

Overview

Advances in communication and computer technology provide new ways to convey messages and carry out financial transactions. These are called electronic mail and message systems (EMS) and electronic funds transfer (EFT) systems. Commercially offered EMS and EFT will increasingly compete with portions of the traditional market of the U.S. Postal Service (USPS). While there is disagreement on how fast EMS and EFT may develop, it seems clear that two-thirds or more of the current mainstream could be handled electronically, and that the volume of USPS-delivered mail is likely to peak in the next 10 years. Any decline in the volume of mail has significant implications for future postal rates, USPS service levels, and labor requirements.

A key policy issue requiring congressional attention is how USPS will participate in the provision of EMS services, both in the near term and in the longer term. If USPS does not attract and keep a sizable share of the so-called Generation II EMS market (electronic input and transmission with hardcopy output) and conventional (especially first-class) mail volume declines, USPS revenues will probably go down, with the likelihood of an unfavorable impact on rates and/or service levels. If USPS does develop a major role in the Generation II EMS market, and if Generation II EMS costs are low enough, the effect on USPS rates and/or service could be favorable.

Two of the major factors influencing USPS labor demand are total mail volume and worker productivity. Regardless of whether USPS participates in Generation II EMS, improving worker productivity and eventually declining conventional mail volumes could lead to considerably lower labor demands in the future. If USPS does participate successfully in Generation II EMS, this potential decline in labor requirements could be deferred or partially offset.

USPS is already involved in EMS to a limited extent. For example, it delivers some industry EMS hardcopy, provides a portion of Western Union's Mailgram service, and in January 1982 introduced a domestic service called "electronic computer-originated mail" or E-COM. (In E-COM, USPS accepts letters in electronic form, converts them to hardcopy, including printing and enveloping, and delivers them.) The role of USPS in EMS activities is already controversial, and it is likely to become more so if its role expands.

As a result of technological advances, historical (and legal and regulatory) distinctions between conventional and electronic mail have blurred, along with the application of the the congressional mandates embodied in the Postal and Communications acts. Absent congressional action to provide a clear direction for USPS and to clarify or redefine regulatory boundaries, the controversy over the USPS role in EMS is likely to continue indefinitely and Generation II EMS opportunities for USPS, private telecommunication carriers, and mailers may be lost.

OTA identified a number of areas related to USPS participation in EMS that warrant congressional consideration:

- **Potential Contribution to USPS Mail Volume.**—A USPS role in Generation II EMS has the potential to provide a volume "cushion" to partially offset reductions in conventional mail. Since private firms are neither willing nor able to duplicate the nationwide physical delivery infrastructure of USPS, any large-scale Generation II EMS service depends on the participation of USPS. There is, however, little consensus on what USPS role

would be most conducive to growth of Generation II traffic (and hence USPS mail volume).

- **Potential Contribution to USPS Finances.**—While Mailgram apparently provides both a substantial avoidance of conventional USPS mailstream costs and a significant contribution to covering USPS 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 original E-COM cost estimates prepared in 1978 for the Postal Rate Commission are now outdated. A comprehensive cost review of E-COM is needed if its contribution to USPS finances is to be understood.
- **Impact on USPS Labor Force.**—USPS labor force requirements are sensitive to mail volume. Any significant decline in mail volume for whatever reasons (e.g., diversion to EMS and EFT, competition from nonelectronic alternative delivery services, reduced demand due to general economic recession) would translate into labor force reductions beyond those that may be needed as a result of higher worker productivity.

USPS participation in Generation II EMS would have two effects on USPS labor requirements. A small number of new jobs would be created to carry out EMS-related activities, and a considerably larger number of jobs would be required in traditional USPS activities to process and deliver the resulting hardcopy. Thus, USPS participation could offset, or at least defer, some of the reductions in the existing labor force that might otherwise be necessary. The need for sizable reductions from the present level of employees is not likely to be felt until the late 1980's or early 1990's.

- **Size and Nature of the E-COM Market.**—OTA concluded that prior estimates of the Generation II market have probably been high, and that prudent planning should be based on a mature market (20 years hence) in the range of 7 billion to 17 billion messages annually, rather than 25 billion as previously estimated by RCA (for comparison, conventional mail in 1981 totaled 110 billion pieces). Even the lower estimate depends on mailer acceptance and successful institutional marketing strategies. Several modifications to E-COM have been proposed that deserve consideration, such as 1-day guaranteed delivery rather than 2-day, flexible letter formats, and the use of telecommunication carrier and mailer logos to personalize the E-COM output and provide incentives for aggressive marketing. A full review of the E-COM market should include governmental as well as private sector mailing needs.
- **Impact on Competition.**—USPS believes its participation in E-COM is authorized by the Postal Reorganization Act mandate to use new facilities and equipment to improve the convenience, efficiency, and cost effectiveness of mail service. However, various telecommunication and computer firms view E-COM as: 1) the entry of a Federal agency into competition with private industry; 2) possibly subject to the Communications Act as well as the Postal Act; and 3) raising questions about the fairness and legality of a USPS role in EMS in general. The applicability of the Private Express Statutes to delivery of Generation II EMS hardcopy output has also been challenged.
- **Regulatory Jurisdiction.**—The E-COM case has surfaced disagreements over the division and extent of regulatory jurisdiction by the Postal Rate Commission and Federal Communications Commission. As a result, USPS brought suit against both commissions and the Department of Justice brought suit against USPS—all on jurisdictional grounds, not on the merits or faults of E-COM. Some private firms believe this demonstrates the dif-

faculty of regulating USPS ratesetting and preventing the potential cross-subsidization of E-COM from conventional mail revenues. One proposed response to that concern would be to require a separate USPS entity for any EMS offering.

- **E-COM Privacy and Security.**—The involvement of USPS in E-COM has pointed out the need for additional security measures to protect the privacy of EMS messages. The Postal and/or Communications Act may need to be amended to provide additional statutory privacy protection.
- **Role in Telecommunication and/or Generation III EMS.**—The USPS role in E-COM does not involve either telecommunication or electronic delivery. Whether there are conditions that would constitute demonstrated need for USPS to contract with a telecommunication carrier to transmit messages electronically on behalf of USPS needs to be clarified. Further study seems warranted on the possible use of EMS Generation III (as well as Generation II) to help USPS maintain adequate service levels to rural and less populated areas and to low volume, nonprofit, and educational mailers (E-COM is currently designed for high-volume business mailers.)
- **Increased Cooperation with the Private Sector.**—At present, it is difficult for USPS to conduct effective long-range planning and market testing of EMS, since this requires good working relationships with private telecommunication and computer firms. 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.

OTA's analysis suggests that advances in technology and increased competition in the communications marketplace will significantly affect USPS finances, service levels, and labor force requirements over the next two decades. It further suggests that modification or clarification of the USPS role in EMS can, in turn, help determine how effectively USPS accommodates to these changes. Given the difficulty of modifying institutions as large and complex as USPS and the laws and regulations that govern USPS actions, it would seem prudent for Congress and USPS to address these issues aggressively. Changes are taking place so fast in the so-called "communications revolution" that by the time USPS actually experienced significant reductions in conventional mail volume, most opportunities for participation in EMS would have passed and it would be much more difficult to adjust.