ABSTRACT
                  Threatened by competitive diversification and by
increasing costs, the United States Postal Service has investigated
two potential cost reducing systems: (1) a microsystem which would
provide electronic facsimile transmission between major markets and
(2) a macrosystem which could take digital input such as utility
bills and deliver a hardcopy to receivers anywhere in the country.
The first system would be most appropriate for business-to-business
deliveries, but the most lucrative portion of this market will
probably be captured by independent competitors. The second system
requires a massive capital investment, and it would probably still
require hand-carried deliveries, the most expensive component of mail
handling. If customers are willing to accept electronic output,
impressive economies of scale can be obtained through the use of
electronic systems. (EMH)

REMARKS OF JOHN F. MCLAUGHLIN

ELECTRONIC MAIL: DEFINING A ROLE FOR THE U. S. POSTAL SERVICE

Before launching into a discussion of the future role
of the Postal Service, vis-a-vis electronic mail, let me
stress that my remarks do not constitute an "official" position
of the Postal Service. As Director of Strategic Planning, one
of my critical functions is to encourage speculation about
future developments which represent threats and opportunities
for USPS. Electronic mail concepts obviously fall within this
area and we are anxious to stimulate useful discussion of the
subject both within the Postal Service and without.

I think that I have spent the best part of the past week
redefining my own position on the subject, and I have been busy
rewriting some of that during this morning's discussion. Thus
what I have to say today should not be seen as any kind of
official stance.

Recently USPS has been denounced on a number of occasions
by a congressman for being "woefully behind in its programs to
harness new technology for the transmission of information..."
During this conference and in previous forums I have been told
that the Postal Service has been bypassing great opportunities

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in the field of electronic mail. Many people within and
without the Postal Service argue that we must "do something"
quickly, or face the likelihood that diversion of mail to
competitive telecommunications systems will precipitate the
collapse of the Postal Service.

I believe that we should evaluate these statements
separately. First, the Postal Service is threatened by
competitive diversion. Something on the order of 47% of postal
revenues stem from handling financial transactions. Another 20%
comes from processing something which we call correspondence.
There are a number of EFTS schemes that would reduce or eliminate
the financial transactions handled by the Postal Service. The
growing availability of cheap broadband communications will
facilitate the wide economic use of facsimile, mag tape type-
writers and other devices that compete with traditional postal
correspondence. Thus at some point in the future, two-thirds
of postal revenues are subject to diversion.

Whether this means that the Postal Service can and should
leap into electronic transmission of the mails presents another
set of issues. Let me illustrate these by recapping some of
the things which the Postal Service has done and what has been
discussed in terms of future electronic mail concepts.

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Recent efforts have been focused on two concepts:

1. A "micro" system which would provide fast,
   reliable and consistent service between major
   markets. This would be similar to the present
   Mailgram service offered through Western Union,
   but probably would be a facsimile system.
   Such a system probably would offer some type
   of expedited delivery at the destination office
   and, like Mailgram, provide for remote electronic
   input, possibly through USPS-leased terminals.
   This would be a high-priced service aimed at
   a relatively narrow segment of the marketplace.

2. A "macro" system, designed to reduce the
   relative cost of sorting and transporting
   a significant portion of first class mail.
   While such a system could be structured to
   accommodate individual letters entered through
   lobby walk-in or word processing terminals,
   the primary market would be mass mailings
   such as utility bills entering the system in
   digital form. This type of system would provide
   faster service for long distance mailings and

increased reliability and consistency of delivery. It would not reduce significantly the transit time for the majority of the mail that is destined for local or nearby delivery.

Both of these concepts are constrained by a traditional definition of mail. They utilize hard copy output which is made available for customer pick-up at a postal facility or delivered by a letter carrier (either on an expedited basis or as part of the routine daily delivery process). Henry Geller has suggested that there are no major legal or policy questions preventing the Postal Service from operating such systems and we agree with that analysis. Our problem with developing and implementing such concepts is one of economics. Let me explain our problems with each system.

In the case of the micro system, I will note first that facsimile is a century-old bridesmaid. People have described it as a threat to the Post Office or a great opportunity for decades. Writing in the Annual Report of 1872, Postmaster General Jonathan Creswell stated:

> "The probable simplification of the fac-simile
> system of Caselli, by which an exact copy of anything
> that can be drawn or written may be instantaneously
> made to appear at a distance of hundreds of miles from

the original; and the countless other applications
of electricity to the transmission of intelligence
yet to be made, -- must sooner or later interfere
most seriously with the transportation of letters
by the slower means of the post." ·

Obviously the technology has been around for a long time.
The problem has been finding a market within the economics of
the technology. We all know that the economics of facsimile
are improving, but there is still considerable question as to
the future demand for such a service.

Most of our research to date suggests that the most
promising market for a facsimile system consists of business-
to-business traffic in geographically concentrated areas. But
if the Postal Service enters this market and develops it, there
is a marked likelihood that specialized common carriers can
pick-off the high density market while the Postal Service
operates under continuing pressure from the Postal Rate Commission
or the Congress to universalize the service to less profitable
areas. More importantly, specialized common carriers would be
able to provide electronic output on the user's premises, thus
eliminating the cost, delay and possible uncertainties of having
a postal carrier deliver a final hard copy.

Perhaps I am seeing a threat where none exists. A facsimile
system between major metro areas can be launched with a

relatively small capital investment. Perhaps a national system operated by the Postal Service could provide the economics of scale and the wider accessibility that would create a new market for facsimile services. We think that the concept is worth continued exploration and we are pursuing it. Any decision to implement such a system, however, must be based upon better economic justification than is available presently, not the availability of the technology or the asserted presence of a threat.

Looking at a macro concept, I see similar problems. There seems little doubt that USPS could develop a system to accept large billings on mag tape, sort and transmit the data electronically and print-out the bill at the destinating post office. Presumably we could do the same with social security checks and other large payments. Conceivably we could do it with correspondence prepared on magnetic storage typewriters or entering the system via Telex -- <u>a la</u> Mailgram. The technology to do these things exists, and most authorities probably would agree that there is no major policy issue involved as long as the final output of the system is a hard copy delivered by a postal letter carrier.

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We have not built such a system to date; however, because no one has been able to show that it makes economic sense to do so.

The most optimistic forecasts that I have seen for a macro electronic mail system suggest that we might be able to force one-third of our total mail volume through it. Taking some other optimistic assumptions, that might translate into a billion dollars a year in annual savings. More realistically, we probably are talking about half a billion.

Now I do not want to sneer at the prospects of saving a billion or even half a billion dollars annually -- that's a lot of money even for us; that would be between 3% and 7% of our annual budget for next year. But -- it entails a major investment of money, probably a billion dollars at the minimum, and it entails considerable risk in terms of technology and market acceptance.

Implementation of such a system would be years off, increasing those risks accordingly.

The biggest risk, of course, is that eventual development of a comprehensive EFTS scheme would divert most of the traffic the system was designed to handle.

We are continuing to explore the technology and the market that might make a macro system economically attractive. Perhaps the technology will evolve to our advantage. Perhaps we will discover that sophisticated electronic funds transfer systems will not evolve dramatically. Perhaps our next round of studies will indicate the desirability of forging ahead on a macro system, a micro system, or both.

Personally I remain a little skeptical as long as we accept the given of hard copy output delivered by letter carriers. More than a third of present postal spending is devoted to the delivery function. Delivery costs will continue to grow as households and businesses multiply. Some 80% of delivery routes are motorized today, up from 30% a decade ago, and we see little opportunity to achieve further productivity improvement in the delivery function.

Electronic mail probably will remain economically unattractive unless it provides electronic output, thus obviating the massive cost of routine daily delivery service and eliminating the opportunities for delay, loss or error inherent in human intervention between the destination terminal and the recipient. In effect, USPS stands to benefit most

through electronic _delivery_ of mail as opposed to just electronic sorting or transportation.

Any system utilizing electronic output, when coupled with electronic input and intermediate switching, would have the effect of making USPS a common carrier. This in turn raises a multitude of questions concerning charter, regulation and national telecommunications policy.

If for no reason other than cost avoidance, USPS has a vested interest in pursuing an electronic mail system that would reach into millions of households and businesses. Such a system could be viewed as a basis for EFT applications and complementary to voice, cable TV and other communications systems. Along with the present voice and cable utilities, such a system might represent the essence of the once-popular "wired-nation" concept.

USPS lacks the technical and financial resources to develop and implement such a comprehensive system on its own, even if the critical policy issues could be resolved. Those institutions possessing the resources to contribute to such a system appear to lack the requisite charter to enter the field or expand upon their present operations. There may be sufficient economic

justification for a comprehensive electronic mail system and
most of the technology seems available. Such a system
probably can contribute to the public welfare, but no one
can put it together alone.

The most likely solution -- if there is one -- might be
a joint venture centered upon USPS -- which offers a potential
charter and stands to benefit by reduced costs -- and
involving many other parties in providing a switched network,
value-added services, household terminals and other elements
of an advanced system. Thus an appropriate role for the
Postal Service would be sponsoring research and encouraging
the development of proposals for joint ventures along these
lines.

This implies what many would see as a collusion of giant
monopolies or a conspiracy of big business, but there appears
to be no other solution if a nationwide electronic mail
service is to become a reality in this century.

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