
Chapter 8

Congressional

Policy Considerations

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Congressional Policy Considerations

Introduction

Congressional authority over the role of the U.S. Postal Service (USPS) in electronic mail and message systems (EMS) derives in the first instance from the U.S. Constitution which vests in Congress the power to establish post offices and post roads (sec. 8, clause 7) and to regulate commerce among the several States (sec. 8, clause 3).

USPS operates as an independent Federal agency pursuant to the Postal Reorganization Act enacted by Congress in 1970. It is subject to policy direction by the USPS Board of Governors and to regulatory review of mail rates and classifications by the Postal Rate Commission (PRC), both established by the Postal Act. Private EMS firms operate pursuant to the Communications Act of 1934 and regulations promulgated by the Federal Communications Commission (FCC) under authority granted by the Communications Act.

Historically, technology has been used to improve and speed up the processing, transportation, and delivery of mail. Thus, the railroad, plane, truck, and automated sorting machine have been integrated into postal operations. The Postal Act reiterates and strengthens the mandate to use new facilities and equipment to improve the convenience, efficiency, and cost effectiveness of mail service. Electronic message technology is viewed from this perspective as one more step in an evolutionary process of keeping the “post offices and post roads” up to date and competitive.

Over the last three decades, there has been a continuing revolution in computer and communication technology, a gradual deregulation of the telecommunication industry (the computer industry being essentially unregulated), and a proliferation of new and old firms offering or planning to offer EMS services. Congress has generally encouraged this deregulatory process, and continues to work to revise

the 1934 Communications Act to bring it in line with current technological, economic, and competitive realities. During the last decade and a half, there has also been a concerted effort by Congress, exemplified by the 1967 “Brooks Act” amendment to the Federal Property and Administrative Services Act and the Paperwork Reduction Act of 1980, to improve the Federal Government’s management and procurement of data-processing and related telecommunication equipment and services, and to rely on the private sector for provision of such equipment and services on a competitive basis wherever possible.

In essence, technological advances have reached the point where these three originally independent congressional policy directions are increasingly in conflict. USPS stands near the center of this conflict. Privately offered EMS services can and ultimately will compete with and divert a significant portion of the USPS conventional mainstream, based on the market penetration analysis in chapters 3 and 4. Absent any USPS participation, this prospect would likely lead to significant rate increases and/or service and labor force reductions by the year 2000. It seems clear that USPS can benefit from participation in providing EMS services, and indeed it can be argued (see ch. 7) that USPS has the statutory authority to participate as long as the final output is in hardcopy letter form delivered over postal roads. But even a minimal USPS role—delivery of EMS hardcopy output—is of concern to some private firms if such delivery is considered subject to the Private Express Statutes (PES). These firms believe that delivery of hardcopy output is ancillary to communication services subject to the Communications Act as well as the Postal Act.

A larger USPS role that involves message processing and computer-based printing and

enveloping, as well as hardcopy delivery, apparently troubles portions of the computer industry (particularly computer service bureaus) because of concern over potential competition from USPS and the belief that the industry is willing and able to provide such services. Should the USPS role extend to the telecommunication portions of an EMS service, then many telecommunication carriers would view USPS as a direct competitor. Even with respect to E-COM, where the USPS role does not include telecommunication, some carriers are concerned that it was designed to accommodate future functions (e.g., magnetic computer tape input) that are not presently authorized. These carriers believe that any USPS involvement in telecommunication, whether directly or by resale, would be subject to the jurisdiction of the Communications as well as the Postal Act, and would constitute the entry of a Federal agency into competition with private industry. The computer service bureaus apparently feel the same way with respect to USPS provision of message processing.

Reaching a consensus on a role for USPS in EMS has been further complicated by jurisdictional conflicts between PRC and FCC, PRC and USPS Board of Governors, FCC and USPS, and the Departments of Commerce and Justice and USPS. These conflicts have come to a head over E-COM, resulting in legal actions brought in Federal court by USPS against FCC and PRC, and by Justice against USPS. Various parties, especially telecommunication value-added carriers, have filed briefs in these judicial proceedings, and before FCC and PRC in regulatory proceedings on E-COM, raising substantive issues of ratesetting, potential cross-subsidization, and privacy, among others.

On the other hand, many of the private telecommunication and computer firms who have been adversaries of USPS also believe that full development of Generation II EMS depends

on a major role for USPS, but they disagree with USPS on what that role should be. Various mailer organizations, consumer groups, and postal labor unions see a USPS role in EMS as essential to USPS long-term viability and to maintaining, or at least minimizing any reductions in, mail services that are vital to a large part of the U.S. population. They point to the critical role of USPS in providing a universal, low-cost, nondiscriminatory nationwide communication service that is statutorily mandated by Congress.

Based on interviews with many of the stakeholders and USPS, as well as a comprehensive review of the historical record, OTA has concluded that, absent congressional action, the controversy over the USPS role in EMS is likely to continue. Although the U.S. District Court of Appeals has denied a Justice petition to block E-COM, further regulatory proceedings are anticipated and additional legal actions are possible. With continuing uncertainty over the future of E-COM, and in general of the USPS role in EMS, the prospects for a successful USPS entry into domestic EMS services are uncertain. Some firms have indicated to OTA that they are reluctant to make any major commitments until they are certain what role USPS is going to have. Meanwhile, many of the carriers continue to put much of their research and development effort into Generation III EMS, which would completely bypass USPS. In addition, USPS is unable to establish effective working relationships with many private carriers and potential Generation II EMS users, given the continuing adversarial atmosphere.

Should Congress wish to take action, there are several major possibilities. Congress could: 1) provide a clear direction for USPS involvement in EMS; 2) reduce or eliminate further regulatory and judicial delay; and 3) maintain oversight and initiate planning on long-term USPS viability. These possibilities are discussed below.

Provide a Clear Direction for USPS Involvement in EMS

There are essentially nine major alternatives for a USPS role in EMS. Variations on each are possible.

1. USPS would deliver the hardcopy printed output of industry EMS services when desired and at the discretion of industry. USPS would not otherwise participate in EMS. This role would presume that hardcopy output is ancillary to communication services subject to the Communications Act and outside the scope of the Postal Act or PES.

2. USPS would deliver the hardcopy printed output of all industry EMS services when conveyed over postal roads (routes served by USPS), with exceptions for time sensitive letters. USPS would not otherwise participate in EMS. This role would be based on current USPS interpretation of PES.

3. USPS would deliver the hardcopy printed output as in 2 above, but would also permit the location of carrier Generation II EMS terminal equipment on USPS premises. This would be similar to the current role of USPS in Western Union's Mailgram service, except that equipment from several carriers, not just Western Union, would be located on premises. These carriers would then be permitted to interconnect with USPS facilities.

4. USPS would deliver the hardcopy output from industry EMS as in 2 above, and would also provide printing and enveloping portions of EMS when desired by and to meet the specifications of industry (within reason). Here, USPS would offer a range of options with respect to number of pages, paper style and format, envelope logo, and possibly inserts to meet varied needs of carriers and their customers. All carriers (defined as in E-COM to include all message-processing companies) would be permitted to interconnect with USPS facilities either on a dedicated or dial-up basis. This would be similar to E-COM, except that carriers would be able to retain their individual identity (through use of logo envelopes and

possibly letterhead paper) and meet a wider range of mailer needs (through variable letter lengths and possibly inserts).

5. USPS would deliver the hardcopy output from industry EMS and would provide printing and enveloping portions of EMS on a standardized basis available to all carriers and mailers (within reasonable limits). This would be similar to the current role of USPS in E-COM. All messages would be no more than 2 pages in length, be printed on identical paper, and use E-COM logo envelopes. Other than standardized business reply envelopes, inserts are not possible. Carriers would be permitted to interconnect as in 4 above.

6. USPS would provide printing, enveloping, and telecommunication portions of EMS and physically deliver hardcopy output. USPS would lease telecommunication facilities from private industry, and would also provide interconnection for industry carriers. This would be similar to the USPS role in E-COM if there is a "demonstrated need" for USPS provision of telecommunication as well as printing, enveloping, and delivery.

7. USPS would provide printing, enveloping, the telecommunication portions of EMS, and physical delivery, as in 6 above, plus electronic delivery if there is a "demonstrated need" for certain geographical areas that can no longer sustain conventional mail service at comparable levels. USPS would lease or contract for telecommunication and electronic delivery facilities on a competitive basis from private industry, and would also provide interconnection for industry telecommunication carriers.

8. Combination of 4 and 6.

9. Combination of 4 and 7.

All of these alternatives are technically feasible. In evaluating each, Congress may wish to take into account the following considerations.

Impact on USPS-Delivered Mail Volume

The market penetration results (ch. 4) indicated that USPS-delivered mail volume (conventional plus Generation II hardcopy output) is one key consideration. USPS-delivered volume is in part a function of the rate of Generation II EMS growth and the degree of stimulation of the Generation II EMS market. The faster the rate of growth (and the earlier the take-off) and the greater the stimulation of new message traffic, the larger the Generation II EMS volume (and hence USPS-delivered volume), assuming that USPS delivers Generation II EMS hardcopy output. There is currently little consensus on the extent to which the various alternatives would contribute to Generation II EMS growth and volume.

Impact on USPS Finances

The revenue/cost results (chs. 5 and 6) indicated that EMS cost displacement and contribution to USPS fixed costs are also key considerations. The greater the EMS cost displacement (avoidance of conventional mail-stream costs) and contribution to USPS overhead, the less likely the need for service (and labor) reductions. Again, there is lack of agreement between the USPS and major stakeholders. While Mailgram apparently provides both a substantial cost displacement and contribution to fixed costs, it is not clear whether E-COM would do likewise at current rates and in its present configuration. All parties, including USPS, agree that the RCA cost estimates prepared for the electronic message service system (EMSS) in 1977 and the original E-COM cost estimates prepared for PRC in 1978 are now outdated. A comprehensive cost review of E-COM is needed.

Impact on USPS Labor Force

Based on the chapter 6 labor requirements analysis, the size of the USPS labor force is determined principally from the volume of USPS-delivered mail and labor productivity. There is general agreement that USPS partic-

ipation in EMS would generate only a relatively small number of new jobs. However, through higher mail volumes it could offset or at least defer significant labor reductions that would otherwise be necessary.

There are an estimated 200 persons (125 operations, 50 maintenance, 25 marketing and administrative) currently working on E-COM, and a fully deployed service (at 150 serving post offices (SPOs) compared to the current 25) is estimated to require perhaps 2,000 persons.

In contrast, the additional volume from USPS delivery of industry hardcopy output under the baseline assumptions would require about 38,000 employees more than would otherwise be necessary. The additional mail volume from 100-percent Generation II EMS stimulation and high but plausible Generation II EMS growth would require 39,000 employees more than otherwise would be needed, for a total of about 77,000 employees. Put differently, under the baseline assumptions, the year 2000 USPS total labor force reduction is projected at 29 percent assuming no USPS participation in EMS (i.e., industry delivers its own Generation II EMS hardcopy output), but at only 17.5 percent for USPS-delivery of Generation II EMS output coupled with high but plausible Generation II EMS growth and 100-percent stimulation (see fig. 11 and table 16, ch. 6). Absent the 100-percent stimulation, the labor force reduction is projected at 23.3 percent.

Space in SPOs for Carrier Output Equipment

A continuing issue is whether and how USPS should provide space on USPS premises for carrier equipment. For the Western Union Mailgram service, USPS has agreed to locate and operate Western Union printers in 144 SPOs. Other telecommunication carriers have, in the past, asked USPS for a similar arrangement. USPS indicates that it is willing to consider any serious proposals along these lines, but that none have been received. The carriers

believe that USPS is not receptive to such proposals, and question why Western Union should receive special accommodation. It is not clear whether physical constraints and economies of scale would permit the location of equipment from a large number of carriers, or that a large number of carriers would find such an arrangement to be cost effective. This question deserves further study.

In E-COM, USPS does not provide space in SPOs for carrier hardcopy output devices. Instead, USPS owns and operates its own printing equipment and provides access facilities to enable carriers to interconnect directly with SPOs. USPS has purchased the interconnection equipment and leases it to carriers desiring dedicated access at a monthly charge.¹ Some carriers are not happy with the relatively limited capabilities of the E-COM equipment. According to USPS, the selection of E-COM equipment was made by RCA, and was judged to be the best technology available off the shelf that met USPS requirements. Congress could request an independent review of the technology selected.

Electronic Transmission to SPOs

The role of USPS in the telecommunication portion of EMS has proven to be controversial. USPS originally proposed to initiate its E-COM service using a telecommunication network leased from Western Union. That is, USPS would have provided telecommunication as well as printing, enveloping, and delivery. In December 1979, PRC recommended an alternative plan under which USPS would not own or operate a telecommunication network, but all telecommunication carriers would be permitted to interconnect with E-COM at the designated SPOs. In April 1980, on remand from the USPS Board of Governors, the PRC explicitly recognized the

¹The monthly charge per SPO ranges from \$102 to \$412, depending on the type of equipment. See "Telecommunication Connection Arrangements for Postal Service Electronic Computer Originated Mail (E-COM) Service and Innovation for Capacity Planning Cooperation," *Federal Register*, vol. 46, No. 199, Oct. 15, 1981, p. 50882.

authority of USPS to contract with a telecommunication carrier to transmit messages electronically on behalf of USPS.² However, PRC conditioned this authority on a showing of demonstrated need, a term that has not been clearly defined but presumably implies a situation where the needs of E-COM users could not be met adequately through the telecommunication services of private carriers. The Governors have accepted this condition.³ However, some carriers are concerned that the ambiguity of this condition could be used in the future to, in their opinion, improperly and unjustifiably permit USPS to contract with a carrier (or carriers) to provide electronic transmission on behalf of USPS. Congress may wish to clarify the definition of demonstrated need.

Electronic Delivery to Recipient

USPS has not proposed, nor have the Governors or PRC considered, any EMS service whereby USPS would provide electronic delivery of mail directly to the recipient. USPS has stated repeatedly that it "will not provide 'Generation III' services which transmit messages all the way through telecommunications."⁴ However, some consumer advocates and researchers have suggested that electronic delivery might be justified to maintain USPS service levels in geographic areas where conventional mail service could no longer be maintained at present levels. Congress may wish to examine what, if any, conditions would constitute a demonstrated need for USPS involvement in electronic delivery (presumably by contract with private Generation III EMS firms). Any USPS role in Generation III would have to be carefully defined to avoid either the appearance or reality of competition with private firms and the substantial controversy and opposition that would likely generate.

²Further Recommended Decision, docket No. MC78-3, Postal Rate Commission, Apr. 8, 1980.

³*Ibid.*, pp. 4-9; Decision of the United States Postal Service Board of Governors, docket No. MC78-3, Feb. 22, 1980.

⁴Mar. 12, 1981, letter and position paper from Edward E. Horgan, Jr., of USPS to Sen. Barry Goldwater.

Interconnection and Standard Interface

For E-COM, USPS provides interconnection for message input from qualifying telecommunication carriers and users (i.e., mailers) using a standard interface. Mailers may establish an account directly with USPS and prepay USPS for E-COM delivery, while arranging separately with a qualified telecommunication carrier for transmission of messages to SPOs. Alternatively, mailers may choose to deal only with a qualified telecommunication carrier that acts as an agent for E-COM service. These carriers must establish an account with USPS and prepay USPS for delivery.⁵

In E-COM, USPS is offering both dial-up and dedicated access. As explained by USPS, "the dial-up access facilities will permit customers to connect to any SPO by means of any public telephone network, using whichever telecommunication carriers the customers choose. . . . Dedicated access is designed for those who wish to have exclusive access to E-COM."⁶ USPS provides two standard interfaces for dial-up access and four standard interfaces for dedicated access.⁷

At the present time, carriers appear to be reasonably satisfied with these interfaces from a technical point of view, and USPS has indicated a willingness to consider other interfaces proposed by carriers. However, some carriers are not happy with the allocation of interconnection lines (or ports) at SPOs between dedicated and dial-up access, or with the total number of lines available. The total number of lines is limited by the present E-COM technology. The allocation between dedicated and dial-up access is a management decision. Congress may wish to review whether technical modifications could permit more total lines (and at what cost), as well as alternative allocation schemes.

⁵"Telecommunication Connection," *op. cit.*, p. 50875.

⁶*Ibid.*, p. 50879.

⁷*Ibid.*

Transmission Facilities

USPS has not proposed, nor have the Board of Governors or PRC considered, any EMS service whereby USPS would own transmission facilities. USPS originally proposed to contract for the use of transmission facilities, as noted above. Given the wide range of privately offered transmission services and the rapid change in that industry, it seems unlikely, even in the case of demonstrated need to provide the telecommunication portion of EMS, that USPS would buy rather than lease or contract for telecommunication transmission lines.

Marketing of EMS Services

Historically, USPS has been granted the authority (under applicable law and regulation) to market services filed and approved under the Domestic Mail Classification Schedule. While some private firms have objected to USPS marketing of EMS service, E-COM in its current form is considered to be a subclass of first-class mail under the Domestic Mail Classification Schedule. Accordingly, USPS has already initiated marketing efforts to identify customers for E-COM.⁸ Even if USPS were authorized to provide telecommunications, such EMS service would most likely be filed and approved as one or more subclasses of first-class mail (and other classes of mail where electronic transmission may be appropriate), and thus could be marketed by USPS.

However, the question of how aggressively the participating telecommunication carriers would market their portion of E-COM, or any other USPS EMS service where the identity of individual firms is not retained, is an open one. Some firms have proposed the use of envelopes (and possibly paper) with the company logo, rather than or in addition to the standardized E-COM envelopes. By maintaining the individual identity of participating carriers, these firms would, in theory, have greater incentive to develop the Generation II market.

⁸USPS News Release No. 53, Oct. 19, 1981, p. 3.

Performance Standards for EMS Services

The current E-COM service is designed to achieve guaranteed 2-day delivery. Since 2-day delivery is already guaranteed for conventional mail deposited within 600 miles of destination, the time advantage of E-COM is primarily for cross-country mail where normal delivery is 3 days. Of course, mailers may realize benefits other than time; for example, reduced printing and enveloping or computer processing costs. Still, some carriers and mailers have argued that 1-day delivery, as is available with Mailgram, would be preferable.

According to USPS, E-COM could achieve 1-day guaranteed delivery if the number of SPOs equipped with E-COM facilities were expanded from the current 25 to about 150. The total capital cost is estimated at about \$250 million (roughly six times the current cost of E-COM system design and implementation), a substantial investment but considerably less than the \$1.5 billion to \$2.0 billion originally estimated by RCA for a nationwide electronic mail service system (EMSS). However, it is

questionable whether E-COM volumes would support this investment.

In 1978, USPS projected a volume of 230 million E-COM messages 5 years out. A more recent Opinion Research Corp. survey commissioned by USPS projected a market of 500 million messages per year now and 1 billion messages per year 5 years out. This latter projection falls somewhere between the moderate and high OTA projections.

Because of the uncertainty of such projections, an incremental approach to expansion appears to be warranted. For example, E-COM (or some other alternative) could be expanded in a small number of selected origin-destination pairs (e.g., Washington, D. C.-San Francisco, New York-Los Angeles) to test the feasibility of and market for 1-day guaranteed delivery. An incremental approach would appear to require more flexibility in the USPS decisionmaking process (including regulatory review) than is presently the case. Congress may wish to consider some changes in the Postal Reorganization Act to provide more flexibility.

Reduce or Eliminate Further Regulatory and Judicial Delay

The most important action Congress can take to reduce delay is to provide clear direction for USPS involvement in EMS, as discussed earlier. A note of caution is in order. If the direction set out is not well understood and reasonably clear and does not reflect a substantial consensus, further regulatory disputes and litigation could result.

Additionally, Congress could: 1) clarify the applicability of PES to delivery of hardcopy output; 2) delineate the division of regulatory jurisdiction between PRC and FCC; 3) mandate a separate USPS entity for any EMS offering; and 4) establish standards for protection of privacy for EMS services involving USPS.

Applicability of Private Express Statutes

PES⁹ restrict the delivery of letters by organizations other than USPS. In general, the private carriage of letters is prohibited. PES give USPS the exclusive right to carry "letters" over postal routes, with important exceptions. One exception is an administrative suspension for "extremely urgent" letters, which permits private carriage if at least \$3 or twice the applicable postage is charged or, in certain cases, if delivery is completed within

⁹39 U. S.C. §§601-606; 18 U.S.C. §§ 1693-1699, 1724. USPS regulations implementing PES require that letters to be privately delivered over postal roads must be covered, sealed, dated, and stamped.

a matter of hours. Many electronic mail services might qualify under this exception.

USPS regulations define a "letter" as a "message in writing" addressed to a "particular person," and include electronically transmitted messages when in hardcopy form and delivered over postal routes.¹⁰ FCC, among others, has claimed that PES do not extend to physical delivery of hardcopy output from electronic communications, on the grounds that such delivery is incidental to electronic communications as defined in the Communications Act of 1934 and therefore is not subject to PES.¹¹ In addition, FCC has challenged a USPS proposal to redefine a previously granted exemption for telegrams. USPS had proposed to limit the exemptions to telegrams "as commonly sent in the past by other members of the public." Other forms of hardcopy output from electronic communications would not be exempt.¹² Although this proposal was subsequently withdrawn, USPS has taken the general position that its long-standing exemption for telegrams does not apply to other types of hardcopy output from electronic transmission.

Some private firms dispute the USPS position, but to date no party has successfully challenged the legality and applicability of PES to the delivery of hardcopy output as defined by USPS regulations. On the other hand, PES do not apply to end-to-end electronic communication of messages, according to recent statements by USPS officials and USPS interpretation of PES. "The PES will remain applicable only to 'hardcopy' letters."¹³ "Messages transmitted by wire or wireless or electronically between sender and addressee are not letters since the PES apply only to corporeal messages physically carried on post routes."¹⁴ However, as discussed earlier, "messages so transmitted which are converted to physical form and carried over a post road

before delivery are letters,"¹⁵ and thus are subject to PES.

Nonetheless, some private firms question not only the applicability of PES to Generation II hardcopy delivery, but are also concerned that USPS may attempt to extend PES to Generation III EMS. Congressional clarification may be needed.

Regulatory Jurisdiction

Over the last 3 years, the question of which regulatory bodies have what jurisdiction over various USPS proposals for offering EMS service has been considered extensively in regulatory proceedings. In two court actions, USPS has challenged the extent of appropriate jurisdiction as asserted by both PRC and FCC.

By declaratory ruling, FCC asserted authority under section 2(a) of the Communications Act of 1934¹⁶ to regulate parts of the original USPS plan for E-COM. This plan called for USPS to contract for transmission and other services on a sole source basis with a single common carrier (Western Union).¹⁷ FCC apparently based its assertion on the grounds that Western Union was already subject to FCC regulation, and furthermore, to the extent that USPS offered electronic communication services, it was a "person" within the meaning of the Communications Act and was therefore itself subject to FCC jurisdiction.¹⁸ USPS petitioned the U.S. Court of Appeals for the District of Columbia for a review of the FCC action arguing that, under the Postal Reorganization Act of 1970, PRC is the appropriate regulatory body and further that USPS is not a "person" subject to the jurisdiction of FCC. On October 14, 1980, the court dismissed the USPS appeal and vacated the FCC ruling as moot for two reasons: 1) "the contract between Western Union and the

¹⁰39 C.F.R. 152(1970) and USPS order 71-10.

¹¹Mar. 12, 1979, letter to Louis A. Cox, USPS General Counsel, from Robert R. Bruce, FCC General Counsel, pp. 2-3.

¹²Fed. Reg. 60,616 (1978); 45 Fed. Reg. 59,871 (1980).

¹³Horgan letter, Op. cit.

¹⁴USPS, *Interpretation of PES*, 1973 report, p. 7.

¹⁵Ibid.

¹⁶47 U.S.C. §152(a).

¹⁷Postal Rate Commission, docket No. MC78-3.

¹⁸Federal Communications Commission Common Carrier Docket No. 79-6; in the matter of request for declaratory ruling and investigation by Graphnet Systems, Inc., concerning the proposed E-COM service.

Postal Service . . . that was objectionable to the FCC has been cancelled, and 2) PRC itself rejected several features of the Postal Service electronic mail system proposal found objectionable by the FCC.”¹⁹ Thus, the court did not rule on the merits of the case and the legal jurisdiction of FCC over USPS involvement in the telecommunication portion of EMS remains unclear.

USPS also petitioned the court for review of that part of the PRC Final Recommended Decision that designates E-COM as an “experimental” subclass of first-class mail authorized only through October 1, 1984. Basically, USPS claimed that PRC far exceeded its authority and sought to exercise a power reserved to the USPS Board of Governors.²⁰ In June 1981, the court ruled for USPS and remanded the matter back to PRC for further consideration.²¹

However, two issues were still in dispute. First, PRC believed it was proper to review the entire E-COM decision, not just the “experimental” designation which was the subject of the court proceeding. A number of communication carriers and others (including the Departments of Commerce and Justice) who filed statements with PRC took the position that the court, in effect, vacated the PRC Recommended Decision in toto, and that USPS was not authorized to proceed with E-COM on January 4, 1982. USPS maintained that the court’s remand, and therefore PRC’s reconsideration, extended only to the question of “experimental” designation and that USPS was otherwise authorized to initiate E-COM service in January. In December 1981, PRC suspended the proceedings, leaving the legal status of E-COM uncertain. On January 4, 1982, USPS started E-COM service. In April 1982, the U.S. Court of Appeals for the District of Columbia denied a Department of Justice petition to block implementation of E-COM.

Absent clear direction from Congress, it seems likely that USPS entry into EMS will precipitate continued regulatory (and related judicial) conflicts. Congress, through legislation or otherwise, could clarify regulatory jurisdiction over USPS involvement in EMS. For example, this might take the form of the amendment to S. 898 which stipulates that FCC shall establish costs for the telecommunication portion of any USPS EMS service and shall assume that any such telecommunication services are offered by a separate organizational entity within USPS. Apart from these two provisions, the amendment to S. 898 states that FCC shall not regulate USPS.²² As another example, Congress might clarify through an amendment to the Postal Act—the extent of PRC jurisdiction over a USPS role in EMS.

USPS Subdivision for EMS

As discussed in chapter 7, a number of private firms and other parties have expressed concern that USPS involvement in EMS would constitute unfair competition between an independent Government agency and the private sector. This concern focuses in part on the possibility that USPS might use public appropriations or revenues from other USPS services to cross-subsidize EMS services. In July 1979, the White House proposed the creation of a separate USPS subdivision for EMS service in order to make cross-subsidies easier to detect and prevent. The original White House proposal suggested “a separate entity for accounting and ratemaking purposes.”²³ H.R. 2813 would require USPS to establish by regulation “a separate organizational unit . . . to provide for the management of all electronic mail service of the USPS.”²⁴ S. 898 would require “a separate organizational entity” for any telecommunication services offered by USPS.²⁵

¹⁹Oct. 14, 1980, Order, U.S. Court of Appeals.

²⁰Decision of the Governors of the U.S. Postal Service, Aug. 15, 1980.

²¹654 F 2d. 108 D.C. Court of Appeals 1981.

²²*Congressional Record—House*, Oct. 7, 1981, p. S.11211.

²³Administration policy Statement, The White House, July 19, 1979.

²⁴H.R. 2813, 97th Cong., 1st sess., Mar. 25, 1981, p. 2.

²⁵*Congressional Record—Senate*, Oct. 7, 1981, S.11211.

USPS has already established a separate Office of E-COM Operations and implemented detailed cost accounting procedures which, according to USPS, are more stringent than anywhere else in the organization. USPS has initiated a complete review of E-COM costs to date, recognizing that some costs have been higher than initially estimated and that rate

adjustments may be necessary so that costs are fully covered over a given period of operation and projected volume. However, Congress may wish to consider stronger safeguards (e.g., outside audit) and a greater degree of organizational separation to prevent cross-subsidization and allay private sector fears.

Privacy Protection

Privacy protection in a USPS EMS service is a continuing issue. First raised in the original PRC consideration of the E-COM proposal, a 1982 National Research Council (NRC) report²⁶ has amplified the privacy and security concerns discussed in chapter 7. To quote from the NRC report: "Electronic mail presents potentially serious problems of security and privacy protection. The processing, storage, and transmission of large amounts of data, which are functions central to electronic mail, offer an attractive target for anyone seeking access to individual and corporate information."²⁷

OTA has not conducted a thorough review of E-COM security and privacy. However, preliminary discussions with USPS indicate that while some protections are in place, additional security measures appear to be necessary. The E-COM equipment is apparently physically secure, but the technical configuration makes it possible for the operator to read the hard-copy printouts before being enveloped. Operators are instructed not to read the contents, and unauthorized personnel are not permitted in the E-COM facilities when printers are in operation. Nonetheless, the potential for security breaches does exist.

A second potential problem is that the user (carrier or mailer) account numbers are printed on the outside of E-COM envelopes, thus guar-

anteeing dissemination in a physically visible manner of one of the two pieces of information needed to use E-COM. The account number, together with an access code and familiarity with the E-COM technical interconnection standards, would permit unauthorized use of E-COM. A third potential problem is that all incoming messages are stored for 1 week in computer memory or on magnetic tape in the E-COM computers. While this archiving may be necessary in case of errors in message conversion or transmission, it also could present another target for security violations. This security risk is heightened by the fact that computers at each of the 25 E-COM locations are interconnected electronically to the USPS management operations center in Wilkes-Barre, Pa. The purpose of the management information system is to validate account numbers and access codes and keep track of message volume by account. However, it may be technically possible to tap the archived messages via the management information system which apparently uses dedicated, but not otherwise secure, leased telephone lines.

Congress may wish to mandate an independent review of E-COM security to ensure that the necessary security measures are either in place or implemented shortly. Since it appears that the postal statutes do not at present extend to the electronic transmission portion of Generation II EMS, or at least it is not clear that the statutes apply, Congress may wish to consider the possibility of amending the Postal Act and/or Communications Act to provide additional statutory protection, and consider the use of data encryption to provide additional technical protection.

²⁶National Research Council, Assembly of Engineering, Committee on Review of U.S. Postal Service Planning for Electronic Mail Service Systems, *Review of Electronic Mail Service Systems Planning for the U.S. Postal Service*, National Academy Press, Washington, D. C., 1981.

²⁷*Ibid.*, p. xi.

Maintain Oversight and Initiate Planning on USPS Long-Term Viability

While the immediate focus is on E-COM, providing a clear direction for USPS involvement in EMS and resolving current regulatory problems and delays, EMS issues are likely to be with Congress for many years. Issues will be driven by the impact of EMS on USPS, the role of USPS in EMS, and the broader impact of EMS on American society and the public at large. For a discussion of these broader impact areas, see the related OTA report on *Computer-Based National Information Systems (1981)*.

As the historical (and legal) distinctions between conventional and electronic mail are blurred by technological advances, Congress will be called on to maintain oversight and initiate planning on the long-term viability of USPS for all the reasons cited in chapter 7.

At present, it is difficult for USPS to conduct effective long-range planning with respect to EMS, since this requires good working relationships with private telecommunication and computer firms, many of whom have been and/or are adversaries of USPS. If some clearer consensus can be reached on the direction and limits of USPS involvement in EMS, perhaps a more constructive relationship with the private sector can develop.

USPS reports that the EMSS concept is essentially on hold, and that a new or modified, and more incremental rather than total systems, approach to planning may be adopted. Given the dynamic nature of the telecommunication and computer industries, USPS can hardly be expected to develop the best concept for its own role without the flexibility to test and try out various alternatives, on a limited basis. In most successful private firms, the introduction of any major new product or service is preceded by a long series of research, development, and market testing of several options to hopefully arrive at the one that is most competitive and cost effective. At present, regulatory and institutional constraints make it very difficult for USPS to experiment. In any realistic sense, E-COM should be viewed as an experiment, designed to be modified as operating and market experience identifies areas for improvement or change. In a more supportive climate, USPS might conduct some joint technical and market tests with various private firms in different parts of the country. The results could then help guide the evolution from Mailgram and E-COM to a long-term partnership with the private sector that reconciles the statutory mandate of both the Postal and Communications Acts to the ultimate benefit of the American public.