

NOTES AND COMMENTS

ALLOCATING RADIO FREQUENCIES BETWEEN COMMON CARRIERS AND PRIVATE USERS: THE MICROWAVE PROBLEM*

IN deciding how to control the use of newly developed forms of radio communication, the Federal Communications Commission is called upon to choose between apparently conflicting philosophies of regulation embodied in the Communications Act of 1934.¹ The FCC controls the utilization of the radio spectrum by dividing it into bands of varying width, allocating each band to a different type of radio service, and awarding specific frequencies within each band to individual applicants.² In exercising this control, the Commission is governed by the rather vague standard of "public convenience, interest, or necessity."³ The Communications Act suggests two ways to implement this standard. Title III, "Provisions Relating to Radio,"⁴ suggests that the FCC is to act primarily as a traffic manager, allocating frequencies, awarding licenses, and controlling interference, and conveys at least an implicit congressional mandate to maintain a condition of ordered competition within the field of radio communication.⁵ In contrast, Title II, "Common Carriers,"⁶ seems

*Allocation of Frequencies in the Bands Above 890 mc., Report and Order, 27 F.C.C. 359, 18 P. & F. RADIO REG. 1767 (1959) [hereinafter cited as *1959 Microwave Report*]; Allocation of Frequencies in the Bands Above 890 mc., Memorandum Opinion and Order, 29 F.C.C. 825 (1960) [hereinafter cited as *1960 Microwave Opinion*].

1. 48 Stat. 1064 (1934), as amended, 47 U.S.C. §§ 151-609 (1958).

2. 48 Stat. 1082 (1934), as amended, 47 U.S.C. § 303 (1958). Section 305(a) exempts frequencies occupied by government services, which are assigned by the President. 48 Stat. 1083 (1934), 47 U.S.C. § 305 (1958). The power of the President to withdraw frequencies from the Commission's control has been sustained. *Bendix Aviation Corp. v. FCC*, 272 F.2d 533 (D.C. Cir. 1959), *cert. denied sub nom. Aeronautical Radio, Inc. v. United States*, 361 U.S. 965 (1960).

3. 48 Stat. 1082, 1085 (1934), as amended, 47 U.S.C. §§ 303, 307, 309 (1958). The standard is not, however, so vague as to be unconstitutional. *NBC v. United States*, 319 U.S. 190, 225-26 (1943); *Federal Radio Comm'n v. Nelson Bros. Co.*, 289 U.S. 266, 285 (1933).

4. 48 Stat. 1081 (1934), as amended, 47 U.S.C. §§ 301-29 (1958).

5. See §§ 311, 313, 314 of the Communications Act, 48 Stat. 1086-87 (1934), as amended, 47 U.S.C. §§ 311, 313, 314 (1958); *FCC v. Sanders Bros. Radio Station*, 309 U.S. 470, 474 (1940); *Mansfield Journal Co. v. FCC*, 180 F.2d 28, 33 (D.C. Cir. 1950); *Southeastern Enterprises*, 13 P. & F. RADIO REG. 139, 146 (1957); *Uniform Policy on Violations of Laws*, (pt. 3), 1 P. & F. RADIO REG. 91:495, 500 (1951); Celler, *Antitrust Problems in the Television Broadcasting Industry*, 22 LAW & CONTEMP. PROB. 549, 551 (1957); Hale & Hale, *Competition or Control II: Radio and Television Broadcasting*, 107 U. PA. L. REV. 585, 620 (1959). But see *FCC v. RCA Communications, Inc.*, 346 U.S. 86, 91 (1953); *Carroll Broadcasting Co. v. FCC*, 258 F.2d 440 (D.C. Cir. 1958).

6. 48 Stat. 1070 (1934), as amended, 47 U.S.C. §§ 201-22 (1958).

to contemplate that at least some uses of radio will be developed by large, closely regulated concerns. A communications common carrier is a firm which "holds itself out or makes a public offering to provide facilities by wire or radio [to] all members of the public."⁷ With regard to these enterprises, the FCC is viewed as a much more powerful instrument, exerting control over rates, the adequacy of existing services, and the extension of new facilities.⁸ As a corollary of such regulation, the Commission is expected to protect the common carrier from competition.⁹

The Communications Act contains different approaches because it is actually an amalgam of parts taken from two earlier acts. Both titles were incorporated into the 1934 Act without substantial change because each provided a regulatory program adapted to the peculiar needs of a specific industry. Jurisdiction over communications common carriers, primarily the telephone and telegraph companies, was at first exercised by the Interstate Commerce Commission.¹⁰ Because physical and economic limitations restrict the number of firms that can engage in communications common carriage, and because the duty to provide adequate service is often inconsistent with maximization of profits, these companies were regarded as public utilities and were regulated and protected accordingly.¹¹ At the time of the 1934 Act, Congress expressed concern at the growing dominance of a few firms and attempted to intensify

7. *Frontier Broadcasting Co. v. Laramie Community TV Co.*, 16 P. & F. RADIO REG. 1005, 1008 (1958); see *CATV Systems and Auxiliary Television Systems*, 18 P. & F. RADIO REG. 1573, 1603-04 (1959). A communications common carrier may provide only a specified type of service without losing its status as a common carrier. See *Teleprompter Corp.*, 13 P. & F. RADIO REG. 111 (1955); *Allocation of Frequencies for Theatre Television Service*, 9 P. & F. RADIO REG. 1528 (1953). Similarly, private line service (or private radio service) when provided by a firm engaged in communications common carriage has always been treated as a common carrier service. *CATV Systems*, *supra*, at 1604.

Broadcasting is a separate subject. "Broadcasting" means the dissemination of radio communications intended to be received by the public" and is distinct from both "common carrier" and private radio operations. 48 Stat. 1066 (1934), as amended, 47 U.S.C. § 153(o) (1958). A message not directed to the public at large does not come within the definition of broadcasting. *Scroggin & Co. Bank*, 1 F.C.C. 194, 196 (1935); *Adelaide Lillian Carrell*, 7 F.C.C. 219, 222 (1939).

8. Communications Act, §§ 201-05, 214, 48 Stat. 1070 (1934), as amended, 47 U.S.C. §§ 210-05, 214 (1958).

9. See *FCC v. RCA Communications, Inc.*, 346 U.S. 86 (1953); *Mackay Radio & Tel. Co. v. FCC*, 97 F.2d 641 (D.C. Cir. 1938); *Western Union Tel. Co.*, 6 P. & F. RADIO REG. 1157 (1952); EDELMAN, *THE LICENSING OF RADIO SERVICES IN THE UNITED STATES, 1927 to 1947*, 10 (1950). Compare *Minneapolis & St. L.R.R. v. United States*, 361 U.S. 173 (1959); *McLean Trucking Co. v. United States*, 321 U.S. 67, 85 (1944).

10. 78 CONG. REC. 8822-23, 10313 (1934). The telephone and telegraph companies are still the dominant communications common carriers. See, e.g., *1960 Microwave Opinion* 827 n.1, 850-51.

11. See WILCOX, *PUBLIC POLICIES TOWARD BUSINESS* 497-99, 594-601 (1955); EDELMAN, *op. cit. supra* note 9, at 9-10; S. REP. NO. 781, 73d Cong., 2d Sess. (1934); 78 CONG. REC. 10315 (1934).

existing governmental regulation.¹² The situation was radically different in the radio broadcasting field. By 1927, there were so many transmitters operating on the very few frequencies which the industry was then technologically capable of utilizing that the result was chaos.¹³ Regulation was essential if the radio signals of one transmitter were to be free of destructive interference from other signals. The Congress therefore adopted the Radio Act of 1927¹⁴ which was subsequently lifted almost verbatim into Title III of the Communications Act.¹⁵ There was also a great fear that without governmental control, the public interest would soon be subordinated to monopolistic domination in the radio field.¹⁶ Therefore, the tone of this title is in favor of the preservation of an ordered competition.

As long as radio communications and common carrier transmissions remained relatively separable industries, administration of these different standards did not prove difficult.¹⁷ But as the nonbroadcast, nonentertainment functions of radio multiply¹⁸ and communications common carriers increasingly utilize radio in the performance of their services,¹⁹ the Commission will be called on more often to reconcile the diverse approaches of Titles II and III.

12. 78 CONG. REC. 10315 (1934). At that time, American Telephone and Telegraph had 95% of the telephone business, while Western Union and Postal Telegraph had 99% of the telegraph market. *Ibid.*

13. See EDELMAN, *op. cit. supra* note 9, at 1-5; Segal & Warner, "Ownership" of Broadcasting "Frequencies": A Review, 19 ROCKY MT. L. REV. 111, 119 (1947).

14. 44 Stat. 1162 (1927), repealed by 48 Stat. 1102 (1934).

15. See 78 CONG. REC. 10987 (1934).

16. See, e.g., 67 CONG. REC. 5478-504 (1926); *FCC v. Pottsville Broadcasting Co.*, 309 U.S. 134, 137 (1940); *Uniform Policy on Violations of Laws*, *supra* note 5, at 91:499-500.

17. Ordinarily, the FCC simply allocates certain bands for specified kinds of service in which common carriers and noncommon carriers do not compete. In one proceeding the Commission said that what must be considered in achieving the objectives of Title II could not be considered in achieving the objectives of Title III. In a footnote, it added: "Possible questions with respect to competition between common carrier operation, and private operation, in radio communication are not herein involved and are reserved for consideration when they are appropriately before the Commission." *Southeastern Enterprises*, *supra* note 5, at 149 & n.8.

In only one other situation was the Commission faced by a similar policy conflict. The question was whether a carrier's charges for a lease-maintenance arrangement with private users of mobile radio service are subject to the approval of the Commission under Title II of the act. (A lease-maintenance arrangement is one where a private licensee leases his equipment from a common carrier who also is responsible for its maintenance.) The Commission posed the problem, but left it unanswered; the necessity of answering it was removed when the American Telephone & Telegraph Co. withdrew the tariff in question. *American Tel. & Tel. Co.*, 15 P. & F. RADIO REG. 189 (1957); see Leland G. Smith, 16 P. & F. RADIO REG. 494c (1958); *American Tel. & Tel. Co.*, 15 P. & F. RADIO REG. 196i (1959).

18. See, e.g., FCC Rules § 2.104, 47 C.F.R. § 2.104 (1958) (Frequency Allocation Table); *id.* § 11.501, 47 C.F.R. § 11.501 (Supp. 1960) (list of those eligible to hold licenses in Special Industrial Radio Service); EDELMAN, *op. cit. supra* note 9, at 186-206.

19. See 1959 *Microwave Report* 1771-72. At present over 10½ million (22%) of the long distance telephone circuit miles, and 60,000 (78%) of the intercity television circuit

A recent investigatory proceeding entitled *Allocation of Frequencies in the Bands Above 890 Mc.*²⁰ presented the FCC with an opportunity to examine the relationships between Title II and Title III. The proceeding was concerned with the Commission's policies in regard to the allocation of frequencies in the upper reaches of the usable radio spectrum. These frequencies, which begin at about 890 mc., are known as the microwave bands. Microwave radio is coveted by many current and would-be users of radio for it possesses certain desirable characteristics not present in the lower frequencies. A microwave radio beam may be analogized to a flashlight beam; it can be directed to any selected spot within range of the transmitter. This straight-line directivity permits the same frequency channel to be used by parallel systems, each transmitting its own messages without interference from the other. Microwave radio systems are not affected in the same way by weather and man-made interference as are radio services operating on lower frequencies, and are more economical than comparable wire line systems.²¹

One facet of the investigation concerned the policy toward private use of point-to-point microwave systems.²² Prior to this proceeding, the Commission's policy was to license only common carriers to use microwave, on a developmental basis.²³ A few exceptions were made in favor of public safety bodies and specially designated businesses such as railroads,²⁴ but otherwise

miles of the Bell system are provided by microwave radio. Brief of American Telephone & Telegraph Company, pp. 3, 1-10, *1959 Microwave Report*. "It is no exaggeration to say that microwave radio has become indispensable to the rendition by the common carriers of the high-quality, economical communications services the people of this country have a right to expect." *Id.* at 2.

Some carriers use microwave exclusively. See CATV Systems, *supra* note 7, at 1604-05; Montana Microwave Co., 16 P. & F. RADIO REG. 736a, 736d (1958); Intermountain Microwave, 16 P. & F. RADIO REG. 733 (1958).

20. *1959 Microwave Report*. The purpose of this proceeding was to investigate and formulate Commission policy. It did not, by itself, change the Commission's Rules, nor did it award any licenses or frequencies. For the policies enunciated as a result of this study to take effect, it will be necessary for the Commission to take rule-making action. See *id.* at 1785. These procedures have already begun. See Private Microwave System Standards, 20 P. & F. RADIO REG. 1515, 1524a (1960). Authority to conduct such an investigation is given to the FCC by §§ 154(i), -(j), 303 of the Communications Act, 48 Stat. 1082 (1934), as amended, 47 U.S.C. §§ 154(i), -(j), 303 (1958).

21. Interview with Mr. Fred King, Chief Engineer, WELI, in New Haven, Connecticut, Feb. 9, 1961; *Microwaves, The New Workhorse of Radio*, Radio & TV News, Apr. 1957, p. 12.

22. Data was collected with respect to 19 specified issues, including, for example, such things as present and future demands for microwave frequencies (Issue 1), interference problems in regard to microwave frequency assignment (Issue 3), and requirements of the radio navigation service for spectrum space above 890 mc (Issue 13). *1959 Microwave Report* 1769, 1771, 1778, 1783.

23. See FCC Rule § 21.700, 47 C.F.R. § 21.700 (1958) (Domestic Public Radio Service). This limited station authorizations to "existing and proposed communication common carriers."

24. See *1959 Microwave Report* 1769-70; Brief on Issues 6-9, Motorola, Inc., pp. 1-4, *1959 Microwave Report*.

businesses desiring microwave systems were required to obtain service from common carriers, in much the same way that they obtain telephone service.²⁵ During the twelve years that had elapsed since the Commission last studied these bands, the microwave frequencies had passed from a developmental, experimental stage to a usable, economically practical part of the radio spectrum.²⁶ The communications common carriers opposed liberalization of point-to-point licensing. They argued that, under Title II, there was a duty upon the Commission to protect them from loss, and that competition from privately owned systems would injure their profit position. They also argued that development of microwave systems by common carriers would produce the most efficient and complete use of such frequencies and that carrier development was therefore most beneficial to the public interest. Those who desired to obtain private point-to-point microwave licenses, on the other hand, contended that since it was the award of private radio licenses that was under consideration, the competitive model of Title III should govern.²⁷

After an exhaustive investigation,²⁸ the Commission concluded in its Report and Order of August 1959, that the eligibility requirements for licenses of point-to-point microwave systems ought to be relaxed.²⁹ This was regarded as a defeat for the communications common carriers.³⁰ The Commission reaffirmed this opinion after a rehearing in September 1960,³¹ and a Petition

25. Interview with Mr. Fred King, Chief Engineer, WELI, in New Haven, Conn., Feb. 9, 1961; cf. Southern New England Tel. Co., Mobile Telephone Service Customer's Manual (no date). Although the operator of a point-to-point microwave radio would have to be licensed, according to the regulations the operator need have no special training and there is no examination requirement—or any requirement other than the application—for a restricted radio-telephone operator's license. 47 C.F.R. §§ 11.154, 13.11(b), 13.22(g) (1958).

In practice, however, awards were made to noncommon carriers, but only if common carrier facilities were not available or the type of service sought did not lend itself to a common carrier operation. Manufacturers Radio Serv., 10 P. & F. RADIO REG. 157, 159 (1954); cf. Television Intercity Relay Stations, 17 P. & F. RADIO REG. 1621 (1958).

26. See 1959 *Microwave Report* 1769, 1771-76; 1960 *Microwave Opinion* 848-49.

27. For discussion of these arguments, see text at notes 33-37, 46-52 *infra*.

28. "In all, there were 30 days of oral hearing, over 200 persons and organizations filed comments, and over 160 persons appeared at the hearing and presented oral testimony. Five thousand and thirty pages of hearing record were accumulated in addition to 166 exhibits." 1959 *Microwave Report* 1769.

29. *Id.* at 1788-89. For example, no longer will it be necessary for the prospective licensee of a private point-to-point microwave system to show that common carrier service is unavailable. *Id.* at 1788.

30. See *Messages by Tele-Satellite*, Business Week, July 16, 1960, p. 32.

31. Upon rehearing, the Commission reopened the record for the limited purpose of obtaining information as to frequency needs for space communications. 1960 *Microwave Opinion* 827.

In the 1959 Report and Order the Commission found that the independent telephone companies generally permitted unrestricted interconnection of private microwave systems with their systems. 1959 *Microwave Report* 1787. This was not an accurate conclusion and was therefore modified, but it did not affect the basic determinations of the original

for Review was filed by the American Rocket Society in the Court of Appeals for the District of Columbia.³²

On its face, much of the Commission's decision turns on factual issues rather than on an explicit choice between the different approaches of Title II and Title III. Yet in making these findings, the Commission seemed to be guided by certain assumptions which reflect a strong bias in favor of the regulatory scheme of Title III.

Part of the potential conflict between Titles II and III was resolved by finding that private point-to-point systems did not in fact threaten the economic well being of the common carriers. In raising the spectre of economic hardship, the carriers sought to invoke the policies underlying Title II protection of common carriers. This protectionism reflects the national interest in ensuring that communication services will be available to all, and that such facilities will be as far reaching and comprehensive as possible.³³ The need for such facilities rests not only on their importance to the day-to-day life of the nation, but also upon their critical importance in times of national emergency.³⁴ The carriers, viewing wire and microwave communications as an integrated system, had argued that liberal granting of private microwave licenses would take away a large volume of existing and potential business. Moreover, they contended, those who would establish a private microwave system would be the larger users of common carrier service. This would mean that the cost of common carrier service would have to be spread among the smaller users, thereby increasing the burden upon them, while reducing the quality of service.³⁵ The carriers also pointed out that common carrier rates for microwave systems are

Report and Order. 1960 *Microwave Opinion* 841. A previously announced policy was also modified to permit authorization on a case by case basis of intercity educational television microwave systems. *Id.* at 842. All other policy and factual determinations of the 1959 Report and Order were affirmed, two Commissioners dissenting on the private licensing point. *Id.* at 855.

32. *American Rocket Soc'y v. United States & FCC*, Petition for Review, Civil No. 16,094, D.C. Cir., filed December 5, 1960. The American Rocket Society participated in the proceeding upon the rehearing submitting evidence on frequency needs for space communications, 1960 *Microwave Opinion* 827, and seeks judicial review pursuant to § 402(a) of the Communications Act, 48 Stat. 1093 (1934), as amended, 47 U.S.C. § 402(a) (1958).

33. See Brief of American Telephone and Telegraph Co., pp. 38-46; 1959 *Microwave Report* 1780. See also *FCC v. RCA Communications, Inc.*, 346 U.S. 86, 93 (1953). See generally authorities cited note 11 *supra*.

Section 151 of the Communications Act, 48 Stat. 1064 (1934), as amended, 47 U.S.C. § 151 (1958), gives as the purpose of regulation: "[T]o make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges . . ."

34. See Communications Act § 151, 48 Stat. 1064 (1934) as amended, 47 U.S.C. § 151 (1958); 1959 *Microwave Report* 1779-81.

35. See, e.g., Brief of American Tel. & Tel. Co. pp. 30-37, 1959 *Microwave Report*; Testimony of E. T. Lockwood, Ass't Vice President, American Telephone and Telegraph Co., before the FCC, 1959 *Microwave Report*.

uniformly fixed for service within a given jurisdiction for a given distance, while costs vary. This situation would lead to a "cream-skimming" operation by private enterprises, they said, whereby the private concern will install its own system over the portion of the route where costs are low and utilize common carrier facilities where costs are high.³⁶ The Commission rejected these contentions. In part, its decision seeks to answer them by pointing out that the high costs of private installation will discourage many potential customers from licensing their own systems, and that the market for common carrier facilities will increase as the use of microwave becomes more widespread.³⁷ But the decision also rejected the carrier's arguments on the grounds that they were speculative.³⁸ If injury did in fact occur, the opinion stated, the Commission would be free to reexamine the problem at that time.³⁹

This finding reflects two significant policy decisions. First, the Commission's effort to determine whether competition in microwave transmission was, in fact, harmful to the carriers constitutes an implicit rejection of the contention that, as regulated public utilities, common carriers are per se entitled to protection from competition. Second, the rejection of the carrier's factual arguments as speculative may have important connotations. The entire inquiry into the effects of microwave competition was speculative; the real issue was not what would happen, but what risk of injury to common carriers would the Commission tolerate for the sake of private, noncarrier development. By requiring carriers to adduce convincing proof of threatened injury in this type of inquiry, the Commission weighted the argument heavily in favor of allowing private licensees.⁴⁰ The decision might be interpreted, therefore, as an indication that the protectionist policies of Title II are to be strictly construed

36. Testimony of E. T. Lockwood, *supra* note 35, at 8-20.

37. 1959 *Microwave Report* 1789; 1960 *Microwave Report* 850-52.

38. See, e.g., *id.* at 849-52.

39. We propose to keep constant watch over the development of private services and the impact of such services upon the operations of the carriers. Should it hereafter become apparent, based upon experience, that there is a reasonable likelihood that there will be significant and meaningful adverse effect upon the interests of the public, we shall give our further attention to the problem at that time.

1960 *Microwave Opinion* 852.

The issue might be raised at future licensing proceedings. A common carrier which would suffer economic injury by the proposed grant of a license is a "party in interest" entitled to protest in the hearing before the FCC and with standing to seek judicial review of the Commission's decision. Communications Act, §§ 309, 402, 48 Stat. 1085 (1934), as amended, 47 U.S.C. §§ 309(b), (c), 402(b) (1958); *FCC v. Sanders Bros. Radio Station*, 309 U.S. 470, 476-77 (1940); *R. J. Laros & Brother*, 11 P. & F. RADIO REG. 355 (1954). *But cf.* *Yellow Cab Co.*, 9 P. & F. RADIO REG. 122a (1953).

40. The carriers argued that the Commission had erroneously shifted the burden of proof, contending that §§ 303, 307, and 309 of the Communications Act place the burden of establishing public convenience, interest, or necessity upon the would-be private system licensee. 1960 *Microwave Opinion* 829. The Commission replied that the only issue was whether its conclusions were reasonably supportable. *Id.* at 854-55. This view seems correct, since the proceeding itself did not involve the issuance of any licenses.

when the Commission awards control over newly developed communications facilities. The extent to which this decision subordinates the policies of Title II will depend upon the amount of hardship it actually imposes on the carriers. While it might be argued that the Commission's freedom to change its policy minimizes the possibility of actual hardship, reversal of the present policy at a later time may prove difficult.⁴¹ The most likely way to limit the granting of private licenses in the future would be to refuse issuance of any new licenses.⁴² This "freeze" might create hardships for supply firms which have invested in development and manufacturing facilities geared to a private consumer market.⁴³ If a priority system of awarding licenses is adopted concurrently,⁴⁴ even existing licensees might lose part of their investment. Private licensees might be denied renewal of their licenses as new needs for high priority systems, such as public safety systems, outstrip the limited number of licenses available.⁴⁵

41. The carriers argued that by the time specific data can be obtained, the damage will be done and it will be too late to save the common carriers. See Petition of the Western Union Tel. Co. for Reconsideration and Rehearing, pp. 6-8. Petition for Reconsideration of Report and Order, United States Independent Tel. Ass'n, p. 7.

42. This was the approach taken in television allocation. A "freeze" was instituted by means of a Report and Order, FCC 48-2182, issued Sept. 30, 1948. This provided that no new or pending applications for television stations would be acted upon by the Commission. The "freeze" lasted until April 1952. Sixth Report and Order, 1 P. & F. RADIO REG. 91:601 (1952).

43. Although the common carriers have maintained that independent manufacturers have an equal opportunity to sell equipment to them, see Brief, American Tel. & Tel. Co., pp. 55-58, 1959 *Microwave Report*, Motorola, Inc., itself a manufacturer of microwave equipment, alleged that since A.T. & T. owns a manufacturing subsidiary (Western Electric), its natural course would be to purchase equipment from its subsidiary. Brief on Issues 6-9, Motorola, Inc., p. 24, 1959 *Microwave Report*.

The Commission might, however, view this as an antitrust problem not within the scope of its policy determinations. See *United States v. RCA*, 358 U.S. 334 (1959); Comment, 57 MICH. L. REV. 885 (1959).

44. Private interests suggested that if there was a shortage of frequencies, a system of priorities would be desirable. It was generally agreed that the public safety services should receive top priority. 1959 *Microwave Report* 1778.

45. Section 307(d) of the Communications Act provides that renewal may be granted "if the Commission finds that the public interest, convenience, and necessity would be served thereby." 48 Stat. 1083 (1934), as amended, 47 U.S.C. § 307(d) (1958). Section 312(a) (2) or § 316 might be interpreted to permit a termination prior to the expiration of the license if conditions required it. 48 Stat. 1086-87 (1934), as amended, 47 U.S.C. §§ 312(a) (2), 316 (1958).

A crisis in frequency availability, see text at note 50 *infra*, might be dealt with by the President, designating the frequencies needed to be freed for government use under § 305. 48 Stat. 1083 (1934), as amended, 47 U.S.C. § 305 (1958). See *Bendix Aviation Corp. v. FCC*, 272 F.2d 533 (D.C. Cir. 1959), *cert. denied sub nom. Aeronautical Radio, Inc. v. United States*, 361 U.S. 965 (1960).

Refusal to renew a license in pursuance of the statutory policy is not an unconstitutional taking of property. *Trinity Methodist Church, South v. Federal Radio Comm'n*, 62 F.2d 850 (D.C. Cir.), *cert. denied*, 284 U.S. 685 (1932).

A second policy urged for adopting a Title II approach was also disposed of by means of a factual finding. The common carriers argued that granting licenses only to common carriers results in the most efficient use of the limited number of radio frequencies available. They urged that to permit private enterprises to install their own microwave systems would result in a wasteful duplication of facilities.⁴⁶ While the argument did not specify what was meant by "duplication," several economies in the use of available facilities are possible. In the first place, limiting licenses to common carriers might result in microwave systems being used only where the carrier's other facilities, such as wire communications, were not adequate.⁴⁷ This would result in maximum use of existing facilities and would leave the maximum number of microwave frequencies open to serve other needs. Another advantage which common carriers might employ to limit the burden on microwave frequencies is their superior ability to utilize the same frequency for several customers.⁴⁸ The Commission has refused to allow private users to share a common frequency on a cooperative basis, fearing that the cooperative installations would acquire the powers of common carriers without being regulated according to the act.⁴⁹ As a result, each private user must maintain a separate system, ultimately causing a greater load on the available number of microwave frequencies. It was apparently these economics of the Title II approach which led one Commissioner to dissent. He argued that there were not enough microwave frequencies available to permit the relaxation of the eligibility requirements, claiming that frequency demand had always outstripped the supply and that the imminent development of space communications would impose a potentially intolerable burden upon an already cluttered spectrum.⁵⁰ This latter ground is the basis of the American Rocket Society's Petition for Review.⁵¹

46. See, e.g., Testimony of E. T. Lockwood, Ass't Vice-President, American Tel. & Tel. Co., before the FCC, 1959 *Microwave Report*; Petition for Reconsideration and Rehearing, p. 15, and Reply of American Telephone & Telegraph Co. to the Oppositions to Petitions for Reconsideration and Rehearing, p. 12.

47. Assuming wire and microwave radio are interchangeable, permitting use of private microwave radio in an area already served by wire communication might represent an inequitable overloading in contradiction to the Act's policy of encouraging an "equitable distribution" of communications facilities throughout the country. Communications Act § 307(b), 49 Stat. 1475 (1936), 47 U.S.C. § 307(b) (1958); cf. Cohen & Russo, *The Anomaly in Section 307(b) of the Communications Act of 1934*, 11 SYRACUSE L. REV. 202, 203 (1960).

Microwave radio, however, might be regarded as superior to wire as a method of communication, see text at notes 20-21 *supra*, and thus not in the same classification of communication facilities. The act has been interpreted to require an equitable distribution only within each class of facility. See *Tupelo Broadcasting Co.*, 12 P. & F. RADIO REG. 1233, 1250 (1956) (television and standard broadcast radio not interchangeable services).

48. The FCC itself recognized this attribute. See 1960 *Microwave Opinion* 852.

49. 1959 *Microwave Report* 1786-87.

50. 1960 *Microwave Opinion* 861. The carriers also maintained that the frequency supply was inadequate to fill the demand. See, e.g., Reply of American Telephone & Telegraph Co. to the Oppositions to Petitions for Reconsideration and Rehearing, pp. 19-21.

51. See note 32 *supra*.

The Commission's answer to this problem was that it did not, at present, exist. A majority of Commissioners decided that an adequate number of frequencies are available to handle all presently foreseeable space needs, even if eligibility requirements for point-to-point microwave systems are relaxed.⁵² This finding also is quite speculative,⁵³ and the Commission again added the caveat that it was not precluded from reexamining the problem and taking appropriate action at a later time.⁵⁴ As with the finding that common carriers would not suffer economic hardship, this finding suggests that the Commission is willing to risk losing the advantages of a Title II approach⁵⁵ in order to promote private licensing of the newly developed techniques.

The decision to relax the eligibility requirements for private point-to-point microwave licenses was based on more than the negative determination that the pro-carrier policies would not be adversely affected. The reduction of control by common carriers was promoted by a view that individual participation in the industry adds certain desirable features which are not available under a communications system run entirely by common carriers. The Commission felt that a private enterprise with its own system would have better control and flexibility for meeting its own hour-by-hour operational and administrative needs. It would also be able to set up its own schedule and priority for maintenance and repair, rather than having to rely on a common carrier.⁵⁶ Moreover, a private user which did not require the high quality of service provided by the carriers would not be forced to pay for such service.⁵⁷

Another affirmative policy is suggested by the Commission's attitude toward the threat of competition. The Commission reasoned that the expanded, decentralized market for microwave systems would encourage competition in the manufacture and sale of microwave equipment, and that at least part of this competition would be in experimentation and development of new equipment. The decision seems to conclude that a competitive market is a better stimulant to such development,⁵⁸ indicating that the policy in favor of greater competition may have been required by the statutory obligation to "encourage the

52. 1959 *Microwave Report* 1785. For the evidence on which this conclusion is based, see *id.* at 1770-78. See also 1960 *Microwave Opinion* 843-48.

53. There was a study conducted by the Electronic Industries Association which supported the FCC's conclusion. 1959 *Microwave Report* 1777. American Telephone and Telegraph Company took the position that the estimates of EIA were idealistic and impractical. *Ibid.* The Commission termed the EIA study "somewhat theoretical and subject to some possible limitations," but it did rely on the estimates. See *id.* at 1785.

54. 1959 *Microwave Report* 1785; 1960 *Microwave Opinion* 848.

55. For discussion of the possibility that the Commission's decision may be difficult to reverse, see text at notes 41-45 *supra*.

56. 1959 *Microwave Report* 1776, 1788-89; see *id.* at 1772-76; Testimony of E. J. Strawn, Vice President, Shell Communications, Inc., Exhibit II, Conclusion, p. 2.

57. 1959 *Microwave Report* 1788-89.

58. 1960 *Microwave Opinion* 854; 1959 *Microwave Report* 1789; *cf. id.* at 1781-82. See Letter From the Department of Justice to the Federal Communications Comm'n, Mar. 28, 1957, on file at the FCC (cited and discussed in 1959 *Microwave Report* 1781).

larger and more effective use of radio in the public interest.”⁵⁹ Although the Commission’s opinion did not discuss the impact of competition on carriers’ prices or services, some evidence was introduced indicating that the common carrier microwave services were either inefficient or overpriced. One company submitted comparative cost data which showed that the carrier’s rental charge for a ten year period would be more than three times the cost of purchase, installation, and repair.⁶⁰ Presumably, therefore, competition with private ownership might also lead to improved performance in this area.⁶¹

The Commission’s emphasis on the beneficial effects of competition might be interpreted broadly as a partial renunciation of the regulatory philosophy embodied in Title II. The powers given the Commission under Title II suggest that detailed governmental regulation is the proper means for securing an acceptable standard of performance from communications common carriers.⁶² Traditionally, protection from competition has been viewed as a necessary corollary of such regulation.⁶³ In fact, however, the common carriers have never been free from some competition, for the Commission has never guaranteed them freedom from each other’s competition.⁶⁴ The Microwave Report represents a closer look at this competition-free premise, and it seems to conclude not only that competition need not be harmful, but that it can perform certain regulatory functions itself. Although the Commission’s opinion articu-

59. Communications Act, § 303(g), 48 Stat. 1082 (1934), 47 U.S.C. § 303(g) (1958).

60. Testimony of E. J. Strawn, Vice President, Shell Communications, Inc., Exhibit II. This shows that a common carrier’s estimate of charges for a particular system with no expansion contemplated were \$84,360 yearly, while the private company estimated that it could install its own comparable system at a cost of \$114,023 and it would have a yearly maintenance cost of \$12,000. *Id.* at Exhibit 6a. See Television Intercity Relay Stations, 17 P. & F. RADIO REG. 1621 (1958); *Network Broadcasting*, H.R. REP. NO. 1297, 85th Cong., 2d Sess. 51-52 (1958); Celler, *Antitrust Problems in the Television Broadcasting Industry*, 22 LAW & CONTEMP. PROBS. 549, 554 (1957); Salant, Fisher & Brooks, *The Functions and Practices of a Television Network*, 22 LAW & CONTEMP. PROBS. 584, 589 (1957).

61. There are indications that A.T. & T. has already moved to meet the challenge of private microwave systems. It has created a new service it calls “Telpak” which enables those needing a large volume of point-to-point communication to obtain approximately twice as much service between two specified points without an increase in cost. Press Release of American Telephone & Telegraph Co., January 16, 1961.

62. The Commission is given broad powers over such things as rates, quality of service, and extension of facilities. Communications Act, §§ 201-05, 214, 48 Stat. 1070 (1934), as amended, 47 U.S.C. §§ 201-05, 214 (1958).

63. See notes 9, 11 *supra* and accompanying text.

64. See, e.g., Martin J. Nunn, 7 P. & F. RADIO REG. 844 (1951); see Courtney & Blooston, *Development of Mobile Radio Communications—The “Work-Horse” Radio Services*, 22 LAW & CONTEMP. PROB. 626, 638-42 (1957).

The argument that “public utilities” should be free from competition has frequently failed. See, e.g., *Tennessee Elec. Power Co. v. TVA*, 306 U.S. 118, 139 (1939); *Sheridan-Wyoming Coal Co. v. Krug*, 168 F.2d 557, 558 (D.C. Cir. 1948); *Porto Rico Ry., Light & Power Co. v. Colom*, 106 F.2d 345, 351 (1st Cir.), *cert. denied*, 308 U.S. 617 (1939); 43 AM. JUR. *Public Utilities and Services* § 18, at 582 (1942).

lates only the effect of stimulating research and development, it might be logically extended to recognize the probable effect of improving operating efficiency and of lowering the cost to the consumer. Thus, far from being inconsistent with the concept of regulation by government, competition may indeed complement it.⁶⁵

65. For judicial recognition of this tenet, see, *e.g.*, *Minneapolis & St. L.R.R. v. United States*, 361 U.S. 173, 186-88 (1959); *McLean Trucking Co. v. United States*, 321 U.S. 67, 85-87 (1944); *Mansfield Journal Co. v. FCC*, 180 F.2d 28, 33 (D.C. Cir. 1950).