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Horace P. Moulton

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SOME LEGAL ASPECTS OF INTERNATIONAL COMMUNICATIONS*

HORACE P. MOULTON†

The age of space is upon us. If we date it from Sputnik I, it is only five years old. Yet two sessions of Congress have already been preoccupied with the problems involved in the commercial use of outer space.

Nine years ago Dr. John R. Pierce of Bell Telephone Laboratories pointed out the scientific feasibility of placing microwave stations in orbit thousands of miles in outer space where they would be visible to stations on the ground at points on different continents.¹ In this way, very broadband microwave beams could be sent from one ground station to a satellite and relayed to another ground station in another hemisphere. The ground stations would be connected to the terrestrial communications networks just as international cables and high frequency radio facilities are today.

The advantages of such a system were clear. Another high capacity facility useful for all international communications purposes could be added to the existing system to meet the ever-growing demands for more and more circuits and, in addition, to provide high quality television transmission.² At the time Dr. Pierce wrote,

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† Vice President and General Counsel, American Telephone and Telegraph Company.

¹ Dr. Pierce's suggestions were evolved in a series of science fiction articles and were ultimately set forth in a technical paper, *Orbital Radio Relays*. Jet Propulsion, April 1955, p. 153.

² It should be emphasized that none of the satellite systems which are presently contemplated will be used for broadcasting directly to home television receivers. See DRAFT PROPOSALS OF U.S.A. FOR THE EXTRAORDINARY ADMINISTRATIVE RADIO CONFERENCE FOR SPACE RADIO COMMUNICATION (GENEVA 1963) [Oct. 22, 1962] at 4: "Recent experimental programs have demonstrated the technical feasibility of relaying aural and television broadcast program material via communication satellite stations. However, these demonstrations consisted of transmissions to special receiving stations on the earth's surface from which the program material was distributed over conventional terrestrial communication systems to the broadcasting stations which serve the general public. . . . Studies indicate that there is little likelihood of the general public receiving direct broadcasts from satellites in the near future. The proposals of the U.S.A. do not include provisions for a broadcasting satellite service." *But cf.* Glazer, *ITU: Through Time and in Space*, 60 MICH. L. REV. 269, 299-304 (1962).

however, no satellite had flown and no rocket existed to fly one. Nor was the communications art refined to the point where an operational microwave station could be maintained in a space craft thousands of miles in the sky.

So rapid was the scientific development, however, that by early 1961 it was apparent the technical problems would soon be solved and a world-wide commercial communications satellite system could be established in a matter of a relatively few years. The first peaceful commercial use of space was thus within our grasp and the United States was far ahead in this technology. Suddenly the establishment of a world-wide space communications system under United States leadership became a matter of urgent public importance. And it was then that the great debate began.³ From the outset it was clear that for the reasonably foreseeable future there could be only one commercial communications satellite system. So the basic issue was: What entity or group should represent the total United States interest in this undertaking?

Many proposals were advanced.⁴ Seemingly endless Congressional committee hearings ensued,⁵ tripping on each other's heels, so

³ For the events leading up to the enactment of the Communication Satellite Act of 1962, 76 Stat. 419, 47 U.S.C.A. § 701 (1962), see Moulton, *Communication Satellites—the Proposed Communications Satellite Act of 1962*, 18 BUS. LAW. 173, 174-75 (1962).

⁴ Altogether 16 bills were introduced in the second session of the 87th Congress, exclusive of those offered as amendments in the nature of substitutes: S. 2650, S. 2814, S. 2890, H.R. 9696, H.R. 9907, H.R. 10104, H.R. 10115, H.R. 10138, H.R. 10586, H.R. 10629, H.R. 10747, H.R. 10772, H.R. 10808, H.R. 10978, H.R. 11040, and H.R. 11063, 87th Cong., 2d Sess. (1962). Interest, however, centered on four bills: the administration's proposal, the Kerr-Magnuson Bill, S. 2814 (which provided for the creation of a private corporation with two classes of stock, voting stock to be owned by anyone including carriers and non-voting stock which was limited to communication carriers); the Kerr Bill, S. 2650 (which provided for carrier ownership); and the Kefauver Bill, S. 2890 (which provided for government ownership). S. 2814 was amended by the Senate Aeronautical & Space Sciences Committee, S. Rep. No. 1319, 87th Cong., 2d Sess. (1962), and as reported was introduced in the House by Rep. Harris as H.R. Rep. No. 11040, the bill which eventually became law. See also the REPORT OF THE AD HOC CARRIER COMMITTEE and other proposals submitted to the FCC in Docket No. 14024, discussed in Moulton, *supra* note 3, at 175-76.

⁵ Four committees held hearings on the proposed legislation: the Senate Aeronautical & Space Sciences Committee on Feb. 27, 28, March 1, 5, 6, and 7, 1962 (S. Rep. No. 1319, 87th Cong., 2d Sess. (1962)); the House Interstate & Foreign Commerce Committee on March 13, 14, 15, 16, 20, 21, and 22, 1962 (H. Rep. No. 1636, 87th Cong., 2d Sess. (1962)); the Senate Commerce Committee on April 10, 11, 12, 13, 16, 24, and 26, 1962 (S. Rep. No. 1584, 87th Cong., 2d Sess. (1962)); and the Senate Foreign Relations Committee on Aug. 3, 6, 7, 8 and 9, 1962 (S. Rep. No. 1873, 87th Cong., 2d

that some of us felt like Alice's walrus when he complained to the eager little bright-faced oysters, "We cannot do with more than four to give a hand to each." A small group of Senators mounted a full-blown filibuster which ended in cloture on August 14, 1962.⁶ Then, at long last, the Communications Satellite Act of 1962 was enacted by overwhelming votes in both houses of Congress and became law on August 31, 1962.⁷

The act authorized the creation of a private corporation whose stated purposes are to plan, construct, and operate, by "itself or in conjunction with foreign governments or business entities, a commercial communications satellite system" and to "furnish for hire channels of communication to the United States communication common carriers and to other authorized entities, foreign and domestic."⁸

In the midst of this Congressional turmoil, Telstar arose into outer space to prove what had been assumed but never before achieved—that broadband satellite communication between continents is both possible and practical. On July 10, 1962, Telstar, developed and built by the Bell Telephone Laboratories, was placed in orbit by the National Aeronautics and Space Administration under a cooperative agreement under which the Bell System paid NASA the cost of the launching. Telstar was placed in an elliptical orbit with an apogee of 3501.8 statute miles and a perigee of 593.35 statute miles.

The legal problems involved in Telstar were both mundane and

Sess. (1962)). In addition, hearings on related matters were held by the Senate Subcommittee on Monopoly of the Select Committee on Small Business on Aug. 2, 3, 4, 9, 10, 11, Nov. 8 and 9, 1961; the Senate Communications Subcommittee of the Commerce Committee on Aug. 1, 23, and 24, 1961; the Senate Subcommittee on Antitrust & Monopoly of the Committee on the Judiciary on March 29, 30, April 4, 5, 6, 10, 11, 12, and 17, 1962; the House Antitrust Subcommittee of the Committee on the Judiciary on June 14, and 15, 1961; the House Committee on Interstate & Foreign Commerce on July 25, 26, 27, and 28, 1961; and the House Science & Astronautics Committee on May 8, 9, 10, July 13, 14, 17, Aug. 1, 9 and 10, 1961 and two of its subcommittees on Aug. 15, 17, Sept. 18, 19, 21, 27, and Oct. 4, 1962.

⁶ The vote on cloture was 63 to 27. 108 Cong. Rec. 15398-99 (daily ed. Aug. 14, 1962). For an analysis of and commentary on the vote see Cong. Quarterly Aug. 17, 1962, p. 157. For a brief consideration of the basic issues involved in the debates see Brynes, *TVA in Space*, The New Republic, July 2, 1962, p. 11.

⁷ 76 Stat. 419, 47 U.S.C.A. § 701 (1962). The Senate passed the bill on Aug. 17, 1962 by a vote of 66 to 11 (108 Cong. Rec. 15874 (daily ed. Aug. 17, 1962)) and the House concurred on Aug. 27, 1962 by a vote of 372 to 10 (108 Cong. Rec. 16604-15 (daily ed. Aug. 27, 1962)).

⁸ Communications Satellite Act of 1962, 76 Stat. 425, 47 U.S.C.A. § 735(a) (1962).

ethereal. For example, serious consideration was given to the legal liabilities attending a faulty launching which might cause the rocket and its space craft payload to fall on a place such as Miami Beach at the height of its season. We also considered the legal implications of the fact that Telstar, once in orbit, would pass over nearly every foreign nation extant. In this connection we of course studied the scholarly writings of Professor John Cobb Cooper and others. Our research revealed that the legal and political problems raised by man's entry into outer space had already given rise to a flood of legal papers. The *Index to Legal Periodicals*, as recently as August 1958, had added a new caption entitled "Space Law" to accommodate the increasing flow of writings in this field. In 1959 there were already twenty-three items under this heading which swelled to forty-three in 1960 and today total well over one hundred.

We also took comfort from the resolution of the General Assembly of the United Nations of December 21, 1961 declaring that international law applies to outer space and celestial bodies and that "outer space and celestial bodies are free for exploration and use by all states in conformity with international law and are not subject to national appropriation."⁹ This resolution, important as it was, obviously constituted an uncertain step forward since it made no attempt to go beyond these two broad principles or to define just where airspace ends and outer space begins, a subject upon which a rather wide range of opinion has been expressed by scholars in this field.

Most importantly, we observed that both the United States and Russia had on numerous occasions placed in orbit space vehicles flying over countries throughout the world at altitudes from hundreds to thousands of miles. For the most part, these had been experimental and scientific in character and had given rise to no protest. Thus a body of precedents was even then building for the proposition that outer space is free for all to use for peaceful purposes. We concluded that Telstar, once in orbit, would be well above any reasonable vertical claim of sovereignty, would be used solely for peaceful purposes, and would not otherwise threaten the security or other legitimate interest of any country. Since Telstar's launching, no foreign voice has been raised in protest although many have been heard in acclaim. Against this background I personally am confident that the law of space, as it evolves, will present no obstacle to the establishment of a world-wide commercial satellite communications system.

⁹ U.N. RES. 1802 (XVII).

International arrangements pertaining to the allocation of frequencies for communications satellites must, of course, be made just as similar arrangements have been made in the past for the use of high frequency radio facilities. Historically, these arrangements have been worked out through the offices of the International Telecommunication Union and have been embodied in international conventions. In October of this year, an Extraordinary Administrative Radio Conference of the ITU will be held in Geneva, Switzerland, and among the matters to be considered is the allocation of frequencies for satellite communications. Intensive preparations for this conference already have taken place and the "Draft Proposals of the United States" have been formulated and circulated to all interested parties.¹⁰ There is good reason to believe that these questions will be resolved satisfactorily and will not impede the establishment of a communications satellite system.

The establishment of such a system, however, will also call for a high degree of international business cooperation. United States interests cannot alone construct, own, and operate such a system. The United States is at only one end of each international message originating or terminating within its boundaries. Experience has shown that the other major nations, through their communications administrations or agencies, will wish to participate on a basis of equality. They will provide their own ground stations and will insist upon part ownership in the satellites themselves. Therefore, the United States interests must cooperate with these foreign interests at every step of the way, and there are many areas in which agreement must be reached. To suggest a few: What system should be adopted and how should it be designed? What will it cost and how will that cost be shared? Who will provide the hardware? What arrangements will be made for the coordination of its operation and use?

On their face these seem like difficult questions, especially since there will be a number of countries involved.¹¹ But I believe it is unlikely that they will be as imposing as they seem. The importance of international communications is recognized throughout the world. The establishment and maintenance of facilities for such communications have historically been accomplished with a minimum of difficulty

¹⁰ Paglin, *The Establishment of Satellite Communications Systems*, 70 PUB. UTIL. FORT. 606, 609-13 (1962).

¹¹ See, e.g., Estep & Kearse, *Space Communications and the Law: Adequate International Control after 1963*, 60 MICH. L. REV. 873, 897-98 (1962).

and with little regard to the temperature of the diplomatic climate short of war.

To illustrate, my company alone has operating agreements with communications agencies in 176 countries and areas, including the iron curtain countries and Cuba. Our arrangements with Cuba have continued on a reasonably normal basis even under the Castro regime and despite its nationalization of Cuba's domestic telephone system and the recent unpleasanties. Indeed, since the Castro government came to power, telephone traffic between the United States and Cuba has increased by more than thirty per cent, from 513,329 messages in 1957 to 671,505 in 1961, and during the recent crisis reached an all-time high.

One of the prime functions of the new Communications Satellite Corporation, which was incorporated on February first, will be the solution of the questions to which I have referred, through business negotiations with the communications administrations or agencies of the other interested countries. In the exercise of this function, the act provides that whenever the corporation enters into business negotiations with any international or foreign entity, it shall notify the Department of State of the negotiations.¹² The Department of State shall thereupon advise the corporation of relevant foreign policy considerations concerning which the corporation must keep the Department of State informed throughout the negotiations. It is also specifically provided that, "The corporation may request the Department of State to assist in the negotiations, and that Department shall render such assistance as may be appropriate."¹³

There is ample precedent to which the corporation may turn for guidance in its negotiations. The existing cable and radio facilities can connect a telephone user in the United States with ninety-eight per cent of the world's telephones and this includes more than ninety per cent of the telephones in Asia and Africa. My company today has approximately 750 oversea telephone circuits in operation, 450 of which are provided by modern submarine telephone cables which were placed in service starting in 1956, and the balance by high fre-

¹² Communication Satellite Act of 1962, 76 Stat. 426, 47 U.S.C.A. § 742 (1962). In addition, the act provides that the President shall supervise the relationship between the corporation and foreign governments and stimulate foreign participation in the system. See, *e.g.*, 76 Stat. 421, 47 U.S.C.A. § 721(a)(4)(5) (1962).

¹³ Communications Satellite Act of 1962, 76 Stat. 426, 47 U.S.C.A. § 742 (1962).

quency or tropo-scatter radio. Cables, which provide both greater capacity and superior quality of transmission, are being laid quite rapidly to meet the ever-increasing demand for improved international communications facilities. We now have two transatlantic cables, one to England and one to France, and cables to Cuba, Puerto Rico, Bermuda, Hawaii and Alaska. In addition, there are firm plans for further cables, to the United Kingdom, to Colombia via Jamaica and Panama, to Venezuela, and to Japan via Hawaii and Guam, all to be completed by the end of 1964.

How have these facilities been established? In the case of high frequency radio the problem has been relatively simple. The communications agency at each end has agreed to establish its own transmitting and receiving facilities operating on a common frequency, and an agreement has been reached for the division of revenues derived from the service, generally on a fifty-fifty basis. Where, however, there are intermediate facilities required to provide service, such as undersea cables or satellites in outer space, provisions must be made for their construction, ownership and use. A very brief explanation of the arrangements for the second transatlantic telephone cable (TAT 2) may be helpful in suggesting a possible pattern for the establishment of a communications satellite system. TAT 2 was constructed under an agreement between the French Administration for Posts, Telegraphs and Telephones, the German Bundespost, and American Telephone and Telegraph. Agreement was first reached as to the design of the cable, in this case the design being that of the Bell Telephone Laboratories. It was also concluded that the cable should land at Penmarch, France, and that the French Administration would provide the German Bundespost with facilities across France. AT&T was assigned the responsibility for constructing and laying the cable, and it was agreed that the cable would be paid for and owned, in common, in undivided shares by the three parties in the following ratios: The French Administration, 18.05 per cent, the German Administration, 18.05 per cent, and AT&T, 63.90 per cent. The cable initially was to have a capacity of thirty-six circuits and these circuits were allocated as follows: thirteen circuits were assigned to AT&T and the French Administration for United States-France communications, thirteen to AT&T and the German Administration for United States-German communications, and the remaining ten circuits were assigned to AT&T for communications between the United States and such other European countries as might wish

to take an interest in the cable. It was also agreed that maintenance and operating costs would be paid by the parties in proportion to their ownership interests. By subsequent agreements with AT&T, Switzerland, Belgium, the Netherlands, Italy, and Spain have taken a one-half interest in one or more circuits assigned to AT&T for the purpose, upon paying one-half of the capital costs allocable to such circuits and undertaking to pay in the future one-half of the maintenance and operating costs. In addition, circuits to France and Germany have been leased to certain United States international telegraph carriers.

This pattern, which has as its basic premise undivided common ownership of the communications capacity which is used to communicate between any two countries, recognizes the respective national interests of the countries involved and has been followed in all of our international cable agreements. It is flexible in that provision can be made for new countries to join in the use of the facilities either by capital contributions or by the leasing of circuits in the case of those who cannot afford to take an ownership interest. The adaptation of this pattern to a commercial framework for satellite communications should be given serious consideration.

AT&T was assigned the responsibility to construct and lay the TAT 2 cable. Quite understandably, however, both the French and German administrations desired that the manufacturing of parts of the cable be done in their respective countries. Since in both countries there were manufacturers who were competent to manufacture the cable to AT&T's design, it was agreed that a manufacturer in each country should make a thousand miles of cable, excluding the submarine repeaters. Whether and to what extent the foreign administrations participating in the satellite system may similarly wish to provide hardware or services are questions as yet unanswered. However, few countries have rockets capable of putting communications satellites in orbit, and launching is where some of the largest costs will be incurred.

In this country we are well ahead in the technologies which can make international commercial satellite communications a reality within the next few years. It will take high qualities of leadership to perfect the necessary commercial arrangements with the interested foreign administrations. We all hope and expect that the new satellite corporation will supply this leadership. In my judgment, however, these arrangements cannot be achieved through high level inter-

national conferences or conventions.¹⁴ We should not permit satellite communications to become a pawn in a larger diplomatic game. This must be a matter of business negotiations with the foreign communications administrations and agencies. They are in the communications business and are responsible for both the internal and external communications facilities and services of their respective countries. Their knowledge of, and interest in, communications is very great. Communications people talk a common language although they may not speak a common tongue. It is largely for these reasons that our existing international facilities have been established and maintained cooperatively and with a minimum of difficulty. There is every reason to believe that international satellite communications can be established and conducted in like manner.

I do not mean to leave the impression that the totality of the task facing the new corporation is small. On the contrary, it is very large. Now that it is organized, its management must shortly arrange for an initial stock issue. Fifty per cent of this issue must be offered to private investors in "a manner to encourage the widest distribution to the American public."¹⁵ The remaining fifty per cent will be reserved for communications common carriers authorized to own stock in the new corporation by the Federal Communications Commission.¹⁶ Although, as the President has said, "There may be quite a long period of time before there is any return on this investment,"¹⁷ the glamour of space may make it a "hot" issue. Once armed with funds, the corporation must make decisions respecting the kind, technical characteristics, and design of the system which it will propose to its oversea partners. This doubtless will involve the procurement of scientific and technical advice and assistance from outside sources for it is highly unlikely that a corporation of so recent an

¹⁴ See also Feldman, *Communications Satellite Legislation and International Cooperation*, 7 ANTITRUST BULL. 431, 436 (1962): "While these multi-lateral arrangements are not impossibilities, they may be more complicated approaches and fraught with more perils in negotiation and administration than a more cautious bilateral approach which is generally foreseen as the immediate pattern." Cf. the testimony of Under Secretary of State George C. McGhee before the Senate Aeronautical & Space Sciences Committee on Communications Satellite Legislation, 87th Cong., 2d Sess., at 162 (Feb. 28, 1962), as to the continued regulatory role of the ITU.

¹⁵ Communications Satellite Act of 1962, 76 Stat. 424, 47 U.S.C.A. § 734(a) (1962).

¹⁶ Communications Satellite Act of 1962, 76 Stat. 424, 47 U.S.C.A. § 734(b) (1962).

¹⁷ Statement of President Kennedy at his press conference on March 21, 1962, reported in the Wall Street Journal, March 22, 1962, p. 1, col. 3.

origin can so quickly acquire sufficient in-house capability to make these judgments unaided.

The new corporation will be a common carrier's common carrier fully subject to regulation by the Federal Communications Commission. Challenging regulatory questions will arise. The corporation will, of necessity, live off its capital until at least a part of the system is in operation and revenue producing. What accounting and rate-making treatment will be accorded the losses it will incur until its income meets its outgo? Will its charges for leasing circuits to the United States international communications common carriers be fixed so as to maximize earnings at the earliest possible time and, if so, how? The ultimate source of revenues to support the investment in the corporation will be the monies received by the United States carriers for service to the public via the satellite system. How will the charges of the United States carriers to the public for services originating in the United States be harmonized with the like charges by the foreign administrations for services in the reverse direction? These and a host of other problems attend the undertaking. They are far from insoluble, but their solution will require a very high degree of business, scientific and regulatory understanding and talent.