The people do not worry about that, apparently, in telegrams and mailgrams. They are just generally assumed to be somewhat visible to the people who receive them, whether it is the operators or others?



With respect to first-class private mail, the tendency is to believe those letters are more secure than anything else. And that they become more secure if you write "personal" on them, or even more secure if you write "personal" and "confidential" on them. That is true around this body, as well as in the general public.

However, I think realistically one can say that there is no guarantee of security by an envelope, but that technologically there can be guarantees of security. We have already used them, we use them today in our Defense Establishment, we used them in guaranteeing the sanctity of our computers in space, and so forth. The idea, particularly with the wide band digital communications, of being able to provide for coded security, individual security, is realistic in view of existing technology.

The question is how soon will this technology be acceptable to the American public as a means of receiving personal communications. Would you gentlemen agree with that general statement?

Mr. GELLER. It is my understanding that SBS, for example, which is all digital, will provide secure transmissions. Now the system may be registered under two different tariffs, with one tariff providing really secure transmissions, but at a little higher price. The DES inscription standard, for example will insure that a message is protected against anything but a very powerful computer attack that would take years and years, which no one would be motivated to do.

Other transmission devices that would be very helpful are coming into play. In CCIS, a development of A.T. & T., designating is buried or goes a different way. Somebody trying to intercept it has great difficulty because this transmission is similar to a thousand separate envelopes with addresses on them. An interceptor would have to go through the thousand and find the message he wants.

So there are ways to secure transmissions. It may vary with the tariff, with how much people are willing to pay.

General Motors or IBM or others, or Texas Instruments may very much want security against industrial espionage and be willing to pay for a much more secure system than what an ordinary citizen would.

I think everyone is entitled to secure transmissions and there are ways to accomplish that.

Senator SCHMITT. Should we make any conceptual distinctions between the generations of EMS development set forth in the National Research Council's report? Or should they be viewed as a continuum as I believe has been suggested by Mr. Geller?

Mr. NYBORG. Senator, I would suggest one important distinction, and that is if you look at the communications common carrier industry right now, the FCC has introduced competition into long-haul transmission. You might liken that to post office-to-post office transmission. Almost all of the parties in the debate agree that the local distribution system in the telephone industry, the Bell operating companies, independent operating companies which perform local distribution services, is a natural monopoly kind of service.

Now if you go that far and then look at the Postal Service, one might imagine the Postal Service, or hopefully outside contractors, providing transmission of electronic messages between post offices. But Generation III goes a step further, from post office to recipient, and there is a different issue there, because the equivalent of the



monopoly local distribution system in the paper mail industry, if you will, is the very large labor force of letter carriers. And as the local distribution functions shift from paper to electronic form, I think it very clear for the same reasons that the FCC has viewed local distribution as a truly monopoly service, that the Postal Service should not be building underlying facilities. And I think it also clear along the lines of FCC policy that terminal equipment can be entirely deregulated, that the FCC registration program could specify perhaps a widely available simple basic electronic message service terminal that many people could buy at an inexpensive price. The remaining question is the Generation III services, not underlying transmission, but who provides the service on top of that underlying transmission facility from post office to recipient. We have an underlying transmission system electronically in place in the local telephone operating companies.

Mr. GELLER. I believe however, that too much emphasis is being placed on Generation III. We also once thought that this generation was a discreet step. But the fact is, if you permit a Generation II, which is the macro mailgram system to come into existence, and if the USPS puts the required computers and other devices in place and makes a very large investment for a nationwide mailgram service—I just use “mailgram” to identify the nature of the system—that provides input, then that input can be used also for output just as easily. There would be no reason at all to stipulate that the system be restricted to input into the Postal Service for physical delivery. After all, the same machines could be used for output in whatever communities they are placed in. Thus, the issue as to why the system should be so restricted would arise. If Congress allowed the Postal Service to invest all of this money for Generation II service, and it turned out that the service could be used for electronic output, why shouldn't the Postal Service be permitted to go ahead and do it? Why would the Congress artificially restrict it? This is the same issue that comes up before the FCC, where it must be decided whether to try to artificially restrict a device that can be used both for data processing and for data communication.

Therefore, we think a decision to permit USPS to go into Generation II in a large-scale way is really a decision to allow it to go into Generation III as well, and the Congress ought to consider those together. I am not advocating that the Congress not grant this permission. But the policy decision should not be based upon a view of Generations I, II, and III as discrete concepts. They are really all part of the same decision.

Mr. BOLGER. Senator, to be honest with you, we are on our way into Generation II, and I do not think with the responsible position we have taken, we should be restricted even from exploring Generation III. But again whether we go into this wholesale or not is a public policy issue, and I wouldn't propose the Postal Service go into that activity, so-called Generation III, or make huge investments even in Generation II until such time as the public policy issue is addressed.

Senator SCHMITT. The legislative history is clear. The Congress drawn a fairly consistent distinction between philosophical Generation II and the philosophical Generation III. For that reason, I



believe the Congress has to deal with whether you can or not make such a distinction. That doesn't mean you can't think about this question. But I don't believe you can implement it without a specific direction from the Congress.

Mr. McLaughlin, do you have any comment?

Mr. McLAUGHLIN. I would just like to reinforce Mr. Geller's observation that just by any scheme you work out, as long as you wind up depending upon the letter carrier at the end, you are going to have in the long term a noncompetitive system. And you know it just doesn't make sense to flash messages across the country in milliseconds or whatever, and then have them sit there for 12 hours until the carrier can walk them out the next day.

So I think the dynamics are there, if you have a Generation II system, you have all of the pieces for a Generation III system, so you have to consider them together.

Senator SCHMITT. One final technical question. Mr. Nyborg, you said that you thought that the terminals, if we ever got into Generation III, could be competitive. In this area, as well as other communications areas that involve terminals, whether it is a phone or a facimile system doesn't the issue of quality control still have to be addressed.

Who determines the standards that those systems have to meet in order to interface with whatever network exists?

Mr. NYBORG. I do think it is an issue. But it is also an issue which does exist in the telephone terminal area as well.

Senator SCHMITT. I agree, That is why I am asking it.

Mr. NYBORG. The commission has concluded on that issue that adequate quality can be maintained through the registration program.

I would add that as our technology is driving towards terminal devices based on integrated circuits, including a voice telephone based on integrated circuits, the associated high degree of reliability will come with it. I don't think the reliability issue will be a problem.

Senator SCHMITT. Gentlemen, I believe we have probably done enough for today. We will have a series of followup questions, to obtain your opinions on specific legal questions. I am sure there will be some other issues relative to the technology and so forth. I do appreciate, as the other committee members will when they have a chance to study the record, your comments, your frankness, and particularly the interchange. I appreciate the synergism that was involved in the discussion. It has focused the committee's attention on a number of specific issues related to S. 3229 and section 10 that we are going to have to deal with.

Before I dismiss you, let me ask several questions for Senator Goldwater. Let me read them and if you gentlemen have additional comments, please feel free.

Should the private business community, such as telephone companies, computer manufacturers, cable TV operators, who may have an interest in electronic transmission, be invited to offer input to the task force created by section 10, or to serve as members of such a panel?

Mr. NYBORG. Senator, we have specifically said in our testimony that they should.

Senator SCHMITT. Do you have any further comments on that?

Mr. BOLGER. I think we should get all of the input we can, whatever group is operating, whether it is a formal task force or not.



Mr. GELLER. I agree.

Senator SCHMITT. I am trying to recall your testimony before I ask this question, Mr. Bolger, but can the committee be provided with a description or a definition—I am sure Senator Goldwater means a very precise one—of what the Postal Service understands as the meaning of the term “electronic mail.”

Mr. BOLGER. We will try a definition of it. I think that is in the mind of the beholder sometimes.

Senator SCHMITT. You might take a shot at it.

Mr. BOLGER. We will take a shot as best we understand it.

Senator SCHMITT. Somebody listening to this discussion and then reading that little colloquy may try to figure out what in the world we were having a 2-hour discussion about. I am sure we can resolve that.

If the Postal Service gets into electronic mail, by whatever definition, would it ask that private enterprise be prohibited from engaging in the same kind of activity?

Mr. BOLGER. Our present posture on that is we just don't know what our role is. Maybe we are the regulated monopoly that might be needed. We don't know. I would have a hard time trying to answer that question at the moment.

Senator SCHMITT. It is safe to say that is a question that will have to be answered sometime in the future, if in fact the Postal Service becomes a major contributor to electronic mail.

Mr. BOLGER. Yes, sir.

Senator SCHMITT. Well, thank you gentlemen again. The hearing is recessed.

[Thereupon, at 12:05 p.m. the hearing was concluded.]

[The following information was subsequently received for the record.]

THE LIBRARY OF CONGRESS,  
CONGRESSIONAL RESEARCH SERVICE,  
Washington, D.C., August 8, 1978.

From: American Law Division.

Subject: Authority of the United States Postal Service to Engage in Electronic Mail Transfer and Similar Systems.

This is in response to your request concerning the authority of the United States Postal Service to electronically send and/or deliver mail.

Section 404a(6) of title 39 of the United States Code contains broad language to the effect that that Postal Service may “provide, establish, change, or abolish special nonpostal or similar services.” We have made a search of the legislative history of the 1970 Act, which established this language, but have been unable to locate any information on the intent or meaning of this provision.

It should be noted that the hearings record on this Act consists of 1431 pages in the Senate and 1318 pages in the House. The fact that this provision was never discussed except by brief restatement would indicate that the provision was not intended to result in any basic change in the authority of the Postal Service. Analysis of the provision contained within the Message From The President of the United States Relative to Reform of the Nation's Postal System, House Document No. 91-121 (reproduced beginning at page 1290 of the House hearings) appears to fairly reflect the intent of the provision:

This section catalogs the specific powers of the Postal Service which, in conjunction with the general powers granted in section 205 [enacted as 39 U.S.C. § 401], are to be used in carrying out postal service duties. The Postal Service is to have the power . . . to provide philatelic services and special, nonpostal, or similar services; . . . (House Hearings, p. 1305).

If “electronic transfer of mail” means mere improvement over current systems of message transfer by wire or radio, we conclude that the present law contains no authority for the Postal Service to implement such a system. We find no evidence that Congress, by enacting the general wording of 39 U.S.C. § 404a(6) in



1970, intended to authorize the Postal Service to compete with other types of message service already provided by private enterprise and regulated by the Federal Communications Commission under the Communications Act of 1934, as amended, 47 U.S.C. §§ 151 et seq.

In this regard, we note that in 1890 Acting Attorney General William H. Taft advised the Postmaster General that the Post Office Department, under the then statutory broad term "communication of intelligence," had no power to make contracts for the transmission of intelligence by telegraph, for the general public, as a part or branch of the postal service. While it is true that this decision was in part based upon the fact that the postal service had previously operated a telegraph line under specific Congressional authority, which had lapsed, the decision was based in major part upon a more general application of the law:

... [W]hen we consider the number, variety, and importance of the communications transmitted by its use [the telegraph], and when it is taken into account that private persons and corporations have been allowed for a long period to develop, extend, and control this instrumentality, the conclusion seems to be beyond argument the Congress, in clothing the Department with its existing powers, can not be held to have granted, without specifying it, the power to provide for a telegraphic system of correspondence for the public at large. (19 Attorneys General Opinions 650, 653.)

The Attorney General's reasoning of 1890 is pertinent to the broad language in today's statute as well. We find no evidence that the Congress enacted 39 U.S.C. § 404a(6) with an intent to convey authority to the Postal Service to compete with services already available in the private market. Whether or not "electronic transfer of mail" is such a service is a technical question, of course.

We trust that this is responsive to your inquiry. We will make every effort to assist you should you have further questions.

DAVID R. SIDDALL,  
*Legislative Attorney.*

[The following information was referred to on p. 61:]

McKENNA, WILKINSON & KITTNER,  
*Washington, D.C., August 3, 1978.*

Hon. HARRISON H. SCHMITT,  
*U.S. Senate,  
Dirksen Senate Office Building,  
Washington, D.C.*

DEAR SENATOR SCHMITT: In a telephone conversation yesterday afternoon with Mr. Philip S. Nyborg of the Computer and Communications Industries Association, I was advised that, during hearings before the Communications Subcommittee yesterday morning on S. 3229, Mr. Nyborg related certain information concerning the U.S. Postal Service's recent contracting activities in connection with its proposed Electronic Computer Originated Mail (ECOM) service—information I had discussed with Mr. Nyborg the previous day. This letter, on behalf of Graphnet Systems, Inc., is in response to what I understand to have been your request that the Subcommittee be furnished documentation of the matters referred to by Mr. Nyborg.

By way of necessary background, Graphnet Systems, Inc. is an FCC-authorized communications common carrier which provides certain record communications services throughout the United States. It is The Western Union Telegraph Company's principal competitor in this regard. Graphnet has twice received FCC certificate authority to provide domestic record services,<sup>1</sup> and the FCC has found Graphnet's proposed services to be superior to Western Union's. Graphnet has also been granted authority to provide its services between the United States, on the one hand, and Canada, Mexico and eleven Western European countries, on the other.<sup>2</sup> In the latter respect, the FCC specifically noted Graphnet's "proven capability and expertise", and noted the authority it granted "would extend the benefits of [Graphnet's] capability and expertise into the competitive international environment and make available to the public the benefits inherent in [its] service offerings".

<sup>1</sup> Attached as appendix A are copies of the FCC's decision in that regard.

<sup>2</sup> Attached as appendix B are copies of the pertinent FCC decision.



For more than six years, both Graphnet and its parent company, Graphic Scanning Corp., have repeatedly sought to participate in U.S. Postal Service contracting activities with respect to electronic mail-type services. During the early 1970's, discussions were held concerning various aspects of possible electronic mail delivery systems with the Postal Service. A variety of information was informally provided by Graphnet to the Postal Service—often in response to inquiries—during that period. And indeed, paralleling an earlier submission by Graphic Scanning, Graphnet in 1974 submitted an unsolicited proposal concerning possible electronic mail service.<sup>3</sup>

Graphnet's interest and qualifications with respect to electronic mail concepts and systems, therefore, have long been made known to the Postal Service. Moreover, Graphnet has taken all reasonable steps to assure that it is advised of any RFPs in that area, and that it has a chance to compete for any contracts. Appendix D to this letter is an example.

The Postal Service's recent handling of ECOM is more of the same. Again ignoring Graphnet's earlier indications of interest, the Postal Service apparently organized some form of discussions with various parties concerning its ECOM plans during early June.<sup>4</sup> Graphnet was not notified. On June 16th, after Graphnet had learned of the Postal Service's activities, and at Graphnet's request, I contacted the Postal Service and once more repeated Graphnet's interest in such matters.<sup>5</sup>

Graphnet had an interest in the ECOM project in its own right. In addition, discussions were proceeding between American Satellite Corporation and Graphnet, looking toward a possible joint proposal by those companies.

While in June it had been indicated that the normal RFP process would be the likely course, by July the Postal Service had peremptorily decided it would deal only with Western Union—the Postal Service's partner in Mailgram service—on a sole source basis. Attached as Appendix H are exchanges of correspondence between American Satellite Corporation and the Postal Service in that regard. Regardless of the fundamentally objectionable nature of that approach, American Satellite was advised simply that "the decision of Postal Service management" was to "enter the marketplace immediately on a sole source".

Graphnet believes the Postal Service's approach is wholly unwarranted. There are a number of entities—including Graphnet—that can satisfy the Postal Service's requirements in a fashion superior to, and less costly than, Western Union. However, the Postal Service has not troubled to conduct any truly meaningful investigations in that regard, choosing instead to ignore Graphnet and others, and to conduct such minimal preliminary assessments as it deems necessary to lend an air of legitimacy to its sole-source "determination".

The Postal Service's continued favoring of Western Union also holds the potential to destroy any viable competition in the domestic U.S. record communications marketplace, and to defeat competitive FCC policies in that regard. As mentioned initially, Graphnet is Western Union's principal competitor in the domestic record communications field. It has confronted—and thus far prevailed in—more than five years of Western Union efforts at the FCC to frustrate Graphnet's carrier authorizations. Graphnet can compete against Western Union in the marketplace. But it cannot hope to survive a Postal Service/Western Union combine. And there should be no doubt the current ECOM circumstance represents just such a threat.

Western Union and the Postal Service are now partners in Mailgram. The ECOM prospect—representing a multi-billion dollar potential to the participating carrier—is one which would automatically be Western Union's should the current sole-source procurement be permitted. The Postal Service's July 13th letter (Appendix H) itself acknowledges that it already favors Western Union, and that "whoever" is chosen for the "Test and Evaluation" phase is the likely successor for the long-term contract. While it tries to paper over that inevitability with assurances that "we have no intention of locking ourselves into Western Union", such rhetoric not only belies history, but attributes to anyone familiar with the marketplace—and certainly this Subcommittee—a high degree of naivete.

<sup>3</sup> A copy of Graphnet's transmittal letter and portions of that proposal are appended hereto as appendix C.

<sup>4</sup> See appendix E, attached.

<sup>5</sup> See appendix F, attached.

<sup>6</sup> Appendix G is a copy of my letter in that regard.



Setting aside important threshold questions concerning the role the Postal Service should play in the electronic communications field—a vital issue addressed by others before your Subcommittee—it is at least apparent that Postal Service judgments on ECOM contractors are effectively being made *now*. Before such judgments, having extraordinary long-term consequences, are made, the most complete evaluation possible should be made *now*. The normal competitive bid process is recognized to be the most effective way to make that evaluation. The Postal Service should not be permitted to circumvent that process as to the ECOM. And it should not be permitted to do so as to any contracting activities relating to the electronic message research and development which S. 3229 proposes to require.

The attached materials have been assembled as quickly as possible, in order to be as immediately responsive as possible to your request of yesterday. Because of the brief time period involved, we have not been able to present in this letter all of the pertinent information relating to ECOM, or to set out all of the considerations Graphnet believes the Subcommittee should be aware of in evaluating S. 3229. It is Graphnet's earnest hope that its principals will have the opportunity, in light of your expressed interest, to discuss these matters further with the Subcommittee and its Staff. I am attempting to pursue with the Subcommittee Staff the possibility of such meetings, and sincerely hope Graphnet will have an opportunity to present its views in these areas.

Very truly yours,

EDWARD P. TAPTICH,  
*Counsel for Graphnet Systems, Inc.*

Enclosure.<sup>1</sup>

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<sup>1</sup> The enclosures, appendixes A-H, are in the subcommittee files.









