

ALL ASPECTS OF COMPUTER REVOLUTION'S IMPACT ON COMMUNICATIONS SERVICES AND REGULATION OF THEM TO BE STUDIED BY FCC IN PROJECT NOW IN PROCESS OF FACT GATHERING, STRASSBURG REPORTS; RAISES QUESTIONS OF REGULATION

"All aspects" of the computer revolution's impact on the communications field and its regulation are to be studied by the Federal Communications Commission, in a project now "in its fact-gathering stage," FCC Common Carrier Bureau Chief Bernard Strassburg reported Thursday, Oct. 21.

Mr. Strassburg, in the first publicly available analysis of the impact of data processing on communications, said a small FCC task force has begun to look into such questions as "What facets of computer service involve communication common carrier activities which are subject to regulation?"

HIGHLIGHTS: Other key questions include possible extension of regulation, or amendment of Communications Act, and effects on data industry of carriers' tariff requirements. . . Communications Act, legislative history, and FCC precedents do not dispose of questions stemming from computer revolution, FCC bureau head points out.

Other key questions, he went on, include "Whether any facets which are not subject to regulation should be regulated, and in this connection the appropriate amendments to the Communications Act that may be required," and "The effects upon the growth and efficiency of this industry of existing tariff regulations and practices of communications common carriers, and the need for revisions of those tariffs."

It is clear, the FCC official declared, that the Communications Act, with its "a common carrier is a common carrier" definition, the legislative history surrounding the act, and the FCC decisions which might be considered as precedents do not dispose of the specific problems which are expected to arise from the computer revolution.

He told his audience, attending an institute on management information and data transfer systems in Washington, that the precedents which can be found "have only limited value," but do illustrate the questions likely to come up.

"For example," he went on, "if a computer center limits itself to the collection and storage and dissemination of specialized types of information upon request to its customers, it would appear that the argument can be made that this is not a common carrier activity. This would include such information services as stock quotations, library data, and credit rating services. Here the communication would appear to be

between the computer service and its customers doing business solely with the computer center.

"If, however, in addition to offering this service, the facilities of the computer center are also available as a means for interconnecting its different customers for the exchange of correspondence on a real-time basis of communication, a serious question is presented as to whether such function is not the service of a communications common carrier and therefore a common carrier service.

"The answer could turn on a question of degree. Thus, if a computer service acts as a means or catalyst whereby, for example, buy and sell orders are transacted and confirmed among brokers, either instantaneously or with some measure of delay, is the computer service performing a common carrier operation? In other words, is not the computer performing essentially as a sophisticated switchboard or switching mechanism in order to complete a path of communication for the transmission of intelligence between correspondents?

"Furthermore, if a single charge is made for both the information service (e.g., stock quotations) on the one hand, and the interconnection service between customers on the other hand, a further question arises as to whether the entire activity takes on the aspects of a common carrier service."

The FCC official also pointed to associated tariff questions, including customary limitations on the use of the service by private line customers to matters relating to their own businesses, and barring the customers from transmitting communications for others. He commented, "To the extent, therefore, that computer enterprises may seek to employ common carrier channels for the rendition of a package of services taking on the character of data processing and communication, questions are presented as to the status of such services both under the Communications Act and the tariff regulations of the communications common carriers."

In describing the FCC precedents which might have some bearing on the issues involved, Mr. Strassburg said that "It is apparent from the legislative history that merely because an enterprise employs communication channels to merchandise or sells its services, it does not follow that it is a common carrier within the intent of the act. This would include persons who engage in the sale of news or entertainment.

"The Commission has also held that a corporation formed by airlines as a joint enterprise principally to coordinate the use of frequencies for aeronautical purposes was not a common carrier even though it used wire lines obtained from common carriers to establish an integrated communication network to meet the needs of participating airlines.

"Similarly, the Commission has held that the Florist Telegraph Delivery Association, which transmits flower orders over a private line network among its members, is not a common carrier. We did indicate, however, that if greeting messages, at a separate charge therefor, were sent along with the flowers, the association would be engaging in a common carrier communication service subject to regulation.

"The provision of ticker service by Western Union to radio stations, newspapers, and others, consisting of accounts of major league baseball games, has been held by the Commission to be a common carrier undertaking. We reached this conclusion because the baseball leagues retained title to the news of their sporting events and therefore Western Union was, in fact, transmitting intelligence that was not its own for various other parties."

Keener competition is expected to emerge in this area, Mr. Strassburg forecast, between rival data centers, hardware manufacturing companies, and between diverse communications circuits.

Regarding communications circuits, he noted that "Today, the Bell System accounts for the bulk of voice channel capacity. But this predominance could well be challenged from three sources: Western Union, (the Communications Satellite Corp.), and private microwave systems."

He added, "the economies of shared computer use could cause a severe shift in the cost components of data processing. These cost components include the rental time of computer use and charges for communication circuits. As time sharing increases, the economies of scale could so reduce the cost of computer use that the major cost component of the data service could be the charges for communication channels and services. Conceivably, this might induce some large firms with the financial capability to establish their own nationwide private microwave networks."

Competition between rival data centers, the FCC official went on, already has come up, as when "banks and data processing centers clashed in the deliberations preceding the enactment of the Banking Service Act of 1962. Communications common carriers obviously will figure in the competitive arena. It seems doubtful that communications common carriers, in general, would be content to limit their role merely to supplying communication circuits."

As to hardware, he remarked that "Perhaps the most provocative implication of the computer for the communications carrier is as a substitute for its message switching equipment. In this sense, private computers would compete directly with communication carriers. Within this context, it cannot be forgotten that the carriers also have a very real interest in manufacturing and use of terminal equipment (i.e., teletypewriters, touch tone telephone instruments), as well as equipment employed for switching data and record circuitry." (Continued on page 36)

FCC DATA STUDY (Continued from page 3)

The concept of the entry of electronic data processing service into every home and business "is more than idle speculation," he commented. "By 1971, the experts tell us, practically all computers will be capable of simultaneous response or real time operation, that most computers will be on-line (tied to a central processor), that some 60% of all computers will be tied into the nation's communication networks, and that half of the information transmitted over that network will be in data form."

Other speakers to the four-day seminar included L. H. Southmayd, Manager-Data Communications Planning of the American Telephone & Telegraph Co.; Robert Francisco, Assistant Vice President in the Western Union management information systems organization; and J. H. Kilcoyne, Jr., of Comsat.

The carriers' spokesmen outlined what their organizations are doing in the management information system and data field, as previously reported in general. Mr. Kilcoyne pointed out that tests made by Comsat in conjunction with the telecommunications administrations of the United Kingdom, France, and Germany showed that the Early Bird system can successfully handle data up to 3200 bits per second within a four kilocycle channel, and high-speed facsimile in the 48 kc range. "Initial reaction on the part of all involved indicates a circuit reliability equal to or better than a transatlantic cable circuit," he added. -End-

SENATORS URGE USE OF SYSTEMS ENGINEERING TO SOLVE DOMESTIC U.S. ISSUES

Use of modern systems research and engineering to study the nation's domestic problems, including such things as air and water pollution, traffic, housing, and information control, was proposed last week in a bill introduced by Sen. Gaylord Nelson (D., Wisc.), and co-sponsored by Sens. Joseph Clark (D., Pa.) and Jennings Randolph (D., W.Va.). It would authorize the Secretary of Labor to administer the program.

Senator Nelson said the plan is based on a study which has been going on in California for several years, in four areas which include data and information control. The California studies are being conducted by aerospace organizations, using the same techniques they have employed in the space program. -End-

FORMER REA ASSISTANT ADMINISTRATOR APPOINTED TO MISSOURI COMMISSION

Charles J. Fain, an attorney and former state legislator, has taken office as a member of the Missouri Public Service Commission. Mr. Fain served for three years in Washington during the Eisenhower administration as Assistant Rural Electrification Administrator. -End-