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# COMPUTERS AND COMMUNICATIONS: THE FCC DILEMMA IN DETERMINING WHAT TO REGULATE

Hanan Samet\*

*Pursuant to the Communications Act of 1934, the FCC has been charged with regulatory authority over communications carriage services. Recent technological developments have induced communication carriers to employ computers to perform functions other than communications carriage. Professor Samet examines the potential merger of the services provided by the regulated communications industry and the previously unregulated data processing industry with a focus upon the FCC's regulatory role after the merger.*

The Federal Communications Commission (FCC)<sup>1</sup> is now in the midst of evaluating the comments of a self-initiated inquiry<sup>2</sup> concerning its role in the future regulation, or non-regulation, of aspects of the communications industry pertaining to the use of computers. This inquiry emerged from the FCC's recognition that communications services and computer services are converging.

Traditionally, the FCC has regulated the communications carriage services, an industry which often exhibits natural monopoly characteristics.<sup>3</sup> The

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1. The FCC was created by Congress in 1934 with a mandate to regulate the communications industry. Communications Act of 1934, § 1, 47 U.S.C. § 151 (1970). However, the portion of the Communications Act dealing with point-to-point communication consisted primarily of language borrowed from similar provisions of the Interstate Commerce Act. Regulation of telephone and telegram service started with the Mann-Elkins Act of 1910, Pub. L. No. 61-218, § 7, 36 Stat. 539, 546 amending Interstate Commerce Act of 1887, Pub. L. No. 49-104, 24 Stat. 379 which was promulgated to control 19th century rail and barge traffic. See Berman, *Computer or Communications? Allocation of Functions and the Role of the Federal Communications Commission*, 27 FED. COM. B.J. 161, 165 (1974) [hereinafter cited as Berman]. Many of the considerations which were taken into account at that time are no longer meaningful and, in fact, Congress is now in the process of rewriting the entire Communications Act. Also under consideration is the Consumer Communications Reform Act of 1976, aimed at reforming the common carrier portions of the Act from a certain vantage point. See also STAFF OF THE SUBCOMMITTEE ON COMMUNICATIONS: COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE OF THE HOUSE OF REPRESENTATIVES, 95TH. CONG., 1ST SESS., OPTIONS PAPERS (Subcomm. Print 1977). AT&T has expressed strong support for this bill. In particular, if passed, it would reverse many of the FCC's pro-competition actions.

2. Notice of Inquiry and Proposed Rule Making, Amendment of Section 64.702 of the Commission's Rules and Regulations, 61 F.C.C.2d 103 (1976) [hereinafter cited as Notice of Inquiry II]; Supplemental Notice of Inquiry and Enlargement of Proposed Rulemaking, Amendment of Section 64.702 of the Commission's Rules and Regulations (Computer Inquiry), 64 F.C.C.2d 771 (1971) [hereinafter cited as Supplemental Notice].

3. For one definition of communications common carriers see note 159 and accompanying text *infra*. Regulation is a process which accompanies the government's acquiescence to a natural monopoly and serves to prevent abuse of a firm's monopoly position. In a natural

Communications Act of 1934 was passed in recognition of this fact as well as to ensure the availability of efficient service at reasonable charges to the entire country.<sup>4</sup> It was felt that only through such regulation could every citizen be protected against potential abuses of such monopolies. However, such regulation also has the effect of shielding the carriers from competition in activities which are incidental to carriage<sup>5</sup> and are not in themselves natural monopolies. Increasingly, carriers are finding it beneficial to use computers to perform these "incidental" functions and it is in this region that the different market philosophies of the computer and communications sectors are on a collision course.<sup>6</sup>

Computers and data processing services<sup>7</sup> have traditionally been unregulated. This industry has thrived on competition and has been spurred by it. Currently, however, its members are finding themselves competing to some degree with the communications common carriers. In particular, the compu-

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monopoly, the most economical service can be realized by a single commercial entity because duplication of services is most likely to result in higher costs with no visible benefits to the user. One example is the electric power industry. A more relevant example is private home telephone service. In this case, the usefulness of the service would be destroyed if one would have a choice of telephone services since this would imply that in order to be able to communicate with all users one would have to subscribe to all services. Note that the home telephone monopoly is different from business telephone service where it is perfectly reasonable to expect that a customer might wish direct service to a finite number of points. This is the basis of MCI's Execunet service. See note 144 and accompanying text *infra*.

Regulation has also been applied to competitive industries; however, unlike natural monopolies, the results have been generally disappointing (e.g., regulation of the railroads and the trucking industry which are competitors in the freight business). The problems are numerous. Setting a price level is virtually impossible due to the various underlying financial structures of the competitors. Whenever a price level is set, the invariable results are different levels of service and possibly ruinous competition as weaker components join the fray.

Another serious problem is that of differential pricing. The reduction of price in a certain segment of the market by one firm may seriously jeopardize the financial health of those of its competitors who depend upon the affected market segment for the bulk of their revenues. This situation can not be ignored by the regulatory agency since such action may result in the elimination of service to a certain class of customers, and thus the regulator is compelled to take protectionist measures. For a more thorough discussion of regulation see generally the comments of Mr. Jones on the regulation of competitive activities in Reply Comments of IBM. The FCC solicited the comments of the various parties likely to be affected by regulation of data processing. [Hereinafter they will be cited as Reply Comments.] Jones, *An Example of a Regulatory Alternative to Antitrust: New York Utilities in the Early Seventies*, 73 COLUM. L. REV. 462 (1973); Jones, *Judicial Determination of Public Utility Rates: A Critique*, 54 B.U.L. REV. 873 (1974).

4. See note 1 *supra*.

5. Examples include modulation, demodulation, error correction, finding a minimum path through a network, etc. *Communications Act of 1934*, § 3(a) & (b), 47 U.S.C. § 153(a) & (b). See also Berman, *supra* note 1, at 165.

6. See, e.g., Memorandum Opinion and Order, American Telephone and Telegraph Company (AT&T) Revised to Tariff's F.C.C. Nos. 260 and 267 Relating to Dataspeed 40, 62 F.C.C. 2d 21 (1977), *appeals pending*, Nos. 77-4005, 77-4020, 77-4059 (2d Cir.) [hereinafter cited as Dataspeed 40/4]. See also note 17 *infra*.

7. The terms computers and data processing are used interchangeably in the following text.

ter industry would like to have a share of the communications market which is incidental to carriage, thus the collision of the two sectors. The problems of determining how to allocate the market in services, which are incidental to carriage, arise, in part, from the 1934 Communications Act which appears to subject such communications activities to regulation.<sup>8</sup> The regulated carriers claim that such services are clearly within their domain, while the data processing industry claims that these services should be unregulated and unavailable to the regulated carriers.

Generally, problems in the allocation of the market are inherent in any situation in which there is competition between regulated and unregulated entities. The primary issue which arises is whether the competition is to take place in a regulated or unregulated marketplace. Competition in an unregulated environment invariably leads to charges that the regulated enterprise is engaging in predatory pricing activities when it seeks to undersell the unregulated enterprise.<sup>9</sup> On the other hand, the regulated enterprise charges that the unregulated enterprise is engaging in "cream skimming."<sup>10</sup> A common response to such charges is the regulation of the new competitors by limiting their pricing policies.<sup>11</sup> The consequence of such regulation is that the agency exceeds its mandate by regulating both the regulated and previously unregulated sectors.<sup>12</sup> In effect, the regulatory agency allocates business between the two sections, in order to protect both enterprises.

Aside from the allocation issue, the FCC is faced with the need to formulate a demarcation line between the unregulated computer industry and the regulated communications industry.<sup>13</sup> Such an attempt by a regulatory agency leads to a proliferation of artificial distinctions concerning the activities to be regulated which may impair economic efficiency and technological progress. A further consequence of distinguishing between the regulated

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8. See note 5 *supra*.

9. Predatory pricing means that the regulated enterprise is using its monopoly revenues to subsidize its non-monopoly activities.

10. See First Report and Order, Establishment of Policies and Procedures for Consideration of Application to Provide Specialized Common Carrier Services in the Domestic Public Point-to-Point Microwave Radio Service and Proposed Amendments to Parts 21, 43 and 61 of the Commission's Rules, 29 F.C.C.2d 870, 910 (1971). "Cream skimming" means that only the most attractive segment of the regulated enterprise's market is being engaged in by the unregulated enterprise. In particular, the unregulated enterprise will seek the low cost customers whereas the regulated enterprise may remain with only high cost customers whom it will have to serve by virtue of its mandate, at a price which will not meet the cost of serving them alone. For example, in the case of long distance telephone service, the regulated enterprise's charges are reinforced by pointing to provisions such as section 1 of the 1934 Communications Act which call for efficient nationwide services with adequate facilities at reasonable charges.

11. See note 3 *supra* for the discussion of regulation in competitive industries.

12. See, e.g., GTE Service Corp. v. FCC, 474 F.2d 724 (2d Cir. 1973) (FCC had no authority to regulate a common carrier's business practice in the data processing market).

13. The "maximum separation" requirement in Computer Inquiry I where common carriers wishing to engage in data processing activities could do so only under separate entities. See e.g., 47 C.F.R. §§ 64.702(b) & (c) (1977). See also note 43 *infra*.

and unregulated sectors is the possibility that the regulated entity may be unnecessarily excluded from a sector under the guise of prohibiting predatory behavior.<sup>14</sup>

The first Inquiry<sup>15</sup> was conducted to investigate the problems emerging because of the overlap in the computer communications industry. In it, the FCC considered the ramifications of regulation upon data processing, and the restrictions it would impose on carrier entry in the data processing market. As a result, the Commission declined to regulate the data processing market, permitting carriers to enter the data processing market through separate independent subsidiaries.<sup>16</sup>

Subsequent to Inquiry I, technological developments<sup>17</sup> resulted in a need to re-examine some of the policies promulgated in that Inquiry. Such developments led to Inquiry II. While Inquiry II was in progress, AT&T developed a new offering, Dataspeed 40/4,<sup>18</sup> which could not be easily characterized under the existing rules or the proposed rules. Because the FCC had to rule on this peripheral device, it enlarged Computer Inquiry II by issuing the Supplemental Notice of Inquiry. In particular, the respondents were to address problems posed by communications common carriers' (e.g. AT&T) provision of services which include peripheral devices (e.g. Dataspeed 40/4).

The purpose of this Article will be to chronicle the developments in FCC regulation which emerged or are likely to emerge out of their two Inquiries,

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14. See, e.g., *United States v. Western Elec. Co.*, TRADE REG. REP. (CCH) ¶ 68,246, 71,134 (D.N.J. 1956). The judgment of this case is often referred to as the 1956 Consent Decree.

15. Notice of Inquiry, Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities, 7 F.C.C.2d 11 (1966) [hereinafter cited as Notice of Inquiry I]. Out of it emerged a decision in which the Commission attempted to formulate the proper roles for itself and the communications common carriers in the converging sectors of communications and computer services. Tentative Decision, Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities Decision, 28 F.C.C.2d 291 (1970) [hereinafter cited as Tentative Decision]; Final Decision and Order, Regulatory and Policy Problems Presented by the Interdependence of Computer and Communication Services and Facilities, 28 F.C.C.2d 267 (1971), *rehearing denied*, 34 F.C.C.2d 557 (1972) [hereinafter cited as Final Decision].

16. However, this had the effect of precluding AT&T from entering the data processing market due to a Consent Decree they entered into in 1956 in the case of *United States v. Western Elec. Co.*, TRADE REG. REP. (CCH) ¶ 68,246 & 71,138 (1956) which prohibited them from engaging in non-regulated activities. *Id.* at 71,137-38.

17. See note 57 *infra*. E.g., the newest digital switching systems of the phone companies are sophisticated computers capable of performing a variety of data processing tasks as well as switching phone lines. Also, there is no longer a discernible distinction between a terminal used for communications and one used as an input/output device for a computer. In economic terms, the American telephone industry billed its customers \$25 billion for telecommunications services in 1977 while the domestic data processing industry, including its foreign operations, had sales totaling \$38 billion. Moreover AT&T estimates that the American "information services" industry will have \$380 billion in annual sales by the early 1990's. *The New Telephone Industry*, BUS. WEEK, February 13, 1978, 68-70.

18. See note 6 *supra*.

while describing technological advancements, such as Dataspeed 40/4, which were the impetus for the Inquiries. Finally, the Article will evaluate the usefulness of the standards and proposed regulations. Since it is important to consider the Inquiries with respect to the parties affected by them, some attention will be directed to the positions asserted by AT&T, IBM and the Department of Justice. Close scrutiny of these individual parties' responses reveals that much more than the public interest is at stake when a particular economic sector is to be regulated. The economic survival of a number of entities is also a concomitant of regulation.

### COMPUTER INQUIRY I

The first computer inquiry was prompted, in part, by a dispute between the Bunker Ramo Corporation and Western Union.<sup>19</sup> The conflict occurred when Western Union, pursuant to its tariff, refused to sell communications circuits to Bunker Ramo, contending that Bunker Ramo had engaged in the resale of communications services, a process forbidden to non-common carriers.<sup>20</sup> Confronted with this controversy, the FCC characterized its Inquiry as involving two questions.<sup>21</sup> The first was one of a policy nature: whether or not data processing was to be regulated. The second was concerned with the communications common carrier's role in providing data processing services. The second question was further complicated by the existence of services in which data processing and communications were so closely intertwined that a simple distinction would be difficult to make.

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19. Bunker Ramo had a stock price quotation system, Telequote III, which offered users up to date information on any stock traded on the exchange. This service used private line wires of Western Union. Subsequently, Bunker Ramo introduced a new service, Telequote IV, which enabled users to communicate with each other through the use of the Bunker Ramo computer as a store forward device. An order would be sent to the computer and stored there until polled by another computer which would forward it to the appropriate broker or trader. Although it had willingly provided carriage services for the Telequote III offering, Western Union balked at doing the same for the Telequote IV offering. In the Telequote III offering users had no choice as to what type of information was being communicated. Only recorded stock price quotations were transmitted. This was not the case, however, in the Telequote IV offering.

Western Union's action was undoubtedly based on its fear that given this communication capability, there was nothing to prevent users, as well as Bunker Ramo, from using their facilities for all types of communications. Bunker Ramo subsequently withdrew the Telequote IV offering and thus the FCC never did have the opportunity to rule on the issue. See Comment, *Federal Communications Commission Regulation of Domestic Computer Communications: A Competitive Reformation*, 22 BUFFALO L. REV. 947, 961 (1973); Note, *The FCC Computer Inquiry: Interfaces of Competitive and Regulated Markets*, 71 MICH. L. REV. 172, 192 (1972); Note, *Computer Services and the Federal Regulation of Communications*, 116 U. PA. L. REV. 328, 329 (1967).

20. 1934 Communications Act, § 203(c)(3), 47 U.S.C. § 203(c)(3) (1970).

21. The questions were: (a) The nature and extent of the regulatory jurisdiction to be applied to data processing services; and (b) Whether, under what circumstances, and subject to what conditions or safeguards, common carriers should be permitted to engage in data processing. Tentative Decision, *supra* note 15, at 295.

*The Nonregulation of Data Processing*

In dealing with the question of whether to regulate data processing, the FCC observed that since computers were not in existence at the time the Communications Act of 1934 was enacted, it could not turn to the Act for assistance in determining whether it had any authority for the regulation of data processing. Instead, it turned to *United States v. Southwestern Cable Co.*<sup>22</sup> which affirmed a grant of expansive powers to the FCC.<sup>23</sup> Therefore, the Commission concluded that it had authority to regulate "communications facilities and services not in existence, or even anticipated, at the time the Communications Act of 1934 was enacted."<sup>24</sup>

Prior to any attempt to draw a line between communications and data processing, the FCC pointed to the record before it as demonstrating that pure data processing services were essentially a competitive business and, therefore, in no need of regulation. Consequently, the Commission concluded that it saw "no need to assert regulatory authority over data processing services whether or not such services employ communications facilities in order to link the terminals of the subscribers to centralized computers."<sup>25</sup> Nevertheless, it did reserve the option to re-examine its policies should there "develop significant changes in the structure of the data processing industry, or, if abuses emerge which require the exercise of corrective action by the Commission . . . ."<sup>26</sup>

*Maximum Separation*

Having determined that data processing should remain unregulated, the FCC turned to the problem posed by the provision of data processing services by common carriers. To justify such offerings, the communications common carriers urged that it would promote a more efficient use of the excess capacity of their in-house computers and create additional competition in the marketplace.<sup>27</sup> The disadvantages, however, were found to be

22. 392 U.S. 157 (1968).

23. Tentative Decision, *supra* note 15, at 296, citing *United States v. Southwestern Cable Co.*, 392 U.S. 157, 173 (1968).

24. *Id.* at 297. The FCC noted that it was not required to assert jurisdiction over a particular activity because it might be construed as being within the scope of the Communications Act of 1934. *Id.* Instead, it saw itself as being "entitled to some leeway in choosing which jurisdictional base and which regulatory tools will be most effective in advancing the Congressional objective." *Id.*, quoting *Philadelphia Television Broadcasting Co., v. FCC*, 359 F.2d 282, 284 (D.C. Cir. 1966). *But see* *National Ass'n. of Regulatory Util. Comm'rs. v. FCC*, 525 F.2d 630 (D.C. Cir. 1976).

25. Tentative Decision, *supra* note 15, at 298. This decision coupled with the 1956 Consent Decree which precludes AT&T from offering non-regulated services has the effect of excluding AT&T from the data processing marketplace.

26. *Id.*

27. Note, *The FCC Computer Inquiry: Interfaces of Competitive and Regulated Markets*, 71 MICH. L. REV. 172, 188-89 (1972).

numerous.<sup>28</sup> Foreseeable problems included: the ever-present danger of cross subsidization and predatory pricing; the potential for discrimination by the carrier in providing services to its non-carrier competitors;<sup>29</sup> and the possibility that the carrier's control over the customer's communication facility could enable it to exert subtle pressures on the customer to procure data processing services from it as well.

The FCC compromised by allowing common carriers to provide data processing services through separate corporate entities.<sup>30</sup> This policy of "maximum separation" prohibited the carriers from selling or promoting data processing activities on behalf of its data processing affiliate.<sup>31</sup> Further, the FCC's decision stipulated that the carrier involved in data processing should employ only equipment and services which are adapted for data processing and other non-common carrier services exclusively.<sup>32</sup> This mandate eliminates any potential overlap in communications carriage and data processing.

Despite objections by Western Union,<sup>33</sup> the FCC ruled against allowing a carrier to sell its excess off-peak or "back-up" computing system capacity.<sup>34</sup> It felt that the "carrier's 'back-up' system should be designed to meet foreseeable breakdowns of equipment dedicated to public service and it should be available instantly for that purpose without the conflicting claims of other users."<sup>35</sup>

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28. *Id.* at 189-94.

29. Some examples included a slow response to orders for new services and outages, the assignment of inferior grade lines and switching facilities, and, most importantly, abuse by the carrier of its right to refuse to provide services on the grounds of alleged tariff violations. Final Decision, *supra* note 15, at 274.

30. 47 C.F.R. § 64.702 (b) & (c) (1977).

31. *Id.* at (c) (3).

32. Tentative Decision, *supra* note 15, at 303. In establishing this policy, the Commission took into account powers granted to it by Sections 201(a) and 214(d) of the Communications Act and concluded that it had "ample jurisdiction to bar carriers from providing data processing services upon a proper finding that it would prevent them from discharging their common carrier responsibilities in a manner consistent with the standards and objectives of the Communications Act." *Id.* at 30-01. As long as the 1956 Consent Decree is in force, this policy is only applicable to common carriers other than AT&T (*e.g.*, GTE, Western Union, etc.) since AT&T can only provide regulated services.

33. Final Decision, *supra* note 15, at 271.

34. 47 C.F.R. § 64.702(d) (1977).

35. Final Decision, *supra* note 15, at 271. This conclusion was based, in part, on a belief that normal peaks do occur from time to time. The Commission also dismissed the carrier's claim that their participation in data processing would be beneficial due to increased competition when it reiterated its belief that the industry was one characterized by a large number of competitors with low entry barriers. *Id.* at 270, citing Tentative Decision, *supra* note 15, at 297. In its Final Decision, the FCC, at the urging of several of the parties, expanded the prohibitions on carrier activities set forth in the Tentative Decision. 47 C.F.R. § 64.702(c) (4) & (5) (1972). First, a carrier's data processing affiliate was prohibited from using the name of its parent common carrier in its promotions, and also from using in its corporate name any words or symbols appearing in the name of its parent common carrier. Second, a common carrier was prohibited from obtaining any data processing services from its separate corporate affiliate. This



The policy of maximum separation did not go unchallenged for long. Soon after the FCC announced its decision, several communications common carriers<sup>36</sup> filed petitions for a review of the conditions under which they may compete in the data processing sector. The carriers were objecting to the restrictions placed on their dealings with their separate affiliates.<sup>37</sup> These objections culminated in the *GTE Service Corp. v. FCC*<sup>38</sup> decision, in which the Second Circuit reviewed the maximum separation policy.

The court in *GTE Service Corp.* first addressed the issue of "whether the Federal Communications Commission is authorized by Congress to promulgate rules regulating the entrance of communications common carriers into the nonregulated field of data processing services."<sup>39</sup> The court relied on the 1934 Communications Act<sup>40</sup> as providing such authority.

Once the authority of the FCC to promulgate rules was determined, the court stated that, despite the absence of any reference to computers in the statute, there was strong precedent for an expansive definition of communications. In particular, it observed that Congress recognized that communications is a dynamic field and framed an Act with expansive powers so that the Commission would respond as the industry evolved.<sup>41</sup>

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was based, in part, on arguments that exclusive transactions between a carrier and its data processing affiliate would have a substantial impact on the competitive market where small firms would be unable to obtain a contract with so large a customer. Fear was also expressed that "excessive payments by carriers to data processing affiliates would enable the affiliates to unfairly underprice their own competitors in the data processing market." *Id.* at 273. Nevertheless, despite the experience of Bunker Ramo with Western Union, *see* note 19 *supra*, the Commission declined to address the problem of the carrier favoring its data processing affiliate while supplying communications facilities and services to a competitor. This was predicated on its lack of conviction "that the public interest requires total preclusion of carriers from offering data processing services." Final Decision, *supra* note 15, at 274. However, it did state that "any such favoritism is contrary to the obligations of the carriers under the requirements of the Act." *Id.*

36. These included GTE Service Corporation, United Telephone Company of Missouri, Western Union Telegraph Company, International Telephone and Telegraph Corporation, and Continental Telephone Corporation.

37. The carriers took exception to provisions of the rules which preclude them from obtaining any data processing services from their data processing affiliates, and also prohibit their separate affiliates from employing in their name any words or symbols contained in the name of the parent.

38. 474 F.2d 724 (2d Cir. 1973).

39. *Id.* at 730.

40. The Act states that the FCC was created: "[ f ] or the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges . . ." 47 U.S.C. § 151 (1970); *see* note 1 *supra*. Authority for rulemaking was found in Section 4(i) of the Act wherein the Commission was authorized to "make such rules and regulations, and issue such orders . . . as may be necessary in the execution of its functions." *Communications Act of 1934*, Section 4(i), 47 U.S.C. § 154(i) (1970).

41. *See* *GTE Serv. Corp. v. FCC* 474 F.2d 724, 731 (2d Cir. 1973) *citing* *NBC v. United States*, 319 U.S. 190, 219 (1943) (network practices found to be inimical to the public interest).

Next, the court discussed whether "the proper role of the FCC should be to wait for actual abuses [to occur] and then proceed on an adjudicatory basis rather than through the device of rule-making."<sup>42</sup> The court held that it need not do so, basing its decision, in part, on the fact that the Commission was entering into a new area of policy which affects a large number of entities. In particular, it stated: "[T]he choice made between proceeding by general rule or by individual, *ad hoc* litigation is one that lies primarily in the informed discretion of the administrative agency."<sup>43</sup>

With respect to the institution of a prohibition on common carriers procuring data processing services from their affiliates, the court found that the FCC had exceeded its jurisdictional authority.<sup>44</sup> The court recognized the Commission's concern that the regulated carriers continue to provide the public with efficient and economic communications services. However, it felt that the rules were not formulated for the protection of the "communications market which Congress has entrusted to its care, but for data processing which is beyond its charge and which the Commission itself has announced it declines to regulate."<sup>45</sup>

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Thus the court concluded:

[E]ven absent explicit reference in the statute, the expansive power of the Commission in the electronic communications field includes the jurisdictional authority to regulate carrier activities in an area as intimately related to the communications industry as that of computer services, where such activities may substantially affect the efficient provision of reasonably priced communications service.

*Id.*

42. *Id.*

43. *Id.*, quoting *SEC v. Chenery Corp.*, 332 U.S. 194, 203 (1947). These holdings essentially validated 47 C.F.R. §§ 64.702(b);(c) (1),(2),(3); & (d) (1977). 47 C.F.R. § 64.702(b) provided that, except for non-Bell system companies, communications common carriers could not furnish data processing unless they complied with the maximum separation requirements of 47 C.F.R. § 64.702(c)(1). Recall that Bell system companies were already excluded by virtue of the 1956 Consent Decree. 47 C.F.R. § 64.702(c) (1) required that each such separate corporation had to maintain its own books of account as well as to utilize separate operating personnel and computing equipment from those of the parent carrier. 47 C.F.R. § 64.702(c) (2) stipulated that copies of all agreements entered into between the separate data processing corporation and the parent common carrier be deposited with the FCC. 47 C.F.R. § 64.702(c) (3) prohibited the parent common carrier from selling or promoting the sale of data processing services on behalf of its separate corporation. 47 C.F.R. § 64.702(d) forbade a common carrier from selling or leasing any of its computing capacity which it ordinarily used for the provision of its communications common carrier services.

44. *GTE Serv. Corp. v. FCC*, 474 F.2d 724, 733 (2d Cir. 1973), 47 C.F.R. § 64.702(c) (4) & (5) had the effect of precluding the common carriers from procuring any data processing services from their separate affiliates. Moreover, they prohibited the separate affiliate from employing in its name any words or symbols contained in the name of the parent carrier or from using the carrier's name in the affiliate's promotional enterprises.

45. 474 F.2d at 733. The Commission had argued that it had a right to make regulations on the basis of antitrust considerations to which the court responded that "the unfair competition, restraint of trade or potential threat of monopoly, must be in a market in which the Commission has jurisdiction." *Id.* at 734. In this case, the threat was to the data processing industry—an area where the enforcement of the Sherman and Clayton antitrust acts is within the purview of

*GTE Service Corp.* should be read as an endorsement of the "maximum separation" doctrine.<sup>46</sup> However, the policy extends only to the protection of customers in the communications sector. Once the separate affiliates have been created, any regulation pertaining to their practices in sectors other than communications is not within the Commission's purview. Pursuant to a 1956 Consent Decree in the case of *United States v. Western Electric*,<sup>47</sup> AT&T is barred from the data processing market. As long as AT&T remains barred, the *GTE Service Corp.* decision is not of major importance. However, should the bar contained in the 1956 Consent Decree be lifted, then *GTE Service Corp.* takes on an extremely important dimension since it unleashes an economic giant in a market in which the FCC has little or no control.

### *Hybrid Services*

In addition to the maximum separation doctrine, Computer Inquiry I dealt with services in which communications and data processing services were intertwined—the so-called "hybrid services."<sup>48</sup> In evaluating whether a

the Antitrust Division of the Department of Justice or the Federal Trade Commission.

In reaching its decision, the court elaborated on its interpretation of the "maximum separation" doctrine. In its eyes, this device was developed as a means of enabling a carrier to provide data processing services to others while at the same time insuring that communications customers are in no way penalized for the carrier's activity in the unregulated data processing sector. Specifically, the FCC was concerned with the possibility that costs incurred in the data processing sector would be passed on to communications customers, or alternatively, that revenues from common carrier services would be used to subsidize data processing services. Therefore, the court concluded, the separate corporate entity was not a device devised by the carrier to avoid regulation. Yet, it added, the FCC, after forcing the creation pursuant to 47 C.F.R. § 64.702(c), was now attempting to invoke §§ 64.702(c) (4) & (5) (1972) on the grounds that it (the separate corporate affiliate) was a means of avoiding regulation. This, determined the court, was improper when it stated that the concerns of the FCC, that the above improprieties may cause "irreparable harm" to the data processing industry, may "support the 'maximum separation' concept of the approved rules, but do not sustain the Commission's intrusion into the data processing activities of the separate affiliate." *Id.* at 735.

46. Any objection to the maximum separation policy from the point of view of a data processing user or a data processing service organization is not appropriate. Recall that charges of unfair practices are within the jurisdiction of other agencies such as the Antitrust Division of the Justice Department or the Federal Trade Commission.

47. TRADE REG. REP. (CCH) ¶¶ 68,246 & 71,138 (1956).

48. 47 C.F.R. § 64.702(a) provides the following definitions:

- (1) *Data Processing*—The use of a computer for the processing of information as distinguished from circuit or message-switching. "Processing" involves the use of the computer for operations which include, *inter alia*, the functions of storing, retrieving, sorting, merging and calculating data, according to programmed instructions.
- (2) *Message-Switching*—The computer-controlled transmission of messages, between two or more points, via communications facilities, wherein the content of the message remains unaltered.
- (3) *Local Data Processing Service*—An offering of data processing wherein communications facilities are not involved in serving the customer.

hybrid service<sup>49</sup> was to be regulated, the FCC decided it would determine the primary functions performed by the service.<sup>50</sup> If it was primarily a data processing service, then the entity which offered the service would not be subject to common carrier regulation.<sup>51</sup> If, however, the offering was designed primarily to meet the communications needs of the subscriber then it would be regulated subject to the Communications Act whether or not the offeror was a common carrier.<sup>52</sup>

Under the "primary function" approach to regulation, when a common carrier intended to offer a hybrid communications service, it was required to file its tariff with the FCC.<sup>53</sup> No such requirement, of course, was placed on non-common carriers who were planning to offer a hybrid data processing

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(4) *Remote Access Data Processing Service*—An offering of data processing wherein communications facilities, linking a central computer to remote customer terminals, provide a vehicle for the transmission of data between such computer and customer terminals.

(5) *Hybrid Service*—An offering of service which combines Remote Access data processing and message switching to form a single integrated service.

Tentative Decision, *supra* note 15, at 295-96. The definitions distinguish the use of a computer for message-switching from its use in data processing by stating that in the former the content of the message remained unaltered. Thus in the case of message-switching, the computer was viewed as replacing the manual or electromechanical switching operations which had traditionally been provided by the communications common carriers.

49. The FCC declined to give specific factual situations where a hybrid service would be ruled hybrid data processing and where it would be ruled hybrid communications. Instead, it felt that guidelines could be best established by a process of review and evaluation, on an *ad hoc* basis, of factual situations as they arose. It was willing to proceed on a case by case basis because it felt it lacked experience in this domain, and also it did not want to retard the development of new services. Final Decision, *supra* note 15, at 278-79.

50. This concept is a crucial aspect of the inquiry because the effectiveness of decisions with respect to maximum separation and lack of regulation of data processing can be seriously undermined depending upon how widely the FCC defines hybrid communications services.

51. Even if the service involved message-switching, when offered as an incidental feature of the data processing service, it would not be subject to common carrier regulation. Tentative Decision, *supra* note 15, at 305. A common carrier wishing to offer a data processing service with some message-switching must still do so under maximum separation.

52. *Id.* A non-common carrier wishing to offer such a service would be required to become a common carrier. In determining the characteristics of the service, the Commission stated that it would examine the context in which the service was being offered. *Id.* One test would be whether the service had the attributes of point-to-point services offered by the conventional communications common carriers and thus was basically a substitute for them. Another test would be whether the message-switching capability was essentially independent of the data processing component. These tests were to be carefully applied by the FCC in recognition of the 1956 Consent Decree which precludes AT&T from offering non-tariffed services. *Id.* Such considerations probably resulted in the FCC bending backwards in order to aid AT&T in the Dataspeed matter just as it is often accused of doing in the case of Western Union.

53. Final Decision, *supra* note 15, at 279. The tariff is the means of regulation which provides the FCC with information about the offering, including the cost to the customer of the service.

service since these services were to be unregulated.<sup>54</sup> This left it to the common carriers to police the line between communications and data processing. If a carrier decided that the service to be offered by a data processing entity was a hybrid communications service rather than a hybrid data processing service, it could call the violation to the attention of the FCC or refuse to sell communications services to the data processor. The grounds for refusal to sell were that the carrier's tariff prohibited it from selling carriage to one who intended to resell it.<sup>55</sup>

These self-policing provisions assumed that the policing carrier would be scrupulous in evaluating the offering and deciding whether it was data processing or communications. This led to a number of problems.<sup>56</sup> First, the risk of establishing a hybrid data processing service was increased because of the danger of drawing the attention of the FCC or the policing carrier. The potential offeror would not know if the offering would be regulated. Second, there was a burden imposed on the offeror in preparing for hearings before the FCC should the nature of the service be called into question. Third, since the primary thrust of a business was often undergoing change, the offeror would constantly be subject to re-examination by the policing carrier or the FCC. Ultimately, the carriers may be promoting their self-interest by questioning the emergence of these new services since data processing affiliates are likely to provide the carriers with some competition.

#### COMPUTER INQUIRY II

Increasingly, as computing functions are being decentralized, there is a growing merger of data processing and communications activities in "intelligent" terminals.<sup>57</sup> Such terminals are furnished to the user by both the regulated common carriers and members of the unregulated terminal equipment manufacturing sector. Nevertheless, the terminals are under the control of the user rather than the carrier or manufacturer. These advances raise the question of whether the "intelligence" is data processing or communications. The definitions promulgated in Computer Inquiry I are in-

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54. Communications common carriers could only offer hybrid data processing services under maximum separation. Non-common carriers desiring to offer hybrid communications services would have to become common carriers.

55. Final Decision, *supra* note 15, at 279-80. See Report and Order, Regulatory Policies Concerning Resale and Shared Use of Common Carrier Services, 60 F.C.C.2d 261 (1976); *aff'd sub. nom.* American Tel. & Tel. Co. v. FCC (2d Cir. 1978) (allows resale but specifies that resellers must become common carriers).

56. Berman, *supra* note 1, at 181-82.

57. This is attractive to users because they do not have to use communication facilities as heavily as before thereby lowering their costs. Another important new development has been the miniaturization of logic and memory. This has resulted in decreasing costs and has led to the development of microprocessors, which are small computers embedded in devices other than central processors. An additional, and somewhat parallel, development has been the growth in the use of networks of computers where some of the computing power ("intelligence") is distributed into the network rather than the terminal.

adequate since they were directed at a computing environment in which data processing was performed by a central processor, and thus are of little help when new applications are being considered.<sup>58</sup>

In order to cope with such issues, the FCC undertook to revise the rules set forth in Computer Inquiry I. The revised rules proposed in Computer Inquiry II maintain the maximum separation regulatory policies set forth in Computer Inquiry I. Inquiry II subsequently proposed a definition of data processing as the "use of a computer for the purposes of processing information wherein: (a) the semantic content, or meaning, of input data is in any way transformed, or (b) where the output data constitute a programmed response to input data."<sup>59</sup> This definition appropriately recognizes that all computers perform a combination of the basic steps of arithmetic, logic, storage, retrieval, and transfer.<sup>60</sup> Therefore, the amalgamation of these steps into programs is not necessarily data processing.

Data processing services<sup>61</sup> could not be offered by a communications common carrier except under the maximum separation conditions. Nonetheless, not all services employing the use of computers are necessarily in the domain of data processing services.<sup>62</sup> They can be distinguished from data

58. Consider such features as call forwarding, restricted and abbreviated dialing, etc.; their provision may lead to disputes since they can be achieved either by the terminal or by the network as AT&T is doing in its new ESS equipment. Notice of Inquiry II, *supra* note 2, at 106.

59. *Id.* at 107. A comment explains that the term "program" is used in its broadest sense and includes software which is user alterable as well as hardwired or ROM (read only memory). This explanation is important because it demonstrates recognition by the Commission of the trend toward embedding programs in the actual circuitry of the computer. This trend has been fueled by the rapidly decreasing cost of memory and switching circuitry.

60. In greater detail one has:

*arithmetic computation*—the basic operations of count, add, subtract, multiply, and divide.

*logical computation*—operations which include: and, or, not, compare, and branch.

*storage, retrieval, and transfer*—of alpha-numeric or graphical data.

*Id.* at 108.

61. These services include:

*arithmetic processing*—general commercial accounting, payroll, inventory control, banking and point-of-sale processing, financial and econometric modeling, scientific calculations, etc.

*word processing*—a rapidly developing application resulting from advances in memory technology and word processing software. Applications include: interactive information retrieval systems, management information systems, text editing, translation, typesetting, etc.

*process control*—the increased reliability and availability of computers is leading to an expansion of application where a computer is used to monitor and control some process which is occurring continuously—such as a nuclear-powered generating station, an electric power distribution grid, an automatic machine tool, or a fire detection and control system.

*Id.* at 109.

62. These uses include:

*network control and routing*—applications include: Message and circuit switching, speed and code conversion, pulse format conversion, error detection and correction,

processing on the basis of how a computer applies its computing functions to the data. In particular, the decisions made by the computer in these applications are based not on the information content of the data; but, instead, they are based on the structure of the data.<sup>63</sup> Such services could be incorporated into the carrier's communication offering without evoking the constraints imposed by the maximum separation requirement.

In general, the critical change in the definition proposed by Inquiry II is that the term "hybrid" disappeared. The question of whether an offering is data processing becomes an "all or nothing" decision, and in some instances the stakes in the determination are rather high. In particular, in the case of AT&T, a finding that a service is data processing has the effect of precluding AT&T from offering the services by virtue of the 1956 Consent Decree which prohibits it from offering anything but a regulated service.<sup>64</sup> Such a problem arose in the matter of the Dataspeed 40/4 tariff.<sup>65</sup>

#### DATASPEED 40/4

The Dataspeed 40/4 is AT&T's competitive alternative to other "intelligent" remote access devices which allow the customer to make use of a remote computer by having the information transmitted by phone or a similar device. Dataspeed was designed to interface with a host computer data processing system at a location other than the customer's premises. Unlike other communications devices,<sup>66</sup> however, it can only communicate with another Dataspeed terminal via a host computer and under computer control. Essentially, it is a device that contains sufficient memory to store a long message and enable the user to edit it by correcting his mistakes prior to transmission.<sup>67</sup>

analog to digital and digital to analog conversion, signal processing, and time division multiplexing.

*input/output processing*—this category comprises the uses of a computer capability resident in a carrier network facility for the purpose of making disparate computers and terminals compatible with each other. Typical functions are the formatting, editing, and buffering of data to make it compatible with the electrical characteristics of different transmission media.

*Id.* at 109—10 (footnote omitted).

63. Examples of data structuring considerations are whether the message is long enough, or whether any transmission errors occurred.

64. *United States v. Western Elec. Co.*, TRADE REG. REP. (CCH) ¶¶ 68, 246 & 71, 137, (1956).

65. This matter arose on November 18, 1975 when AT&T filed the tariff. The memorandum opinion and order was adopted on December 22, 1976. At this time Computer Inquiry II was in progress and the Commission applied the rules set forth in Computer Inquiry I in reaching its decision in this matter. *See Dataspeed 40/4*, note 6 *supra*.

66. For example, TWX is such a communications device.

67. Via appropriate commands the user may manipulate a cursor to make changes in previously typed text which is on or off the screen (up to 72 lines). The advantages of such a mode of operation are several:

- (1) It enables the efficient use of the central processing computer since it need not constantly listen to the terminal nor perform such operations as screen manipu-

Other manufacturers provide comparable<sup>68</sup> and often superior devices. Dataspeed, however, is not merely a terminal, but instead, is a service which provides a terminal in conjunction with various transmission modes.<sup>69</sup>

In offering the Dataspeed 40/4 service, AT&T evidenced its determination to avoid being frozen out of the data terminal market whenever customers desired more efficient communications with a computer. It was especially concerned that, insofar as the Computer Inquiry I rules did not permit it to provide data processing,<sup>70</sup> it would be reduced to providing only wires.<sup>71</sup> AT&T contended that it was offering a communications service on the ground that the service was a natural extension of its role in providing teletypewriter service.<sup>72</sup> Therefore, AT&T claimed that it was automating functions previously performed by teletypewriters.<sup>73</sup> Moreover, it relied on the definition of "message-switching" in Computer Inquiry I<sup>74</sup> to argue that "the functions performed by the Dataspeed 40/4 service are clearly communications since the informational content of the message transmitted is (a) controlled by the customer and (b) not altered in transmission by the carrier."<sup>75</sup>

An adverse argument was posited by IBM who believed that AT&T intruded into the periphery of the office equipment marketplace.<sup>76</sup> IBM contended that computers' functions do not become communications merely by virtue of their location in a remote access device. IBM argued that the Dataspeed was in fact a data processing device because it performs functions previously performed by the central processor to which the teletypewriter was connected. Therefore, IBM objected to AT&T's provision of a terminal as part of its tariff.

lation. This enables the central processing computer to devote more attention to other tasks and thereby increase its productivity.

- (2) There is an increase in the efficiency of the use of communications facilities. Rather than transmitting one character followed by a pause followed by another character etc., one may transmit a block of data with a minimization of transmission time.

68. There are at least 220 terminals from 79 vendors available today which are comparable to the Dataspeed. *DATAPRO* (April, 1977) at 70 D-010-2a.

69. In particular, a 2400 and 4800 bits per second Dataphone Digital Service (under Tariff F.C.C. No. 267) and also voice grade private line service (under Tariff F.C.C. No. 260). *Dataspeed 40/4*, *supra* note 6, at 21.

70. Actually the Computer Inquiry I rules merely state that data processing is to be unregulated. The 1956 Consent Decree prevents AT&T from engaging in unregulated activities. Therefore, AT&T cannot provide data processing. This led it to favor an expansive definition of communication since this implies regulation.

71. *Dataspeed 40/4*, *supra* note 6, at 75.

72. Previously, a user could obtain the same type of service by use of a teletypewriter and a papertape unit. The message could be punched on tape, the tape edited (albeit rather inefficiently), and once all of the errors were removed it could be transmitted.

73. Actually, the users manipulated the teletypewriter along with its paper tape unit to achieve these functions.

74. *See* note 48 *supra*.

75. *Dataspeed 40/4*, *supra* note 6, at 27.

76. Anderson, *IBM Versus Bell in Telecommunications*, *DATAMATION* (May, 1977) at 91.



The Chief of the Common Carrier Bureau ruled that the offering was a data processing service in that it was intended for either on-site or remote access interaction with a central computer. In so doing, he noted that the device "falls into that class of equipment which is designed to be used and marketed solely for the input, output, formatting, and conversion of computer-based data and which is not generally intended for basic terminal-to-terminal transmission."<sup>77</sup>

If the rejection was based on the Dataspeed being "incapable of the traditional record communication functions of the predecessor Teletype devices,"<sup>78</sup> then the Chief was clearly mistaken. Such reasoning ignored the options available to AT&T. It could easily attach a printer, autoanswering, and autodialing units to the Dataspeed terminal thereby enabling it to assume all of the functions of traditional record communications devices.

Rejection of the Dataspeed 40/4 tariff on the ground that it incorporated data processing functions previously handled by the central computer, is also questionable in light of the FCC's mandate to promote the efficient use of communication facilities.<sup>79</sup> AT&T proposed to increase the efficiency of utilization of communications links by eliminating large gaps of inactivity. The fact that another device, the central computer, can perform a function, albeit less efficiently, is no reason to bar a carrier from improving the situation. Such capability would result in greater utilization of the telephone network and could lower the costs to the public—a goal mandated to the FCC.<sup>80</sup>

The FCC overruled the decision of the Chief of the Common Carrier Bureau. First, it found that Dataspeed 40/4 did not fall within the scope of the maximum separation policy. In doing so, it reasoned "that AT&T is not providing, and does not propose to offer, the data processing operations of the central computer which render the Dataspeed 40/4 functional."<sup>81</sup>

Second, the FCC decided that the Dataspeed 40/4 offering was communications. This decision was based, in part, on the previously mentioned observation that the service incorporated data processing capabilities which result in a more efficient method of transmitting data over a communications link. And such a result, reasoned the FCC, is a principle of the Commission's "statutory mandate as long as there are no countervailing [sic] public interest factors."<sup>82</sup>

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77. Dataspeed 40/4, *supra* note 6, at 25.

78. *Id.* at 27.

79. *See* note 1 *supra*.

80. *Id.*

81. Dataspeed 40/4, *supra* note 6, at 30. Recall, "[t]he maximum separation policy was directed to the provision and utilization of central host computers by communications common carriers in the offering of their data processing services." *Id.* It did not address the distribution of data processing among devices other than the central computer, a new development not in widespread use at the time of Computer Inquiry I.

82. Dataspeed 40/4, *supra* note 6, at ¶ 30.

Finally, the FCC took note of the ongoing Computer Inquiry and restricted its holding to the factual situation presented by the Dataspeed 40/4 offering. Furthermore, in light of the inadequacy of its current rules as they pertain to offerings such as the Dataspeed 40/4, the Commission indicated its belief that it would be appropriate to enlarge the ongoing Computer Inquiry to "include issues raised by a carrier's provision of peripheral devices which might be considered data processing activities to determine whether this results in the offering of communications or data processing service."<sup>83</sup>

The FCC's decision can be criticized on several grounds. First, it leads an observer to believe that all subsequent terminal devices similar to the Dataspeed would be regulated. Such a decision begs the main issue in that the provision of the terminal must be decoupled from the provision of the communications service. Every terminal device manufacturer should be able to take advantage of a communications service like Dataspeed 40/4. Second, it seems that the FCC took into account the special plight of AT&T arising from the combination of the 1956 Consent Decree and the Commission's decision not to regulate data processing. If the FCC had characterized the terminal device and communications as distinct services, then AT&T could offer the communications service only. It could not offer the terminal absent modification of the 1956 Consent Decree. This situation is unfortunate since the function of the device, not the identity of the offeror, should be the principal issue.

#### SUPPLEMENTAL NOTICE OF INQUIRY

The Supplemental Notice of Inquiry and Enlargement of Proposed Rulemaking was undertaken in reaction to the Dataspeed proceeding. Primarily, it clarified some of the definitions set forth in the original Notice of Inquiry II.<sup>84</sup> A new definition of data processing was offered with little apparent difference from the one offered in the original Notice of Inquiry II.<sup>85</sup>

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83. *Id.* at 31.

84. Notice of Inquiry II, *supra* note 2.

85. Compare Notice of Inquiry II, *supra* note 2, at 107, with Supplemental Notice, *supra* note 2, at 774. The only difference was the use of "information content" instead of "semantic content" which has an effect of expanding the domain of data processing. The reason for the difference is most likely the dispute in the Dataspeed 40/4 proceeding with respect to the question of whether the intermediate processing of the message by the terminal was a change in the semantic content. The term "information content" seems to indicate that data processing did in fact occur since local editing (*i.e.*, form preparation), in the case of the Dataspeed 40/4 service, did transform the information content of the input information whereas its semantic content clearly did not change—it meant the same before and after the local processing in the terminal. The distinction between "semantic content" and "information content" is subtle. Information content can be viewed as simply the message that has been transmitted. Semantic content refers to the meaning of the message. For example, suppose the message pertains to an order to a wholesaler. In particular, a customer orders 10 widgets, however, he already has 5 widgets in stock. A system can be conceptualized which will translate the order of 10 widgets to one for 5 widgets. Thus the semantic content of the message may not have changed; yet, its

The examples of data processing were identical to those in the original Notice of Inquiry II.<sup>86</sup> However, there was a minor change in the categories of network control and routing, and of input/output processing.<sup>87</sup> The category of network control and routing was refined to make it clear that the terms error detection and correction applied only to errors of a transmission nature.<sup>88</sup> The reason for this change was to avoid a conflict with a definition of data processing that might lead to disagreement as to the type of errors that can be detected and corrected.<sup>89</sup> In the category of input/output processing the terms "information sources and receptors" were used instead of "computers and terminals."<sup>90</sup> This change was most probably influenced by the failure of the term "terminal" to fully capture the activities which transpire in a distributed network. It may very well be the case that the network has no physically recognizable terminal.<sup>91</sup>

With respect to the various examples of processing activities which would not constitute data processing, such as network control and routing and input/output processing, the FCC was careful to state that these services could be incorporated into a carrier's communications offering without needing to comply with the maximum separation requirement. Furthermore, the employment of such activities in the course of providing either communications or data processing services would not, by itself, change the nature of the service provided.<sup>92</sup>

Deletion of the hybrid concept of Inquiry I rendered communications and data processing mutually exclusive activities in the eyes of the FCC. Nevertheless, the Commission in the Supplemental Notice of Inquiry did recognize the possibility of a carrier offering a communications service with some data processing when it left the door open for ad hoc determinations.

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information content has clearly changed. Another example of a change in information content is a grammatical correction—*e.g.*, "I done gone to the store" becomes "I went to the store."

86. Supplemental Notice, *supra* note 2, at 774.

87. See note 62 *supra*.

88. Supplemental Notice, *supra* note 2, at 774-75. An example is line noise which results in 0 being transmitted instead of 1 or vice versa.

89. Consider a spelling correction program. If a document is being sent to a computer, then automatic correction of such errors serves to prevent subsequent user interactions and thus enables more people to make use of a transmission line. Note that a number of spelling correction programs are available today. However, they are not yet offered by a communications common carrier. Instead, they exist at various computer centers as programs available to their users. Under the FCC's proposed definitions, a spelling correction service would be considered data processing.

90. Compare Supplemental Notice, *supra* note 2, at 774 with Notice of Inquiry II, *supra* note 2, at 110.

91. In many network applications such as packet communications, there exist no terminals. Instead, computers are used as communications devices between the various nodes on the network. For a thorough discussion of packet communications issues see Berman, *supra* note 1, at 193-201.

92. Supplemental Notice, *supra* note 2, at 775.

In particular, it offered the following guideline as an aid to resolve conflicts: "[T]he specific determination to be made becomes whether the processing activity under consideration constitutes a data processing activity. To the extent that the processing performed is data processing under our definition, a carrier's offering [the data processing component] would be subject to our maximum separation requirements."<sup>93</sup>

This guideline seems to indicate that an offering such as the Dataspeed 40/4 should be separated into two components. The transmission part is clearly communications. The classification of the terminal rests on whether the functions performed by the terminal itself constitute "data processing" services or are part of the communications package much as is the ordinary telephone handset.

Perhaps the key to the dilemma is the FCC's conclusion that "[t]he nature of the processing employed would determine whether communications processing or data processing is being engaged in."<sup>94</sup> Closer examination of the nature of the processing reveals that the terminal is serving as an input/output device to another computer and thus it should be classified as a data processing service.<sup>95</sup>

#### RESPONSE ELICITED BY COMPUTER INQUIRY II

Because regulatory decisions of the FCC affect the economic survival of the entities, it is important to consider their reactions and recommendations with respect to potential regulation. In Inquiry II's solicitation of responses, the Commission was primarily interested in whether the marketing of customer-premises equipment ought to be considered a communications common carrier activity; and if so, what rules should be governing such offerings. In particular, it invited comments with respect to the 1956 Consent Decree and its applicability to the offering of customer-premises equipment by AT&T.<sup>96</sup> The FCC was in search of a line of demarcation to

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93. *Id.* at 777.

94. *Id.*

95. Such a decision might be considerably more difficult in the case of a touch tone telephone with a considerable amount of memory. In this case, the telephone can be used on some days primarily for data entry and on other days primarily for voice communications. Under such circumstances, it would be preferable to err on the side of a communications classification if for no better reason than that the voice communications application was there first. Furthermore, such rulings are much harsher on AT&T than on other carriers since AT&T is barred by the 1956 Consent Decree from engaging in non-regulated activities. These definitions and interpretations imply that the Commission erred in the Dataspeed 40/4 decision. However, it is most likely that any new rules would only be prospective thereby resulting in "grandfathering" the Dataspeed 40/4 as a communications service.

96. The Commission requested that the following issues be addressed:

- (a) Whether the proposed definition of "data processing" correctly divides "communications" and "data processing" when applied to a carrier's processing activities, regardless of location within a service offering; and whether the pro-

distinguish computer and communications services which would reduce ad hoc determinations to a minimum. In order to place the responses to these issues in their proper perspective, it is important initially to become familiar with the parties which are most affected by FCC action.

The parties involved in the proceeding can be subdivided into four categories. They are manufacturers of data processing and communications devices, users of data processing and communications services, common carriers, and the Department of Justice. These parties, with the exception of the Justice Department, are primarily interested in preserving access to the marketplace. They abhor the maximum separation doctrine, at least in so far as it is applicable to themselves. Similarly, the various manufacturers of data processing and communications devices, and their corresponding industry associations,<sup>97</sup> share a common desire to keep AT&T, and to a lesser extent, the remaining common carriers out of the marketplace.

As has been indicated, the current trend in data processing applications is to use communications less and rely more heavily on local processing, given the decrease in the cost of computing in relationship to the cost of communications.<sup>98</sup> AT&T's realization of this trend prompted it to introduce new "communications" services such as the Dataspeed 40/4. Therefore, AT&T has embarked on a mission to demonstrate that its entrance into data processing serves a public interest. It has claimed that "[s]uch participation will often ensure that small users, whose needs otherwise might not be met, will be served."<sup>99</sup> AT&T also cited customer comments as to the desirabil-

posed sec. 64.702 will be administratively enforceable and in the public interests;

- (b) Whether the proposed amendment of sec. 64.702 will afford flexibility in the structuring of service offerings, and, at the same time, be conducive to innovation in the communications and data processing fields;
- (c) Whether the offering of customer-premises equipment which performs any information processing activity, other than basic media conversion, should be considered a communications common carrier activity; and the proper institutional arrangements, terms, conditions, and regulations under which communications common carriers should be permitted to make such offerings.
- (d) Specific legislative proposals or recommendations directed at remedying any inadequacies of the Communications Act of 1934, as amended, in dealing with the confluence of data processing and communications.

Supplemental Notice Inquiry, *supra* note 2, at 778.

97. Examples of such manufacturers are Computer Communications Industry Assoc. (CCIA) and Communications Business Equipment Manufacturing Assoc. (CBEMA).

98. The Department of Justice intimates that recent trends, such as distributed processing are, in part, designed to circumvent the expense of regulation. Reply Comments of Department of Justice, *supra* note 3, at 24.

99. Reply Comments of AT&T, *supra* note 3, at 2. This is an appeal to the purpose of the Communications Act of 1934, which was, in part, to bring the benefits of modern communications to rural areas. Thus an attempt is made to draw an analogy between small users and rural users.

This analogy, however, finds little support when one takes note of the proliferation of terminals, "little guy" entrepreneurs, and tailor-made services in the data processing marketplace. See note 68 *supra*. Furthermore, data processing, unlike communications, does not require

ity of the presence of common carriers in the versatile communications marketplace.<sup>100</sup> This is understandable since many users like the short term effects of a company with a strong financial reserve competing in a market. However, the long term effects resulting from the elimination of competition might not be as attractive.<sup>101</sup>

IBM's primary concern is that the data processing industry ought not be regulated. It too is aware of the declining cost of computing which implies a decline in the growth rate of revenues from the hardware manufacturing sector of its operations.<sup>102</sup> This caused it to view the area between office equipment and transmission<sup>103</sup> as a future market.<sup>104</sup> Regulation would impair its access to the market. Because of a recent antitrust action against IBM,<sup>105</sup> it feared the FCC would view its entry into such a sector as anticompetitive. Therefore, IBM favored a modification of the 1956 Consent Decree to enable AT&T to participate in such a marketplace as an unregulated entity subject to strict accounting provisions which fall short of maximum separation.<sup>106</sup> This is sound policy for IBM since an approval of the modification would highlight the dangers of overly restricting the market in which a corporation may participate.

The Department of Justice's interests are threefold—economic efficiency, pending antitrust lawsuits against IBM<sup>107</sup> and AT&T,<sup>108</sup> and the 1956 Consent Decree.<sup>109</sup> In particular, it is concerned that a system of FCC regulation which allocates segments of the terminal business to carriers and other parts to data processing firms could thwart the relief sought in its action

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large investment capital for entry. As IBM pointed out in its reply, section 214(d) of the Communications Act of 1934 is expressly limited to "lines." It was not intended to mean that carriers are required "to create new, unprofitable services that perform more than the pure transmission function and are priced to be affordable by all conceivable users." Reply Comments of IBM, *supra* note 3, at 13.

100. "Users submitting comments also emphasize the need for participation by common carriers in providing versatile and sophisticated communication services." Reply Comments of AT&T, *supra* note 3, at 2.

101. In 1970, Datran offered switched digital data service. In 1974 AT&T responded with Dataphone Digital Service. This service was priced 40% below the transmission costs of Datran's service and drained away its business thereby forcing it out of business. Reply Comments of CCIA *supra* note 3, at 30-32.

102. The explosive rate of miniaturization of computer circuitry has resulted in a dramatic reduction in prices which is reflected by the fact that the cost of a central processing unit is a very small part of today's cost of a computer system. Peripheral equipment and, to a certain extent, software make up an increasing share of the cost.

103. The office typewriter has been enhanced with the aid of computers and the addition of communication capabilities.

104. See note 76 *supra*.

105. *United States v. International Bus. Mach. Corp.*, 60 F.R.D. 654 (S.D.N.Y. 1973).

106. Reply Comments of IBM, *supra* note 3, at 43. IBM was undoubtedly serving notice of its own abhorrence of a maximum separation policy should it be compelled in the future to be a party to a consent decree as a result of pending antitrust action against it.

107. See note 105 *supra*.

108. *United States v. American Tel. & Tel. Co.*, 427 F. Supp. 57 (D.D.C. 1976).

109. Reply Comments of Department of Justice, *supra* note 3, at 3.

against AT&T; an action which was designed to open up the marketplace.<sup>110</sup> It is also leery of unleashing AT&T on the data processing industry before settlement of its action against IBM since it believes that the industry is already confronting one monopolistic competitor.<sup>111</sup> Thus, it is clear that these pending antitrust actions lead the Department of Justice to take a very cautious attitude in the proceeding.

*Responses to the Definitions Proposed  
in the Supplemental Notice Inquiry*

Having introduced the positions of the parties which are most affected by FCC regulatory policy, it remains to explore the responses generated by the Supplemental Notice of Inquiry. The responses of the participants to the proposed definitions serve to reinforce one commentator's opinion that the inquiry was an exercise in semantics.<sup>112</sup> IBM correctly pointed out that the Commission should have pursued a path that would have led to distinguishing monopoly areas from competitive areas rather than creating arbitrary distinctions between data processing and communications.<sup>113</sup> The definitions imply that data processing and communications are mutually exclusive. Unfortunately, the majority of the respondents proceeded under the illusion that the Commission was wedded to these definitions and merely proposed slight modifications to protect their particular interests from unwanted regulation or competition.<sup>114</sup> A better tactic may have consisted of efforts to

110. *Id.* at 8.

111. *Id.* at 47.

112. Eger, *Bell's End Run*, DATAMATION (May 1977) at 81.

113. Reply Comments of IBM, *supra* note 3, at 3.

114. Some examples include:

CCIA preferred a direct definition of "communication common carrier services" rather than an indirect one with inexpert definitions of data processing. Reply Comments of CCIA, *supra* note 3, at 25.

Western Union took exception to enlarging data processing to include "word processing" since it viewed this as one of its traditional functions (e.g., formatting, use of stored message texts and address lists, editing, correction, etc.). Essentially, it did not want to be precluded from computerizing functions performed previously by mechanical or electromechanical means since this improves efficiency and reduces costs. Reply Comments of Western Union, *supra* note 3, at 3-4.

ADAPSO wished that the examples of services that constitute data processing, and likewise for communications, given in the Supplemental Notice would be included in the rules proper so that the proposed definition would explicitly limit future disputes over the "legislative history" of the new rules. Reply Comments of ADAPSO, *supra* note 3, at 14.

AT&T objected to the inclusion of examples of data processing and communication services in the rules proper on the ground that such an action "would inhibit the development of new and innovative services by establishing categories with regulatory significance that may have no relationship to the actual needs of users." Reply Comments of AT&T, *supra* note 3, at 47.

IBM objected to (1) the inclusion of "formatting, editing, and buffering of information" in the definition of "input/output processing"; and (2) the failure of the defini-

educate the FCC as to the problems arising from rigid, mutually exclusive definitions.

The majority of the respondents favored retention of the hybrid category<sup>115</sup> believing that its flexibility provided a source of continuity which enabled future planning.<sup>116</sup> It was considered that such a category eliminated the need for a company to artificially distort an offering of new services in order to avoid encompassing elements of both data processing and communications.<sup>117</sup> AT&T differed with this consensus and advocated elimination of the hybrid rule because it fails to account for processing which is conducted at locations other than the central computer sites.<sup>118</sup>

Perhaps the most debated aspect of the proposed definition of data processing was clause (b)—“where the output information constitutes a programmed response to input information.”<sup>119</sup> AT&T and other carriers were particularly apprehensive since its inclusion might someday be construed to preclude them from using their vast directory assistance data base.<sup>120</sup> Hence, AT&T called for its exclusion from the proposed definition.<sup>121</sup>

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tion of “processing” to explicitly include “sorting or merging.” This is consistent with its interest of not having carrier competition to, and regulation of, services it might wish to incorporate in its central processing units. Reply Comments of IBM, *supra* note 3, at 36-37.

115. The Department of Justice took a curious position. On the one hand, it claimed to have no objections to the proposed rules. It saw them as based on “marketplace perceptions” rather than physical characteristics, and viewed them as a preferable approach to solving jurisdictional problems in light of the rapidly changing technology. Yet, on the other hand, it recommended that “[t]o the extent that there is some body of interpretive decisions surrounding these rules [of Computer Inquiry I] and they have been reviewed by the courts, retention of the present rules has at least the virtue of familiarity.” In addition, it pointed out the benefits of a “gray” area with its resultant commercial and regulatory flexibility. This is in contrast to the world of “black and white” of the new rules which it predicted, by virtue of the size of the stakes, would result in an exchange of a large number of *ad hoc* determinations in the former case for a small number of massive proceedings in the latter case. Reply Comments of Department of Justice, *supra* note 3, at 27, 59-60.

116. Reply Comments of Boeing Computer Services, *supra* note 3, at 5-6.

117. Reply Comments of Telenet, *supra* note 3, at 22-23.

118. Reply Comments of AT&T, *supra* note 3, at 40. This viewpoint was undoubtedly influenced by AT&T's desire to ensure that any new definition recognize that common carrier services include incidental data processing services.

119. 47 C.F.R. § 64.702 (a) (1977). *See also* note 59 and accompanying text *supra*.

120. Although directory assistance is currently a manual operation, there is clearly a potential for using this data in an information retrieval application (privacy considerations aside).

121. Reply Comments of AT&T, *supra* note 3, at 109-10. However, other entities such as Chemical Bank saw no reason for such concern and cited changed or discontinued telephone numbers as examples of communications in the context of information retrieval which could be permitted under the categories of network control and routing, and input/output processing. Reply Comments of Chemical Bank, *supra* note 3, at 20 n.1. Such sentiments were echoed by CBEMA which noted that a regulation is always read in terms of its legislative history. Reply Comments of CBEMA, *supra* note 3, at 61. In this case, CBEMA pointed out, the intent of the Commission “is to describe the unregulated data processing services as a means of outlining areas where new services must be offered by unregulated entities.” *Id.*



*Opinions as to the Recission or Retention  
of the 1956 Consent Decree*

The 1956 Consent Decree emerging out of *United States v. Western Electric Co.* prohibits AT&T and its subsidiaries from engaging in any business other than providing common carrier communications services.<sup>122</sup> In that decision, common carrier services were broadly defined as "communications services and facilities, other than message telegram services, the charges for which are subject to public regulation under the Communications Act of 1934."<sup>123</sup> Clearly, the more expansive the definition of communications, the fewer the restraints which will be imposed on AT&T by the Decree. Therefore, AT&T advocated retention of this expansive definition of communications<sup>124</sup> and found no need for modification of the Consent Decree.

The Department of Justice assumed that the court would not be persuaded to modify the Decree since such an action would imply a reversal. Because the economic structure of AT&T remained the same and its dominance in the market had not altered, the reasoning underlying the Consent Decree remained valid.<sup>125</sup> Moreover, the Justice Department recognized that many other organizations had invested substantial capital in reliance on the restriction upon AT&T from diversifying into the sector.<sup>126</sup> Retention of the Consent Decree also appeared necessary since the maximum separation doctrine announced in *Computer Inquiry I* could not mitigate anticompetitive practices. The Department noted that the *GTE Service Corp.* decision placed severe constraints on the FCC's ability to regulate cross dealings of regulated carriers and their data processing subsidiaries.<sup>127</sup> In addition, the Department of Justice felt that a court of equity, in reviewing the matter, would not focus solely on economic efficiency theories and overlook recent conduct by AT&T<sup>128</sup> or the expected arguments from data processing companies. All these factors culminated in a view that there was little possibility of modification of the Decree.<sup>129</sup>

IBM's supported modification of the Consent Decree would enable AT&T to compete in the data processing sector. It recommended that the FCC should seek modification through the Department of Justice, the courts, or

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122. *United States v. Western Elec. Co.*, TRADE REG. REP. (CCH) ¶¶ 68,246 & 71,136 (1956).

123. *Id.* at 71, 137.

124. See note 73 and accompanying text *supra*.

125. Reply Comments of Department of Justice, *supra* note 3, at 50, quoting *United States v. Swift & Co.*, 286 U.S. 106, 119 (1932) (Justice Cardozo commenting on a modification).

126. *Id.* at 47.

127. A serious issue is the inequity in raising capital. Compare the solid financial footing of AT&T, in the light of its monopoly status, with the possible shakiness of its competitors. The FCC, unlike its counterparts the FPC and the ICC, lacks the authority to regulate the financial marketplace activities of the common carriers. *Id.* at 51.

128. *Id.* at 55. See also notes 101 & 108 *supra*.

129. *Id.* at 54.

in the Congress,<sup>130</sup> rather than distort its regulatory policies to circumvent the Decree by allowing AT&T to provide non-monopoly services and equipment.<sup>131</sup> Furthermore, it maintained that if the Department of Justice indicated its approval of amendment of the Decree, then the court would modify it.<sup>132</sup> However, given the firm position of the Department of Justice against any modification, IBM's position is analogous to one advocating the exclusion of AT&T from the data processing marketplace.

*Responses to the Issue of Whether to Regulate  
Customer Premises Equipment*

One of the key questions facing the FCC is whether the provision of customer-premises equipment (CPE) ought to be characterized as a communications common carrier activity thus subject to regulation. The ensuing discussion focuses on the problems associated with its regulation and common carrier participation in this area.<sup>133</sup> Further, it provides an analysis of the suggestions proposed by a number of the respondents.<sup>134</sup>

A number of respondents believed that regulation of customer premises equipment would be unnecessary<sup>135</sup> since existing competition among the various sellers of such data processing services and equipment provides continuing assurance of their availability on a fair basis without regulation. Moreover, regulation was viewed as inadequate since by the time the FCC responds to anticompetitive actions, they would have already exacted their toll.<sup>136</sup>

A more fundamental objection to regulation was raised by the Seattle First National Bank on the basis of freedom to contract.<sup>137</sup> As the Bank saw it, the problem with tariffed regulated services was that everything was governed by the tariff which, as a matter of law, could not be varied by contract. On the other hand, unregulated service and equipment offerings could be tailored to fit a specific user's needs and requirements. Furthermore, it cited the inability of a regulated carrier, such as AT&T, to meet the

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130. Reply Comments of IBM, *supra* note 3, at 34.

131. *Id.* at 24.

132. *Id.* at 26.

133. The discussion only stresses the problems associated with regulation of the provision of customer-premises equipment and responses to calls for regulation thereof. For a general argument in favor of regulation, *see* the discussion of "cream skimming" and related issues at note 10 *supra*.

134. Regulation is only addressed in the context of CPE and not resale-like issues.

135. Reply Comments of IBM, *supra* note 3, at 9. *See generally* Reply Comments of IBM, (comments of Jones), *supra* note 3.

136. *See* HOUSE SUBCOMMITTEE ON COMMUNICATIONS OF THE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, 95 CONG., 2d SESS., COMMENTS IN RE DATRAN BY A.G.W. BIDDLE, PRESIDENT COMPUTER AND COMMUNICATIONS INDUSTRY 16 (1977).

137. Reply Comments of Seattle First National Bank, *supra* note 3, at 6.

competition expeditiously because any changes in service must be approved by the FCC or the appropriate state regulatory commission.<sup>138</sup>

The Computer Business Equipment Manufacturing Association (CBEMA) cautioned against the danger of allowing common carriers to offer equipment as well as carriage services. They feared that certain tariffs may establish technical standards which would favor the carrier's equipment and thus be anticompetitive.<sup>139</sup> The carrier would therefore enjoy an unfair advantage over competitors who have to expend time and effort in order to tool up to meet such specifications if their equipment is to be compatible with the tariff. Moreover, the policy of maximum separation would not protect non-regulated competitors from this headstart by the communications carriers' manufacturing affiliates who would inevitably be apprised of long-range corporate planning by the communications carrier. Such an inevitable flow of information between affiliates would allow the equipment manufacturing affiliate to conform their equipment before non-affiliate competitors have information of changes. The *GTE Service Corp.* decision would exacerbate this problem as it limits FCC authority to act outside the communications sector and restrict such a flow of information to its non-communications affiliates.

When tariffing a new service the FCC must consider its effect on existing equipment and services as a precondition to its authorization of the new service.<sup>140</sup> In addition, the proponent of the service often must demonstrate that the service is not duplicative of an existing service. This might be acceptable to an industry accustomed to regulation; however, the data processing industry is accustomed to dramatic advances in technology and is willing to assume the concomitant risk of rapid obsolescence. Regulated entities, however, traditionally are prevented from abandoning their existing equipment and services.<sup>141</sup>

IBM did not agree with AT&T's argument that regulation was necessary because such services are "socially too important" to leave unregulated.<sup>142</sup> It felt that regulation should be imposed only where there are no competing sellers.<sup>143</sup> In the same vein, one may argue that just because common carriers have traditionally provided terminals for record communications (e.g., teletypewriters) under regulation, there is no reason to continue doing so for more advanced computer terminals.<sup>144</sup>

CBEMA cautioned that the mere fact that a regulated communications common carrier could supply computer services by use of its existing plant

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138. *Id.* at 7.

139. Reply Comments of CBEMA, *supra* note 3, at 78.

140. Reply Comments of IBM, *supra* note 3, at 26.

141. *Id.* at 27, citing KAHN, THE ECONOMICS OF REGULATION 117-22 (1970).

142. Reply Comments of IBM, *supra* note 3, at 8, quoting Reply Comments of AT&T, *supra* note 3, at 81.

143. *Id.* at 8-9.

144. See *MCI Telecommunications Corp. v. FCC*, 561 F.2d 365 (D.C. Cir. 1977). This recent opinion reversed the FCC's *Execunet* decision. Decision, *MCI Telecommunications Corp.*,

should not be determinative of whether it should be allowed to participate in the data processing industry.<sup>145</sup> Conceivably, an unending list of additional data processing services could be offered by communications common carriers within their present plants.<sup>146</sup> Computer Inquiry I settled this problem, however, by refusing to allow Western Union to use its plant for "back-up" computer services during the off-peak hours.<sup>147</sup>

These arguments serve to illustrate that integration of computer services in the telephone and related communication industries is not necessarily in the public interest. In particular, it may stifle innovation. Due to the large capital investment in communication plants,<sup>148</sup> a carrier may not wish to innovate in certain segments of its services since such innovation may render connecting segments technically obsolete.<sup>149</sup> In fact, close examination of the mandate of the FCC<sup>150</sup> fails to reveal any evidence to compel a carrier to provide every segment of a particular service. This view is recognized by the existence of unregulated equipment vendors and the policies adopted by the Commission for terminal registration.<sup>151</sup>

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60 F.C.C.2d 25, 57-58 (1976). Judge Wright cautioned the Commission that public interest determinations cannot be based on the way things were done before.

[J]ust as it is not free to create competition for competition's sake, it is not free to propagate monopoly for monopoly's sake. The ultimate test of industry structure in the communications common carrier field must be the public interest, not the private financial interests of those who have until now enjoyed the fruits of *de facto* monopoly. (footnotes omitted).

MCI Telecommunications Corp. v. FCC, 561 F.2d 365, 380 (D.C. Cir. 1977).

145. Reply Comments of CBEMA, *supra* note 3, at 41.

146. *E.g.*, GTE would like to see Automatic Reminder Wake-Up service included within the definition of communications. This service has been traditionally provided by telephone answering services. However, just because new computer equipment for central office switches makes this service easy to provide does not mean GTE must provide it. Reply Comments of GTE, *supra* note 3, at 8-10 of Appendix I.

147. The Commission was particularly concerned with the possibility of a breakdown of equipment dedicated to public service and wished the excess capacity to be immediately available for that purpose without the conflicting claims of the other user. Final Decision, *supra* note 15, at 271.

148. \$94 billion according to AMERICAN TELEPHONE & TELEGRAPH CO., ANNUAL REPORT 28 (1976).

149. See Appendix B to Reply Comments of CCIA, *supra* note 3, for an analysis of AT&T's innovations and lack thereof.

150. Section 1 of the 1934 Communications Act, 47 U.S.C. § 151 (1970) merely requires the Commission to "make available so far as possible, to all people of the United States, a rapid, efficient, nationwide, and worldwide wire and radio communication service with adequate facilities at reasonable charges."

151. See Use of the Carterfone Device in Message Toll Telephone Service, 13 F.C.C.2d 420 (1968). See also Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS), 56 F.C.C.2d 593 (1975), *aff'd sub nom.*, North Carolina Util. Comm'n v. FCC, 552 F.2d 1036 (4th Cir. 1977). Subsequent to these decisions AT&T's manufacturing affiliate, Western Electric, had to drastically change its traditional ways of doing business. Until a few years ago its phone switch-gear plants were producing electromechanical equipment whereas today 85% of their production is electronic. *The New Telephone Industry*, BUS. WEEK, February 13, 1978, at 68.

Any attempt by the FCC to draw a line with respect to the regulation of customer-premises equipment must pay close attention to the *GTE Service Corp.* decision. Recall, it held that the FCC had no authority to regulate the data processing industry even to the extent of protecting that industry from encroachment by the communications industry.<sup>152</sup> Furthermore, the FCC had previously stated that it declined to regulate the data processing industry.<sup>153</sup> Therefore, while the Commission might have the authority to regulate a common carrier's entry into a non-communications area, insofar as it might affect the provision of common carrier services, any other attempt to regulate this field is beyond its mandate.<sup>154</sup>

IBM proposed that all customer-premises equipment and services which involve more than pure transmission be unregulated.<sup>155</sup> It cited *Frontier Broadcasting Co. v. Collier*<sup>156</sup> which defines a common carrier to be one who invites the public to use his carriage facilities, with appropriate compensation, "for the transmission of such intelligence as the subscriber may choose to have transmitted."<sup>157</sup> Moreover, it emphasized the Commission's determination that the choice of the specific intelligence to be transmitted is the exclusive prerogative of the subscriber and not the carrier.<sup>158</sup>

AT&T<sup>159</sup> did not agree with the "pure transmission" concept of IBM.<sup>160</sup> It claimed that communications services involve more than mere "transportation." In particular, "communication in its most basic states requires the acceptance of information in a form convenient to the user, modification for efficient utilization of communication channels, and modification again to a form useful to the recipient."<sup>161</sup> If one is to accept AT&T's premise, then the question becomes how much interaction should the user have with the communications system. Is his role to be a "man in the loop?"<sup>162</sup> If the performance of these modifications is to be within the domain of AT&T,

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152. *GTE Serv. Corp. v. FCC*, 474 F.2d 724, 734 (2d Cir. 1973).

153. Final Decision, *supra* note 15, at 268.

154. *GTE Serv. Corp. v. FCC*, 474 F.2d 724, 734 (2d Cir. 1973).

155. Reply Comments of IBM, *supra* note 3, at 40.

156. 24 F.C.C. 251 (1958).

157. Reply Comments of IBM, *supra* note 3, at 40, quoting 24 F.C.C. at 254.

158. *Id.* This is a rather naive interpretation of the definition which ignores modern advances in communications and the carrier's statutory obligation to ensure efficiency (*e.g.*, uses of computers in multiplexing, switching, etc.) of carriage by transmitting messages as efficiently as possible. Thus IBM would not allow a communications common carrier to offer, under regulation, a service which edits or formats information so that a recipient such as the Central Processing Unit (CPU) can more easily process or store it. In effect, it is stating that the message must be delivered "in its original data format, code, or protocol." Reply Comments of IBM, *supra* note 3, at 42.

159. Reply Comments of AT&T, *supra* note 3, at 13.

160. Neither did it adhere to a CBEMA proposal limiting regulation to "transparent" exchange and private line sources. See Reply Comments of IBM, *supra* note 3, at 40 and Reply Comments of CBEMA, *supra* note 3, at 12-14.

161. Reply Comments of AT&T, *supra* note 3, at 13 n.2.

162. "Man in the loop" denotes a semi-automatic system where the human serves as the ultimate decision maker.

then how does one justify intervention by the user to perform modifications on the message such as text editing? According to AT&T, its job is to perform the "modification for efficient utilization of communications channels." Nonetheless, devices such as the Dataspeed are designed for an environment where the user plays a prominent role in the modification process. This seems contrary to AT&T's conception of the tasks to be performed solely by it (as opposed to by the user) in the transmission process.

The Department of Justice cited traditional comments against entry of regulated firms into unregulated fields.<sup>163</sup> These included an objection to the siphoning away of resources in the process of diversification which could be put to better use in upgrading existing services. It was also concerned that unregulated firms would be confronting a competitor who is also the supplier of a basic component of their service offerings. The arguments cited essentially manifest a fear of "predatory pricing." Nevertheless, the Department referred to economic studies which cast substantial "doubt on whether 'predatory price discrimination' is really much of a danger."<sup>164</sup> Thus, the Department of Justice took a middle ground in concluding that it had no objections to a system of regulation for carriers, absent regulation for non-carriers.<sup>165</sup> In fact, it stated that, in its view, a successful example of such a policy was the Commission's technical registration and standards program which was established to eliminate previous carrier restraints on the use of independently supplied equipment.<sup>166</sup>

A number of respondents expressed reservations about the Commission's actions or lack thereof. The American Bankers Association (ABA) was opposed to any experiment in which AT&T and other regulated communication common carriers would be permitted to engage in unregulated communications activities even though subject to a mandatory review.<sup>167</sup> The ABA represents a group who are planning for a long-term investment of capital in a new technology (Electronic Funds Transfer), and they want to protect this interest.<sup>168</sup> Control Data Corporation (CDC) wanted an explicit statement of regulatory forbearance from the Commission should the FCC allow common carriers to enter the unregulated market.<sup>169</sup> It was recommended that the statement should make it clear that the decision also preempts state regulation in the area. In particular, CDC did not want to

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163. Reply Comments of Department of Justice, *supra* note 3, at 44-45.

164. *Id.* at 45, quoting Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 587 (1969).

165. *Id.* at 58.

166. Proposals for New or Revised Classes of Interstate and Foreign Message Toll Telephone Service (MTS) and Wide Area Telephone Service (WATS), 57 F.C.C.2d 1216, 1229 (1976) (Chairman Wiley, concurring).

167. Reply Comments of American Bankers Association, *supra* note 3, at 16.

168. Consider a decision which would result in changing the participants in the CPE marketplace.

169. Reply Comments of Control Data Corporation, *supra* note 3, at 4.

see a recurrence of an attempt by a state regulatory commission to frustrate the FCC's pro-competition policies.<sup>170</sup>

*Responses to the Maximum Separation Concept*

Opinion on the maximum separation concept was divided. The carriers objected to maximum separation, while the suppliers of data processing equipment and services supported it. In general, non-monopoly common carriers such as Communications Satellite Corporation (COMSAT General Corporation)<sup>171</sup> and Telenet<sup>172</sup> viewed maximum separation as an unjustified policy with respect to their operations since they did not have monopoly revenues with which to subsidize their non-monopoly services. Western Union,<sup>173</sup> in light of the losses it was incurring in providing telegraph service, felt that the maximum separation policy should only be applied to major telephone carriers who have the potential to engage in cross-subsidization.

CBEMA countered such a claim by recalling the Bunker Ramo experience in order to demonstrate that prevention of abuse of network ownership is an equally valid concern.<sup>174</sup> GTE regarded any application of the maximum separation policy as excluding it from the provision of such services by virtue of its primarily rural and geographically dispersed service area which renders separate entities economically unfeasible.<sup>175</sup> Other objections included an increase in costs of data processing offerings due to the need to establish separate companies, and an inconvenience to customers who need to deal with separate suppliers for data processing and communications services. This was felt to be of particular hardship on small users.<sup>176</sup>

Given the existence of the Consent Decree, AT&T had no choice but to adopt a position that a maximum separation policy is unnecessary due to the existence of other regulatory tools<sup>177</sup> designed to prevent the occurrence of cross-subsidization.<sup>178</sup> It felt that concerns about predatory pricing were "grossly exaggerated"<sup>179</sup> and cited the comments of the Department of Justice which cast doubt as to whether the practice is really much of a danger.<sup>180</sup> Moreover, it pointed out that cross-subsidization by a non-common carrier may occur with equal or greater likelihood in a non-

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170. North Carolina Util. Comm'n. v. FCC, 537 F.2d 787 (4th Cir. 1976), *cert. denied*, American Tel. & Tel. Co. v. FCC, 429 U.S. 1027 (1976).

171. Reply Comments of COMSTAT General Corporation, *supra* note 3, at 6.

172. Reply Comments of Telenet, *supra* note 3, at 26.

173. Reply Comments of Western Union, *supra* note 3, at 2.

174. Reply Comments of CBEMA, *supra* note 3, at 84, *citing* Final Decision, *supra* note 15, at 270-71. *See also* note 25 *supra*.

175. Reply Comments of GTE Serv. Corp., *supra* note 3, at 5 n.6.

176. Reply Comments of AT&T, *supra* note 3, at 62.

177. An example is the ratemaking process.

178. Reply Comments of AT&T, *supra* note 3, at 30-37.

179. *Id.* at 30.

180. *See* note 167 & accompanying text *supra*.

regulated environment. Specifically, a firm with dominance in one market may overcharge in that market in order to subsidize lower prices in a more competitive market<sup>181</sup> since such entities are not bound by regulatory controls with respect to pricing nor do they have any overall earning constraints.<sup>182</sup>

IBM did not see a need for a maximum separation policy.<sup>183</sup> Instead, it advocated a system of cost accounting aimed at identifying and allocating costs between regulated and unregulated areas.<sup>184</sup> Customers would be provided with separate bills or billing notations for unregulated services. Under this system, only the transmission portion of the Dataspeed 40/4 tariff would remain tariffed, and the cost of the device itself would have to be billed separately. The Computer Communications Industry Association (CCIA) criticized IBM's proposal for failing to suggest "the type of cost accounting practices and enforcement mechanisms the FCC should substitute for a separations policy."<sup>185</sup>

#### OUTCOME OF THE FCC INVESTIGATIONS AND RECOMMENDATION FOR REGULATION

The notice of Inquiry failed to elicit a large number of legislative proposals. CCIA<sup>186</sup> and, to a limited extent, IBM,<sup>187</sup> recommended that the FCC propose legislation to Congress requesting relief from the specific prohibitions contained in the 1956 Consent Decree with respect to AT&T equipment offerings which the FCC might find should not be subject to regulation. However, as the Department of Justice pointed out, "the final authority on the scope of the judgment is the judiciary."<sup>188</sup>

The Department of Justice made a comment regarding the FCC's lack of authority to control the financial market activities of common carriers with the exception of Communications Satellite Corporation<sup>189</sup> (COMSAT). Although such authority is vested in other regulatory agencies such as the FPC

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181. But, antitrust actions can resolve such matters.

182. Reply Comments of AT&T, *supra* note 3, at 31 n.1. This is a resurrection of "creamskimming"-like arguments.

183. Reply Comments of IBM, *supra* note 3, at 43.

184. This is another instance where IBM is taking into account the possibility that a current antitrust action against it might result in an unfavorable verdict. In such a case, IBM undoubtedly believes that it can compete on a modified separation policy rather than one of maximum separation. Moreover, since IBM has a wide product line, it is better capable to withstand competition with a subsidiary of AT&T without the benefit of a maximum separation policy. On the other hand, the result of competition without maximum separation between a single-product firm and AT&T might have a ruinous effect on the single-product firm. Also, one should not overlook the fact that a large company such as IBM is not adverse to the elimination of some of its competitors as could result from the absence of a maximum separation policy.

185. Reply Comments of CCIA, *supra* note 3, at 15.

186. Reply Comments of CCIA, *supra* note 3, at 53.

187. Reply Comments of IBM, *supra* note 3, at 5.

188. Reply Comments of Department of Justice, *supra* note 3, at 41.

189. *Id.* at 51, citing 47 U.S.C. 721(c) (8) (1970). See also note 160 *supra*.



and the ICC<sup>190</sup> the Department of Justice failed to take an outright position on this issue although it did intimate that an amendment to the 1934 Communications Act to include such authority was reasonable.<sup>191</sup>

Based on the responses, the following conclusions appear to be appropriate. The proposed definitions were useful in setting a discussion in motion; however, on the whole, they seem fairly irrelevant. The Commission might as well retain the "hybrid" categories of the earlier Inquiry since they have proved, by and large, to be workable. The key to the proceeding is how to reconcile the 1956 Consent Decree barring AT&T from providing unregulated services, with the natural desire to see an unregulated market evolve in the domain of customer-premises equipment. It is clear that the common carriers, because of their role in technology, belong in this sector provided that they subscribe to certain guidelines. This poses two problems.

First, the FCC must make a convincing argument to the District Court of New Jersey to modify the 1956 Consent Decree permitting AT&T to offer data processing services incidental to communications on an unregulated basis. Data communications is a rapidly growing area and AT&T clearly belongs in it; yet, not all of the data communications market should be regulated. It is not feasible to regulate the many entities who wish to provide data processing services incidental to communications. Moreover, the Commission could reinforce a position to modify the Decree by reference to the expansive definition of communications and the technological innovations that have taken place since the promulgation of the Decree over 20 years ago.

If the above approach is not successful, then the FCC could conceivably resort to a system of regulation in which data processing is regulated when offered by a communications common carrier and unregulated otherwise. Despite its apparent attractiveness to some of the communications common carriers, such a scheme does have drawbacks. In particular, it is difficult for a regulated firm to quickly react to changing market conditions since such actions generally require the approval of the regulator.

The second problem is to prevent the use of monopoly revenues from cross-subsidizing non-monopoly activities. This can only be achieved via a separation policy similar to that suggested by IBM for the communications common carriers' non-monopoly services. The distinctions between data processing and communications ought to be scrapped in favor of a definition which leaves unregulated all activities which are not of a natural monopoly nature. Offerings which combine monopoly and a non-monopoly service need not be offered by two separate entities; but, instead, their customers must be provided with separate itemized bills for each service.

A final recommendation is for Congress to reexamine the Communications Act of 1934 to take into account recent developments in communications and

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190. *Id.* See also note 160 *supra*.

191. *Id.* at 51-52.

related technology. This would be best achieved by updating the current Act to remove its dependence upon outdated concepts borrowed from its predecessor, the Interstate Commerce Act. A revised Act which takes account of today's marketplace realities is necessary to free the Commission to render decisions consistent with twenty-first century communications realities.

