

**“The Biggest Giveaway in the History of the Nation”:
A Legislative History of the 1962 Communications
Satellite Act**

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NATION”: A LEGISLATIVE HISTORY OF THE 1962
COMMUNICATIONS SATELLITE ACT**

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INTRODUCTION

The Federal Communications Commission was taken completely by surprise in 1960 when AT&T filed for permission to launch an experimental communication satellite, with the intention of shortly building a fully operational nationwide system.¹ In 1960 the issue of satellite communication had not been formally discussed in the FCC - nor for that matter in any level of government - and there was no regulatory or organisational framework within which to view such a communications network. Two years later, the Communications Satellite Act was signed; an Act which created the privately-funded Communications Satellite Corporation (Comsat), and gave it an operational monopoly over the entire commercial industry. The Act concerned only the commercial and private uses for the new technology – the Department of Defense had its own similar but separate communications satellite program.

However, Comsat was not born without a gruelling congressional battle; one which pitted the Kennedy administration against a small group of liberal Democrats. The filibuster which these Democrats mounted in defense of their alternative legislative proposal was bitter, impassioned, and ultimately doomed.

The Communications Satellite Act has not been extensively analysed by historians, but there are a few notable works. In the late 1960s a number of political scientists looked rather uncritically at the Act, particularly Harvey Levin² and Wallace Kirkpatrick.³ Herman Schwartz's "Governmentally Appointed Directors in a Private Corporation"⁴ was critical of the structure of the corporation prescribed by the legislation, but does not extend this criticism to the corporation as a whole.

¹ David J. Whalen, *Communications Satellites: Making the Global Village Possible* (NASA History Office, [cited 4 Sep. 2004]); available from <http://www.hq.nasa.gov/office/pao/History/satcomhistory.html>.

² Harvey Levin, "Organization and Control of Communications Satellites," *University of Pennsylvania Law Review* 113, no. 3 (1964).

³ W. Wallace Kirkpatrick, "Antitrust in Orbit," *The George Washington Law Review* 33 (1964).

⁴ Herman Schwartz, "Governmentally Appointed Directors in a Private Corporation - the Communications Satellite Act of 1962," *Harvard Law Review* 79 (1965).

More recently there has been scholarship critical of the 1962 act, by placing it in its political and economic contexts. Peter Cuniffe's MA thesis "Misreading History: Government Intervention in the Development of Commercial Communications Satellites"⁵ provides a critique of the official histories of the act. Cuniffe's revisionist history identifies not NASA, but private industry - specifically AT&T's Bell Laboratories and Hughes Aircraft Company - as the primary developers of the communications satellite industry. He goes on to argue that government intervention in the industry has sometimes helped, and sometimes harmed satellite development, but more often than not has been unnecessary. Similarly, David Whalen's *The Origin of Communication Satellites, 1945-1965*⁶ speaks of government intervention into an industry that did not require it.

What this paper aims to do is build on the study of Whalen and Cuniffe by contextualizing the Act not only against commercial industrial development, but also by looking at it in the *political* context of the time. The debate over Comsat can be characterized as a fight between a Democratic president and a group of Democratic senators. The question is then posed: where were the Republican congressmen? While the number of Democrats in both the House of Representatives and the Senate were nearly double that of the Republicans, they lacked the overwhelming majority to push through bills without a measure of compromise. Surely conservative legislatures of both would have had ideological reasons to be interested in the issues that Comsat raised. With the distance of forty years, the absence of a Republican opposition to such government-chartered monopoly over an entire industry seems glaring. This thesis is an investigation of that absence.

By looking at the Congressional records of the debate and the specificities of the proposed bills, this paper aims to contextualize Comsat in the political climate of the early 1960s, as well as examine the arguments put forth by Whalen and Cuniffe. By

⁵ Peter Cuniffe, "Misreading History: Government Intervention in the Development of Commercial Communications Satellites" (Masters Thesis, Massachusetts Institute of Technology, 1990).

⁶ David J. Whalen, *The Origins of Satellite Communications, 1945-1965* (Washington & London: Smithsonian Institution Press, 2002).

studying such a microcosm of political history, we can hope to illuminate the historical intersect between government, technological change, and ideology.

Communications Satellites

The term ‘communications satellite’ is actually a rather broad one. A satellite is a body which is subordinate to and dependant on another body,⁷ encompassing natural satellites, the moon, and the artificial; the man-made. All modern artificial satellites work in some part as communications – it is no good taking satellite photographs without some method to transmit their data.⁸ ‘Communications satellites,’ as referred to hereafter, are technically communications *relay* satellites, designed to relay information from one ground station to another ground station. Such satellites can be passive, merely reflecting the signal sent to them, or active, amplifying and directing the radio signals to the ground.

Geosynchronous satellites are stationed above specific longitudes and latitudes, providing continuous coverage to one area. These satellites parallel the earth’s rotation. Low-Earth orbiting satellites instead orbit independently. For the purposes of this paper – and for the framers of the 1962 Act – the term ‘communications satellite’ will refer to active, geosynchronous, communication relay satellites, although it is important to remember that there are other methods of radio transmission.

It is important to note that during the period of this study that there were a number of parallel developments in satellite technology. As well as the DOD’s construction of a communications system, significant progress was made in the fields of surveillance and meteorology. The Communication Satellite Act concerned only civilian communications satellites, and this thesis will be restricted to that discussion.

⁷ Jack Posner, "The Implementation of the Communications Satellite Act of 1962" (Ph.D., The American University, 1967), 26

⁸ There are a few early exceptions to this – in this era film capsules from the Discoverer program were returned to earth by mid-air capture in parachute “buckets.”

CHAPTER 1

LEGISLATIVE HISTORY

A United States communications satellite corporation was proposed by the Kennedy administration in July 1961, when it released a statement outlining the government's interests in such system. The statement advocated a 'coordinated national policy to guide the use of resources in the public interest.'⁹ The administration favoured "private ownership and operation," and "full compliance with antitrust legislation and with the regulatory controls of the government." The imprecision of this initial policy statement were offset, in retrospect, by the policy requirement of the new entity which followed – "Structure of ownership or control which will assure maximum possible competition." Administration policy, by placing such emphasis on the competitive nature of the system (the statement also stipulated "effective competition" in the contractual bidding process,) explicitly required a free market solution to the question of commercial satellite policy. The administration, as early as mid 1961, had ruled out the possibility of a commercial satellite department, or some governmental variance.

As well as detailing the ownership aspects and competitive nature of the new satellite system, the administration statement also outlined the areas of government responsibility. As well as taking responsibility for the actual launching of the satellites, the government was to conduct or supervise any foreign negotiations that the system might deem necessary. Research and development was not entirely handed over to the proposed system – the administration reserved the right to "conduct and encourage" the development of new technologies "to give maximum assurance of rapid and continuous scientific and technological progress."¹⁰ The presidential statement implied that while the new satellite system was to be privately owned and operated, it was still tethered to the government. Government would supervise, or even conduct, its negotiations with foreign entities (whether foreign governments or corporations), and it would provide either the funds or organize the research and development – presumably through NASA and the

⁹ John F. Kennedy, "Statement by the President on Communication Satellite Policy," (1961).

¹⁰ Ibid.

Defense Department. While the DOD had a separate system in development, the Cold War was nevertheless a concern to the framers of the administration statement – at the very least, the satellite network could generate the United States much needed space prestige.

On January 11th 1962, Senator Robert Kerr (D-Oklahoma) introduced into the Senate S. 2650, a bill to amend the four-year old National Aeronautics and Space Act. On the 7th of February he, along with Senator Magnusson from Washington, also introduced an alternative proposal – accompanied by a letter from the White House in its support. This administration bill, S. 2814, was to form a separate act, the Communications Satellite Act of 1962. Both of these bills were referred to the Senate Committee on Aeronautical and Space Sciences, of which Kerr was the chairman.

The Kerr and Administration Proposals

The January 1962 bill that Kerr introduced, S. 2650, proposed the formation of a corporation financed entirely by an offering of 5000 shares of stock valued at \$100,000 each. The Corporation would be a profit-making enterprise, but otherwise conformed to the recommendations of a study by the Federal Communications Commission (FCC) completed in August of the previous year. Ownership would be restricted to US communications common carriers with the authorisation of the FCC and a minimum investment of five shares.¹¹ The percentage of ownership by any one carrier was not limited however. The limited range of possible ownership contenders – there were few companies, even in the burgeoning communications sector, with the resources to outlay the half-million dollars – meant that one carrier could easily dominate the corporation, and it would seem likely that AT&T (as the carrier with near-monopoly status in telecommunications) would have had both motivation and resources to buy up a dominating proportion of the new stocks, if not the majority.¹²

¹¹ *A Bill to Amend the National Aeronautics and Space Act of 1958, as Amended, with Respect to Space Communications Facilities, and for Other Purposes*, 87th Cong. 2nd Sess., S.2650.

¹² Whalen, *The Origins of Satellite Communications, 1945-1965.*, 98



Robert Kerr inspects a Mercury capsule with astronaut Gary Cooper at Cape Canaveral

The bill that Kerr and Magnusson introduced less than a month later, S. 2814, came complete with a presidential letter of approval and endorsement. The presidential bill envisioned a slightly different arrangement for the new corporation. It would remain a private, profit-making corporation, but this time its ownership would be structured in a manner to counter the predicted dominance of AT&T.¹³

Kerr, in his opening statement for the committee, made it clear that he did not consider the bills presented to be substantially different, and that while they envisioned a different corporate structure, they shared the same objectives – that is, the establishment of a privately-owned satellite corporation.¹⁴ Both bills would create a private enterprise and grant it a total monopoly over satellite communications, with a mandate to efficiently create a global communication system.¹⁵ The intention was to create a hybrid entity, one which provided for the effective commercial utilisation of space but was conducive to the national interest. Neither bill sought to make the corporation an agency of the US Government, Comsat was to be an explicitly private enterprise.

¹³ Stock would be split into two categories, A stock and B stock, with a fifty-fifty split between the two. Class A stock was to be presented for public ownership. Initial offering would be at \$1000 per share, and no individual or organisation would be permitted to own more than fifteen percent of A stock. Apart from this restriction, there would be no limitation on who could own stock. Class B stock however would be presented exclusively to the international communications carriers (“common” carriers), as approved by the FCC. Only AT&T, Western Union International, ITT Kellogg and RCA were currently eligible. There were no restrictions on stock ownership, and initial Class B stock prices were under the jurisdiction of the Corporation itself. (*A Bill to Provide for the Establishment, Ownership, Operation and Regulation of a Commercial Communications Satellite System, and for Other Purposes*, 87th Cong. 2nd Sess., S.2814.)

¹⁴ Committee on Aeronautical and Space Sciences, *Hearings on S. 2650 and S. 2814*, 87th Cong. 2nd Sess., February 27, 28, March 1, 5, 6 and 7 1962., 2

¹⁵ Delbert Smith, *Communications Via Satellite: A Vision in Retrospect* (Boston: A.W. Sijthoff, 1976), 108

Both bills gave the corporation the authority to conduct research and development in the field of satellite communications, then construct and operate a satellite system “in the public interest,” While the Kerr bill did not ignore the issue of the arrangements with foreign governments and private enterprises that the new corporation might make – it was able to make contracts with any kind of “person, firm, association, municipality, county, State, body politic or government” it deemed necessary – the administration bill treated the diplomatic powers of the corporation more cautiously. The corporation was specifically instructed to perform its objectives in conjunction with foreign governments and “business entities.” S. 2814 effectively gave the corporation a mandate to conduct foreign diplomacy for the establishment of ground stations and communications contracts. This mandate was checked by the administration bill. Any foreign negotiations were to be approved by the Department of State. Once approved, the State Department reserved the right to supervise or even conduct negotiations on behalf of the corporation.

The Kerr bill therefore proposed private ownership exclusive to the common carrier. This corresponded closely with an FCC report completed in October 1961 which advocated such a structure. The FCC Ad Hoc Carrier Committee had accepted submissions from eight different carriers – the four major carriers, and five minor ones¹⁷ - and was concerned primarily with the anti-trust aspects of the corporation. The FCC proposal, while generally analogous to S. 2650, had a few pertinent differences. Firstly, the corporation was to be non-profit. Removing the profitability of the enterprise would have created an eccentric structure – essentially a congressionally mandated private entity for the public good. Entitlements to seats on the board were similar to Kerr’s – each participating carrier would receive two seats, and a further two would be offered to the non-participating carriers – but a further three seats were added, to be appointed at the discretion of the president.¹⁸

¹⁷ The major carriers were AT&T, Western Union International, ITT Kellogg and RCA. Also invited were Hawaiian Telephone Company, Press Wireless Inc., South Puerto Rico Sugar Corp., Tropical Radio Telegraph Company, Radio Corporation of Puerto Rico

¹⁸ "Report of the Ad Hoc Carrier Committee to the Federal Communications Commission," (Ad Hoc Carrier Committee, 1961), 690-93

Support for the FCC report was not unanimous, however. Western Union released a minority statement that outlined its objections to the proposal of the Ad Hoc committee – criticisms that, for the most part, the administration bill took on board. Western Union objected to the restricted ownership, arguing that the FCC proposal would mean that the ‘larger carrier’ (AT&T) would own two-thirds or more of the new corporation. The creation of Comsat under the recommended FCC structure would directly hand AT&T a monopoly over satellite communication. Western Union advocated a broader-based ownership; open to investment by the general public, “all United States carriers, aerospace companies, [and] equipment manufacturers.”¹⁹

Such concerns were not limited to Western Union, even if the other participating carriers did not publicly voice them. When the FCC report was presented to the Senate in October, it met with similar opposition. Senator Russell B Long, a Democrat from Louisiana, argued that the fact that the corporation would manage, not own, the satellite system meant that the FCC proposal was merely representative of the interests of the participating carriers, not the competitive interests of the United States. Like Western Union, he considered the plan too beneficial to AT&T, commenting that “there may be a way of giving [the corporation] directly to AT&T, but short of that, it seems to me you could not have made better recommendations to achieve the same result.”²⁰ Along with the industries excluded from ownership rights and liberal senators such as Long, the Justice department also raised concerns about the FCC position. In front of the Senate Subcommittee of Monopoly (Judiciary Committee), Assistant Attorney General Lee Loevinger stated that such “limited ownership might well give de facto control to a single company, AT&T.” Even if AT&T did not entirely control the corporation, the strict criteria for ownership would limit competition between the carriers in the “furnishing of communication services, in the manufacture and sale of communication equipment, or in limiting competition in either of these areas of non-participating companies.” Loevinger made clear that the Justice Department was not only concerned with the carriers that were

¹⁹ “Minority Statement of the Western Union Telegraph Company, Report of the Ad Hoc Carrier Committee to the Federal Communications Commission” 12 October 1961, reprinted in *ibid.*, Part 2, 726

²⁰ Senator Russell B. Long. Quoted Smith, *Communications Via Satellite: A Vision in Retrospect.*, 98

being excluded from ownership rights – it was unlikely that Tropical Radio Telegraph Company would be interested in Comsat stocks in the near future – but related industries with just as much interest.²¹

Nevertheless, the bill that Kerr introduced in February followed the proposals of the FCC – albeit as a profit-making entity and without governmental representation on its board. No hearings to examine Kerr’s bill were held until the administration had submitted its bill in March, accompanied with a presidential letter of approval. Stating that S. 2814 conformed to his 1961 policy statement the President considered that the new satellite corporation would be “essentially private enterprise in character but of vital importance to both our national and international interests and policies.”²² The statement went on to say that

it must also be realized that such a system is by nature a government-created monopoly-and that we cannot in good conscience limit its ownership to a few existing companies and exclude automatically all other potential investors who have equal rights to own a part of this Federally-developed enterprise.²³

Contrary to the administration’s arguments, such an admission contradicted the July policy statement that envisioned a “structure of ownership or control which will assure maximum possible competition.”²⁴ The “government-chartered monopoly”²⁵ would not assure the competitive character of the corporation, for a monopoly, by its very nature excludes such competition.²⁶

²¹United States Senate Subcommittee on Monopoly of the Select Committee on Small Business, *Hearings on the Role of Competition in Space Communications*, 87th Cong. 1st Sess., August 2 1961., 142.

²² John F. Kennedy, "Letter to the President of the Senate and to the Speaker of the House Transmitting a Communications Satellite Bill," (1962).

²³ Ibid.

²⁴ Kennedy, "Statement by the President on Communication Satellite Policy."

²⁵ Marcus Lindroos, *Financial/Management Options for Large Space Industrialization Projects* (Space Policy Digest, 20/11 2000 [cited May 10 2004]); available from http://www.spacepolicy.org/page_ml0400.html.

²⁶ Delbert Smith has argued that Kerr introduced S. 2650 in order to make the administration bill seem moderate in comparison, ensuring its passage by the more liberal Democrats. (Smith, *Communications Via Satellite: A Vision in Retrospect*. p.104) Jack Posner however argues that the Kerr bill was merely a legislative tactic to force the administration’s hand – by introducing S. 2650, Kennedy was compelled to draft a bill with full White House support. (Jack Posner, "The Implementation of the Communications

The original FCC report recommended that the new corporation have on its board of three directors, “one more than the representation of any single carrier,”²⁷ who would be appointed directly by the president. While this feature was left out of the Kerr and Administration bills, it was reinstituted in the final Act that was passed in late August 1962. The technique of introducing government-appointed directors in a government-chartered monopoly was not unique to the Communications Satellite Act, but, in the United States at least, rare. The intention of this technique was to produce “a very wholesome development in American life, of Government and private enterprise harnessed together to advance the national interest.”²⁸ Realistically however, these governmental appointees helped the legislators meet the inevitable criticism of “monopoly.”²⁹ The directorship provision was frequently used to defend the bill from these charges. Rather than giving the carriers – implicitly AT&T – an unrestricted monopoly over the satellite industry, the three appointed directors were to protect the “broad public interest.”³⁰ These guardians of the “broad public interest”, as ill-defined as that was, prompted rhetorical reclassification of the entire corporation, from private to “semiprivate or semipublic.”³¹

The question that then arises is what broad public interest would the directors have the job of protecting? The debate over the Satellite Corporation can be roughly characterised by the prevalent fear of domination by AT&T. The August filibuster was comprised of detailed and hyperbolic descriptions of all the past and possible future moral and competitive transgressions of the Bell Telephone company. The presidential appointees seem to be tasked with the job of ensuring such dominance did not occur. Writing five years after the act was passed, Herman Schwartz argues that there was an implied further

Satellite Act of 1962" (Ph.D., The American University, 1967), 107) Given that the Kerr and administration bills were not as dissimilar as Smith would have them, Posner's scenario seems more likely.

²⁷ "Report of the Ad Hoc Carrier Committee to the Federal Communications Commission.", 691

²⁸ United States Senate Committee on Foreign Relations, *Hearings on H.R. 11040*, 87th Cong. 2nd Sess., August 3, 6, 7, 8 and 9 1962., 70

²⁹ Schwartz, "Governmentally Appointed Directors in a Private Corporation - the Communications Satellite Act of 1962.", 350

³⁰ Letter from Attorney General Robert F. Kennedy to President John F. Kennedy, Oct.25, 1962. Quoted in *Ibid.*, 353

³¹ Remarks of Senator Howard W. Cannon, Quoted in *ibid.*

task set for the directors – that of ideological and strategic control of the corporation. It would be the appointed directors' task to guide the corporation along the lines the president and the Congress had intended. Under this interpretation, the mere three directors – amongst a possible group of fifteen others, and with no extra voting rights - were to

bring the system into operation as speedily and efficiently as possible; to contribute to world peace and understanding by extending communications service to underdeveloped areas; to keep rates down and to improve service; to maintain and strengthen competition in the communications and equipment procurement industries; and to ensure non-discriminatory access to satellite of all authorized users.³²

The extent of this brief must have been daunting to the three new directors. Schwartz notes that the Act goes into no details about how these supermen were to perform their tasks, and that the Congressional floor and committee records are notably silent over this issue.

In fact, there were two distinctly different conceptions of the government directors' functions whilst on the board. The 'activist' view maintained that the directors would provide the adversarial vote against corporate interest (the assumption being that often such interests would be contrary to national interest.) The directors would effectively be the proxies for government control – complete with the task of contributing to world peace. The second 'passive' view, however envisioned the directors as mere reporters – a method of communication between the president and the corporation, tasked with keeping the government informed.

An analysis of the powers that the Act provides to the three government directors certainly supports the second, passive, interpretation. Three votes against twelve would be insufficient to hold off 'corporate' interests – in a crisis, they could simply be outvoted. As Schwartz points out, the mere fact that they were appointed by the president would be unlikely to hold enough sway to overcome their institutional weakness. the

³² *ibid.*

most likely function of the appointed directors would be to provide a swing vote when issues of a more ambiguous nature were tabled.

Nonetheless, the directors' role was to provide regulation of Comsat from inside the company itself, rather than the external regulation that the FCC would provide. But their positions on the board were woefully inadequate for effective and consistent regulation. Only in rare circumstances would the government appointees be able to successfully advocate the public interest if it were seen that Comsat's actions were antithetical to them.

CHAPTER 2

KEFAUVER AND A DEPARTMENT OF COMMUNICATIONS SATELLITES

At this stage, every legislative proposal which was put forth in either the House of Representatives or the Senate had anticipated a new entity to own and control the satellite network. The major difference between any of them, be it the three Senate or dozen House bills (House rules prohibit multiple sponsorship,) was the extent of public/private ownership and management. As we have seen, the Kerr and Administration bills envisioned a private monopoly, restricting ownership and control. Bills advocating government ownership and operation were introduced and dispatched easily in the lower house – H.R. 9907 and 10629 were both introduced by north-eastern Democrats, Ryan and Kowalski, respectively, and had little effect on the passage of the companion bill to S. 2814.³³ In the Senate however, they were not so easy to defeat.



Estes Kefauver

The day before hearings on the Kerr and Administration bill were to begin, Estes Kefauver, a Tennessee Democrat and twice Vice-Presidential nominee, filed S. 2890 with the Committee of Aeronautical and Space Sciences. Kefauver's argument against the two previous bills had multiple dimensions. Firstly, Kefauver maintained that communications satellites would form a vital part of American national interest. In his opening statement he argued that the proposals were "overlook[ing] the necessary involvement of American foreign policy in the space communications area."³⁴ Kefauver argued that the government had an implicit interest and investment in the system. The government would be a "major user," and had already invested a great deal of money into research. He also noted that in both S. 2814 and S. 2650, the government would have an enormous amount of responsibility anyway. The

³³ Posner, "The Implementation of the Communications Satellite Act of 1962". Table V, 96

³⁴ *Hearings on S. 2650 and S. 2814.*, 345

fact that the corporation was not an official government agency would relieve little of its administrative, technical and regulatory burden on the government.

Kefauver's main point of contention with the bill was the assumed domination of AT&T over the corporation. It is worth quoting at length from his prepared statement, for no summation would do it justice.

The position of the American Telephone & Telegraph Co. in the communications field is well known. To expect the emergence of a business organization in which the A.T. & T. would not exert a dominant force is unrealistic. Such a suggestion is no more appropriate than defining free enterprise like the elephant, who, dancing among the chickens, shouted, "It's every man for himself."³⁵

Not restricting himself to AT&T, Kefauver also put forward the argument that the bills were inconsistent with the intent of anti-trust laws. The \$500,000 minimum investment in the Kerr bill and minor interests provided by the administration bill meant that few small telecommunications companies would participate, leaving the corporation in the hands of the already large carriers. Kefauver stated that "permitting these major competitors to join together will facilitate conduct inconsistent with the antitrust laws."³⁶

The Tennessee senator's criticisms of AT&T were not unfounded – even a cursory glance at the history of the company does not inspire a confidence in its benign intentions. After the expiration of the Bell patent monopoly over crucial telephone technology in 1893-4 (during this period they filed an astonishing 600 patent infringement lawsuits), competition had been introduced to the telecommunications industry. Within a year, 80 new competitors entered the market, targeting areas which the Bell System did not service, and increasingly directly competing with AT&T in areas in which service was weak.³⁷ By the turn of the century, there were over 3000 competitors. Most importantly, the rapid rise of these competitors demonstrated that the efficiency of AT&T's natural

³⁵ Ibid., 351

³⁶ Ibid., 352

³⁷ G.W. Brock, *The Telecommunications Industry: The Dynamics of Market Structure* (Cambridge: Harvard University Press, 1981), 112

monopoly was a myth. A famous study from 1923 concluded that telephone companies” show no signs of economy with increased size, but rather the opposite.”³⁸

In 1907, the new president of AT&T, Theodore Vail, proceeded to a strategy of consolidation – acquiring as many competitors as possible, including the telegraph giant Western Union. In response, nearly every state commenced antitrust lawsuits against the company, leading to AT&T signing what was termed the “Kingsbury Commitment.” Viewed at the time as a victory for the competitive model over a Bell monopoly, the Kingsbury Commitment was in fact a victory for AT&T. Whilst it banned further acquisitions and returned the Bell stake in Western Union, it returned almost complete control of the telephone network to AT&T.³⁹

Yet competition still remained in the industry. In the next twenty years two things happened to change that. Firstly, in 1918, the federal government nationalised the entire telegraph and telecommunications network for national security reasons. Rates were increased at the behest of the government, and eighty-four percent of the increase went directly to AT&T. Rate regulation increased the difficulty of new entry into the market, “substituting a limited but guaranteed return on capital and management freedom for the uncertainty of the marketplace.”⁴⁰ The second major change was the 1934 Communications Act which created the Federal Communications Commission. With the aim of ensuring that every citizen had cheap access to a telephone service, the FCC protected the industry from “wasteful duplication” and “unneeded competition.” AT&T effectively became a protectorate of the wide-ranging powers of the federal Government. By the Second World War, the monopoly had been consolidated, as AT&T and its regulators recognized their own personal interest in protectionist policies.⁴¹ Even more recently, AT&T and its equipment manufacturer, Western Electric, had been charged with monopolizing the manufacture and sale of telephones, telephone apparatus, and

³⁸ J. Maurice Clark, quoted in Adam D. Thierer, “Unnatural Monopoly: Critical Moments in the Development of the Bell System Monopoly,” *The Cato Journal* 14, no. 2 (1994).

³⁹ Milton Mueller, *Universal Service : Competition, Interconnection, and Monopoly in the Making of the American Telephone System* (Cambridge, Mass.: MIT Press, 1997)., 129-35

⁴⁰ Brock, *The Telecommunications Industry: The Dynamics of Market Structure.*, 159

⁴¹ Thierer, “Unnatural Monopoly: Critical Moments in the Development of the Bell System Monopoly.”

equipment. The lawsuit had been settled in 1956, but its conclusion had been widely regarded as inadequate.⁴²

AT&T was significantly interested in Comsat. In its submission to the FCC Ad Hoc Committee, the company had briefly but firmly made it clear that it had a significant budget to invest in Comsat.⁴³ Under Kerr's original S. 2650, it was self-evident that the communication giant would buy up the vast majority of stock. The prohibitively expensive price of stock ownership - \$100,000 each, and a minimum of five - meant that smaller companies would be unable or reluctant to participate. The administration bill lessened the chances for this domination. By opening purchase up to the public, AT&T would be competing against a wider range of investors. While it only competed against the three other international common carriers for Class B stock, Class A stock - the class of stock that also gave voting rights - was opening to any entity or individual. It is important to note however, that this distinction did not disqualify the carriers from purchasing both classes of stock. Neither Class A nor B stocks entailed any limitation on the extent of ownership; there was no maximum that any entity could own. AT&T, if it had the determination and capital, could have purchased the entirety of the corporation.

Kefauver characterised AT&T's potential domination as the "biggest giveaway we have had in the history of the nation."⁴⁴ Citing the enormous governmental prior investment in research and development of satellite communications, "many, many billions of dollars," he argued that the public interest would not be served by the new corporation. In front of the Senate Commerce Committee in April, he dismissed the opportunities for public investment. "We know that there won't be one-hundredth of 1 percent of the taxpayers who will be buying stock."⁴⁵ The minimal public investment in the corporation would provide no bulwark against the domination of Class A stock by the common carriers, and specifically AT&T.

⁴² Kirkpatrick, "Antitrust in Orbit.", 95

⁴³ "Report of the Ad Hoc Carrier Committee to the Federal Communications Commission.", 34

⁴⁴ United States Senate Committee on Commerce, *Hearings on S. 2814 and S. 2814, Amendment*, 87th Cong. 2nd Sess., April 10, 11, 12, 13, 16, 24 and 26 1962., 273

⁴⁵ *Ibid.*, 273

Russell B. Long, a Louisiana Democrat (who was also the chair of the Select Committee on Small Business, which had in 1961 looked at satellite communications) joined Kefauver against S. 2814 and S. 2650 and in favour of the Kefauver bill, S. 2890. Long's objections concerned the ability of the FCC to accurately assess then effectively regulate the Comsat. In front of the Commerce Committee – just before Kefauver took the stand – he argued that the “bills... depend very heavily on the FCC to regulate in the public interest... in this respect, these bills are based on phantasy and illusion.”⁴⁶ Long's objections were based on historical argument. He highlighted various statements that had previously been made by various FCC directors and representatives in the numerous hearings on Comsat, to emphasise how unprepared the Commission was to efficiently regulate. AT&T was also the focus of his argument. The Bell monopoly had degraded the quality of telecommunications service – equipment was restricted to AT&T approved, and that which was approved was limited, the customer had no warranty protection, and the pricing structure was ambiguous and “disgraceful.” Long used the following example of a telephone cord to illustrate. Noting that an extension cord costs 39 cents to purchase,

An extension cord of similar quality for a telephone appliance must be leased from AT&T for \$4.20 per year, plus 42 cents tax. Over a 10 year period, the consumer would be paying \$42 for the use of this extension cord. This is over 100 times what the consumer would have had to pay if he were permitted to buy rather than lease.⁴⁷

Senator Long's statement made it clear that, based on their prior record, the FCC would be unable to sufficiently regulate the industry and provide benefit to the consumer. “To expect the FCC to protect our interests in this field constitutes either extreme naiveté or self-delusion.”

The Kefauver bill specified an entirely government-owned system, financed through the sale of bonds up to \$500,000,000. This was the same amount as specified by the Kerr bill. (The administration bill had no specified cap.) As it was to be government owned, the directorships were entirely appointed by the president. Four were to be existent public

⁴⁶ Ibid., 263

⁴⁷ Ibid., 265

servants – an Assistant Secretary of State, the NASA administrator, a commissioner of the FCC and another non-specified official. The balance, an additional five, would be appointed by the president “solely based on... distinguished achievement in science, engineering, technology, education, administration, or public affairs,”⁴⁸ and with Congressional approval.

By making Comsat an agency with directors from the FCC and State Department, the Kefauver bill was designed to combat the two major issues that would come bundled with the corporation. The FCC commissioner on the board would narrow the distance between Comsat and its regulators. One of the arguments that Long introduced was the inability of the FCC to gather enough information to properly understand, let alone adequately regulate, the industry. By integrating a commissioner into the agency, assumedly the FCC would be in a much better position to gather such information. Even the Commission’s regulatory powers would be enhanced – a staunch member of the FCC would be able to enforce regulations upon the company from the inside, rather than by legal proxy.

The Assistant Secretary of State would also be able to provide a permanent representative of the national interest in regards to foreign policy. Negotiations in the international arena would form a central part of the operation of Comsat. A dual loyalty similar to the FCC director would provide a more fluid exchange of ideas between the State Department and the satellite agency. Although it was not raised by the supporters of S. 2650, another effect that this assimilation of a State official into the Comsat agency would have was the ability for the agency to act as a representative of broader American foreign policy. The use of preferential rates would enable the agency to conduct diplomacy, rewarding nations which were supportive of the United States, and possibly punishing those which were not. Under a private, if monopolistic corporation (Kerr and Administration bills), such control of the diplomatic functions by the government would not be possible. The Department of State was authorised to negotiate on *behalf* of the Corporation but not to set its terms. State would be unable to offer terms or rates which the Comsat had not

⁴⁸ *A Bill to Establish a Communications Satellite Agency to Provide for the Development of a Global Communications System, and for Other Purposes.*, 87th Cong. 2nd Sess., S. 2650.

authorised. However in the Kefauver model of an Agency, the government would offer whatever it felt necessary – not in terms of a business model and profitability, but how those offers affected the entirety of national foreign policy. A Communications Satellite Agency, as formulated by the liberal Democrats, would be an added tool for Cold War foreign policy.

Kefauver's exchange with the Republican Homer Capehart – a Senator from Indiana – in front of the Committee on Aeronautical and Space Sciences, illustrates the inconsistent justification for S. 2890. It had been the stated aim of the Kefauver bill to avoid a possible AT&T monopoly. Capehart first asked Kefauver whether he was in favour of government ownership of public utilities. After a response in the negative, he then asked whether the Tennessee senator was in favour of monopolies. Kefauver answered that he was “against monopolies”. Capehart then quizzed the senator,

Senator CAPEHART. Why then do you want to create a monopoly, here, on the part of the United States?... I thought you were against monopolies?

Senator KEFAUVER. I think until we see what we have, and what it is worth, and what it is going to do, this should be a Government operation. If you want to call it a monopoly, all right. I am not in favour of taking any chance on placing this in the hands of a private monopoly.⁴⁹

Kefauver's objection to a private monopoly was not an opposition based on a core dislike of enterprise monopolies. Rather than putting forward an economic argument against Comsat Corporation – the natural inefficiency of a monopoly - he was more concerned with the ownership. He and Senator Long both argued that the bills would be a great ‘giveaway’ to private industry. This formed the core of his objections – not an objection to the monopoly, but an objection to the ‘private.’

The objections raised in the 1962 debate against the private model were not economic arguments, but instead motivated by fears of a private ‘giveaway’ – worried that the government did not know what it was giving away, Kefauver wanted to see what the communications satellite system “is worth”. His solution was therefore the creation of a

⁴⁹ *Hearings on S. 2650 and S. 2814.*, 375

new department,, a government means to commercial ends. In any case, the bill that took the form of the Communications Satellite Act of 1962 was S. 2814, the administration bill – albeit with minor amendments. As has been pointed out, Kerr was not ideologically attached to his bill, and, in the debate between the Kefauver and administration models, S. 2650 was discarded.⁵⁰

But many of the liberal Democrats' criticisms stand up to the scrutiny of hindsight, even if their solutions were unsound. The ownership and management structure of the Comsat corporation, as envisioned by the administration bill, would permit AT&T to dominate – regardless of the limitations on directorship and stock ownership. During the August filibuster, it was made known that the AT&T owned exactly 29 percent of the stock of Cincinnati and Suburban Bell Telephone Company. This amount was the maximum ownership allowed by any individual carrier in the final bill – and AT&T considered Cincinnati and Suburban a subsidiary.⁵¹

In 1962, Congress came up with two distinct approaches to communications satellites. The first was to create a satellite company and grant it a complete monopoly over the industry. This approach was a moderate one – it left the technology under the control of the private sector – but it effectively handed it over to AT&T, a company which already had a monopoly on American telecommunications. The second, radical approach was Kefauver's – to take the industry out of the private sector and place it under government control.

It is worth looking at a question of Russell Long's, "If the communication carriers want to set up a satellite communication system jointly, why don't they just do it? Why is legislation needed?"⁵² The Louisiana senator believed that the answer lay within anti-trust laws; that the carriers needed a cover of legislative authority to circumvent the current laws. His question was a valid one – why was legislation needed at this period in

⁵⁰ Posner, "The Implementation of the Communications Satellite Act of 1962".

⁵¹ Michael Kinsley, *Outer Space and Inner Sanctums: Government, Business and Satellite Communication* (New York & London: John Wiley & Sons, 1976), 23

⁵² *Hearings on S. 2814 and S. 2814, Amendment.*, 263

time? – and his argument was based on a fear of private monopolies. We must first analyse the question, and to do so, we must look at the state of the communications and space industry in the late 1950s and early 60s.

CHAPTER 3

THE INDUSTRY

In October 1961, as the administration and the various congressmen were preparing their pieces of legislation, the *New York Times* released a special space section in its Sunday edition. It included enthusiastic articles on the legal aspects of space exploration, new technologies, military uses, rocket testings, satellite navigation, and weather prediction capabilities. However, what strikes the modern reader is not the enthusiasm shown in these articles – and there is no denying their passion – but the print advertisements which frame them. Nothing illustrates the zeitgeist of the early space age more than these ads. Many companies are familiar. Douglas, IBM, McDonnell, with advertisements like “Eleven ways to outwit the laws of gravity,” and “Why ‘information technology’ will become America’s largest industry.” AT&T placed an ad dedicated to their satellite program – “Microwave ‘Towers’ in the Sky.”⁵³ This ad, like the rest in the section, rarely displayed any new products, but the image of technology. They were designed to get a sense of progress, of the cutting-edge, of companies that were pushing technology further than it ever had been. Sometimes the purposes of these ads are hard to grasp. Was any reader of the *Sunday New York Times* “Space Section” really in the market for “Missile & Missile Subsystems,” “Ordnance Systems” or “Electronic Warfare Systems” from Maxson Electronics Corporation?⁵⁴ But nevertheless, companies like Maxson wanted to show their participation in the new space age.

Obviously, Maxson’s customer was the US government, and what it was developing would have had appeal only for the military. However, there was a broader interest and wider clientele for many of the ads. Companies wanted to profit in space. The Columbian Financial Company wanted readers to invest in “Atomics, Physics and the Other Sciences.” RCA wanted to use a reputation garnered by its work on the Tiros weather satellite to sell its consumer electronics. But it was Bell’s advertisement that highlighted

⁵³ “Special Space Section,” *New York Times*, Sunday, October 8 1961., 11

⁵⁴ *Ibid.*, 17

the direct advantages that its space research would have for the consumer. “Such systems mean that, in time, you’ll be able to dial telephone calls directly almost anywhere!”⁵⁵

AT&T

Arthur C. Clarke is commonly cited as the father of the communications satellite for his 1945 article “Extra-Terrestrial Relays,”⁵⁶ and his 1951 book *The Exploration of Space*.⁵⁷ It is more accurate to give that title to John R. Pierce of Bell Laboratories. Under his leadership (he was the research director in electronics and communications for nearly thirty years,⁵⁸) AT&T was laying Trans-Atlantic coaxial cables to provide US-European telecommunications. TAT-1 was laid in 1956, and TAT-2, a direct connection between England and the United States, was laid in 1959, both at the cost of roughly \$50 million.⁵⁹ In 1955, independently of Clarke, Pierce published an article, “Orbital Radio Relays” which outlined in greater depth the differences between active and passive, and geosynchronous and low-earth orbit satellites. Two years later, after seeing a NASA balloon satellite for atmospheric studies, Pierce proposed project ECHO.⁶⁰

Project ECHO was a joint effort between NASA and Bell Laboratories to launch passive reflecting communications satellites. ECHO shared the same flaws as any passive relay device. The signal strength of the enormous 100 foot metallised balloon was too weak to be used in any commercial capacity. It was nevertheless used for a number of important technical experiments and proofs of concept. In August 1960 NASA and Bell project managers successfully conducted a telephone conversation via ECHO “exchanging pleasantries and carrying on small talk.”⁶¹ In 1962 the Massachusetts Institute of Technology used the enormous balloon to relay a television transmission.

⁵⁵ Ibid., 11

⁵⁶ Arthur C. Clarke, "Extra-Terrestrial Relays," *Wireless World* (1945).

⁵⁷ Arthur Charles Clarke, *The Exploration of Space*, [1st ed. (New York,: Harper, 1951).

⁵⁸ John R. Pierce 1910-2002 (IEEE History Center, 2002 [cited June 18 2004]); available from http://www.ieee.org/organizations/history_center/legacies/piercej.html.

⁵⁹ Whalen, *The Origins of Satellite Communications, 1945-1965.*, 33-4

⁶⁰ Cuniffe, "Misreading History: Government Intervention in the Development of Commercial Communications Satellites", 12

⁶¹ Bell News Release 15 Aug. 1960. Quoted in Donald C. Elder, "Something of Value: Echo and the Beginnings of Satellite Communications," in *Beyond the Ionosphere: The Development of Satellite*

The Telstar satellite was the first program to truly show the commercial capabilities of satellite communication. Before ECHO and COURIER (the Department of Defence spin-stabilised satellite) had even been launched, Bell Labs had independently initiated private research into reliable – and efficient – communications satellites. Although they kept NASA informed of their progress, Telstar was developed without any NASA or government funding.⁶² (The NASA monopoly on space launching, enabled the agency to claim Telstar as a government-supported operation.) Any money which was spent on the launching of the satellite, and some minor tracking and telemetry assistance, by NASA was reimbursed – a negligible \$6 million out of nearly \$500 drawn out of AT&T corporate funds.⁶³



AT&T's TELSTAR 1, launched July 10, 1962

Telstar was developed intentionally to minimise government involvement. A strategic decision was made early on. The satellite would be not geosynchronous, but low-earth orbiting (actually medium altitude,) even though it was believed that the former type of satellite would prove to be the most effective in the long run. There were two reasons for this decision. Geosynchronous satellites had to be higher, and the existing technology meant that this would result in a time delay of quarter of a second. Satellites would have to also be launched extremely accurately and kept in place by a complex system of boosters. But the more important reason was the challenges that AT&T had faced in negotiations with NASA. Geosynchronous satellites required launching parents which

Communications, ed. Andrew J. Butrica (Washington D.C.: National Aeronautics and Space Administration, 1997).

⁶² Cuniffe, "Misreading History: Government Intervention in the Development of Commercial Communications Satellites", 14

⁶³ Daniel R. Glover, *Nasa's Experimental Communications Satellites* (NASA Historical Office, 2003 [cited June 19 2004]); available from <http://roland.lerc.nasa.gov/~dglover/sat/satcom2.html>.

had not yet been completely developed. The trouble that the company had had gaining government permission to purchase the *existing* boosters was deemed prohibitive to encouraging new, joint research.⁶⁴

It is easy to list the frustrations that AT&T faced while developing Telstar. In late 1960, NASA became worried that the carrier's progress might eclipse the agency's. In a October meeting with AT&T representatives, the NASA chief, Thomas Glennan, raised concerns that Bell Labs' satellite advancement did not take into account launch scheduling and vehicle availabilities. However, Glennan's principal worry was regarding publicity. AT&T's promotion of its technology and progress created difficulties for NASA. Glennan expressed frustrations that the phone company was overshadowing governmental satellite developments.⁶⁵ To return to the *New York Times*, Glennan was concerned that NASA was merely one ad in a selection of many, many American corporations advertising their involvement in space. NASA wanted to be the focus of the American space efforts, to restrict the inevitable prestige of space development to itself.

NASA had not expressed great interest in communications satellites until mid-1960. Glennan's diaries contain the first reference to the technology in July, well after AT&T and Hughes were marketing their systems. The space agency's responsiveness to business cycles left a lot to be desired. In desperation, AT&T made preliminary investigations as to private launching arrangements.⁶⁶ It proved impractical, for logistic reasons, to have the satellite launched by any branch of the armed forces. Pierce records that the mood amongst the Bell Labs was such that he even asked a visiting Russian scientist whether the USSR would launch the satellite for them.⁶⁷

Another serious obstacle to AT&T was put up by the FCC. AT&T had filed requests to allocate radio frequencies for both research and commercial purposes. Yet in September

⁶⁴ Cuniffe, "Misreading History: Government Intervention in the Development of Commercial Communications Satellites", 16

⁶⁵ Smith, *Communications Via Satellite: A Vision in Retrospect.*, 71

⁶⁶ Whalen, *The Origins of Satellite Communications, 1945-1965.*, 91

⁶⁷ The Russian responded that he "could not even buy a skindiving outfit in [the US] and take it back to the Soviet Union." John Robinson Pierce, *The Beginnings of Satellite Communications, History of Technology Monographs* (San Francisco,: San Francisco Press, 1968), 27

1960, the FCC denied these requests because of “present uncertainties.” AT&T expressed these frustrations in a stockholder’s report. The monopoly the FCC held over frequency allocations, and its inflexibility to communications needs, meant that “one of the most serious problems” confronting the satellite network was “beyond our control.”⁶⁸ Even the International Telecommunications Union did not allocate any frequencies for space communications, only a few narrow ones for space research. By Kennedy’s inauguration day, the FCC had allocated frequencies with a similar stipulation – a few for experimental links between Europe and the United States, but none for commercial purposes.

The *New York Times*, in July 1960 ran a story on the front page that looked at AT&T’s development of Telstar. NASA officials were stunned by the pace of Bell’s progress. The pace of private satellite R&D had “outstrip[ed] Government plans, organization and concepts.” The agency, and the government, had been “plunged, without preparation, into such broad public policy questions as subsidies, licensing, regulation, private vs. public development of space activities.”⁶⁹ AT&T’s experience in the development of Telstar certainly supports this. Telstar was privately funded, to the tune of nearly \$500 million. AT&T eschewed government involvement, except where it was legally required. Unable to launch the satellite themselves, they reimbursed NASA for all expenses. Even then, they were obstructed by what can only be described as a defensive NASA. The most egregious obstruction was the FCC. As is so often the case in the history of technological development, the governmental industry regulators were unsure of the significance of and how to regulate satellite communications. Similarly to the experiences of the Union Pacific board directors, they did not sufficiently understand the industry to properly carry out their function.

Hughes Aircraft Company

⁶⁸ Cuniffe, “Misreading History: Government Intervention in the Development of Commercial Communications Satellites”, 18

⁶⁹ *New York Times*, July 25 1960., 1

AT&T was not the only company independently developing satellite technology. For the purposes of our investigation, it is the development of Syncom by the Hughes Aircraft Company (HAC) that is the more interesting. Syncom was the world's first geosynchronous communications satellite, and it was developed not by a common carrier, but by an aerospace company. Hughes Aircraft had previously built mainly civilian and military aircraft, and even the AIM-4F, the first American air-to-air guided missile. HAC also pioneered the development of American helicopters – but lost a great deal of money doing so.⁷⁰ It had neither an internal structure nor the experience to build communications systems. Even so, to look at the concurrent developments of AT&T and Hughes aircraft is to look at what the industry might have been.

In the first half of 1959, a small number of engineers worked on designs for an exceptionally efficient, and lightweight, communications satellite. In October, after a presentation to the Hughes management, the Hughes Task Force on Satellite Communications was formed. The core challenge that it faced was not technological, but economic. As Hughes was not a common carrier, it had to get an agreement with a telephone company to utilise the technology. S.G. Lutz, one of the members of the task force, noted that this would not be difficult: with a 200:1 cost advantage over cables, the Hughes system would not be left unused.

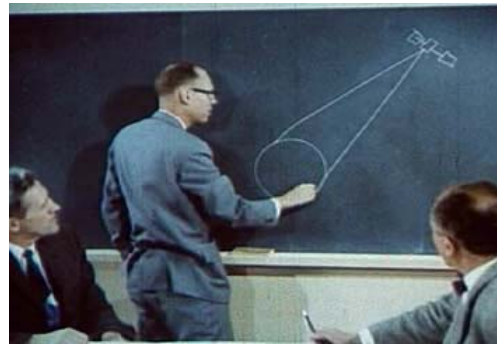
Another challenge was the already existent AT&T monopoly over most telecommunications. The multi-use capabilities of a geosynchronous satellite were considered an advantage to breaking this monopoly. The satellite would not only be able to carry voice traffic, but could also be used to boost corporate prestige or relay television signals. Another possibility the task force floated was that an early satellite launch could claim some sort of territorial rights over a patch of sky. With a geosynchronous satellite, positioned as it was over a specific latitude and longitude, Hughes might be able to claim some form of occupancy over satellite communication in that region.⁷¹

⁷⁰ Judy Rumerman, *The Hughes Companies* (U.S. Centennial of Flight Commission, 2003 [cited June 23 2004]); available from <http://www.centennialofflight.gov/essay/Aerospace/Hughes/Aero44.htm>.

⁷¹ Whalen, *The Origins of Satellite Communications, 1945-1965.*, 51-9

By early 1960, Hughes was spending more than \$100,000 a month on its satellite, Syncom. Its strategy was slightly different to AT&T. With fewer resources to dedicate to communications, the aircraft company tried to get NASA to foot the bill for launching, as a ‘demonstration’ of its capabilities. Hughes would then market the orbiting system commercially. Although, as historian David Whelan notes, Hughes was perfectly willing to spend as much money as necessary on the system, regardless of whether NASA was involved. Hughes was confident of the commercial viability of satellite communications, and was willing to invest heavily in it.⁷²

A 1960 short film *The Big Bounce*,⁷³ was produced at the behest of AT&T, and tells the story of the ECHO program. Produced for educational purposes, and with all the technical flourishes of its era, it offers this remarkable claim whilst talking about geosynchronous satellites - “If it became possible to put three such satellites in orbit,



John R. Pierce in the 1960 promotional film *The Big Bounce*

together they could cover the earth.” With appropriate seriousness, the narrator explains, “But this high orbit... system is at best far in the future.” This was a blatant falsehood. In late 1960 – as *The Big Bounce* was being shown to school children – AT&T’s competitor, HAC had a system in development which envisioned *five* such satellites. It may be too much to ask Bell Labs to have acknowledged the contributions of their financial competitor. Regardless, even in a film meant to portray the state of technological development in an awe-inspiring manner, the rate of technological development was being underestimated. Without even a specific business plan, Hughes was eclipsing AT&T’s satellite technology.

It must be remembered that Hughes was not merely competing for satellite contracts in the manner that it would compete for weapons systems contracts. Despite the nearly total

⁷² Ibid., 63

⁷³ Fairbanks (Jerry) Productions, *The Big Bounce* (1960).

monopoly that AT&T held on American telecommunications, no experience in the communications field outside specific electronics and a lesser investment base, Hughes aircraft still had plans to build a satellite communications network. This network would have been non-governmental, and totally independent of AT&T. By the end of 1960, both companies, Hughes and AT&T, had satellite systems which were very close to operational, and both were marketing them. The Army rejected an unsolicited offer by Hughes for a Syncom satellite network, instead opting to develop its own, Advent – a program which was an undeniable failure, due to bureaucratic mismanagement and infighting.⁷⁴



Hughes' Syncom, the world's first geo-synchronous satellite

Clearly, industry at the time of the 1962 Communications Satellite Act was being continuously underestimated. The government and its regulatory body, the FCC, were far behind what was being done privately. Non-governmental corporations were outstripping what even NASA was able to accomplish in the field. One need only look at the dismal Advent program in comparison to Hughes' Syncom and AT&T's Telstar to see the advantages that the market brought to communications satellite development. Advent was massively overweight, nearly unlaunchable. In 1962 it was embarrassingly cancelled by

Defence Secretary Robert McNamara. Syncom was extraordinarily light, quickly made by a small team of engineers, under budget. In fact, after having rejected Syncom in 1960, the Army eventually purchased it to replace its failed Advent program.

We then have, from mid 1960 until the signing of the Communications Satellite Act, two competing potential satellite communications systems. AT&T, which had the enormous advantage of an existing monopoly on telecommunications, and HAC, which had a

⁷⁴ David N. Spires and Rick W. Sturdevant, "From Advent to Milstar: The U.S. Air Force and the Challenges of Military Satellite Communications," in *Beyond the Ionosphere: The Development of Satellite Communications*, ed. Andrew J. Butrica (Washington D.C.: National Aeronautics and Space Administration, 1997), 67

technologically superior system, and was negotiating with General Telephone to set up a network to break AT&T's monopoly. Hughes was disadvantaged in the formation of the government legislation. It was not a common carrier, and so was, ineligible for much of the primary stock ownership. Under S. 2814, the administration bill, it would have been able to purchase as much Class A stock as it wanted, but ineligible for any Class B. Under S. 2650, Kerr's bill, it would have been ineligible to even participate.

It is clear in hindsight that the creation of the Communications Satellite Corporation was unnecessary, as far as the industry was concerned. Both Hughes Aircraft and AT&T were well advanced in the preparation of an efficient network. If it had just been AT&T with a satellite program, the legislation might have been justified on its own terms, but with the geosynchronous, lightweight and efficient HAC system, Comsat would merely stifle competition rather than prevent a monopoly. It was unlikely that a monopoly would eventuate when Hughes was in the running.

Robert Fogel titled his 1960 book on the Union Pacific Railroad, *A Case in Premature Enterprise*,⁷⁵ referring to the fact that the railroad lacked an inherent appeal for investors. Communications satellite technology did not lack such an appeal. The rapid investments of AT&T and HAC attest to this. What is strange is that the Comsat legislation seemed to assume that it did lack this appeal. The Congress, and the Kennedy Administration, in designing a specific corporation to ensure that the United States would have a communications satellite network, seems not to have noticed to any great extent that there were *already* two being developed – privately financed, and (with the unavoidable exception of the launches) completely independent of government involvement. The intention of Comsat was to encourage a technology, a technology that needed no encouragement.

⁷⁵ Robert William Fogel, *The Union Pacific Railroad; a Case in Premature Enterprise* (Baltimore,: Johns Hopkins Press, 1960).

CHAPTER 4

POLITICS & IDEOLOGY

There was a peculiar feature of the Comsat debate. A Democratic president, with a Democratic congress, was attacked by the left of his own party. Debate was confined to the left, the dispute characterised by an internal party fight. Where were the conservatives? ? The legislation was to create a government-mandated monopoly over space telecommunications. Regardless of how diversely held the individually owned shares in the corporation would be, the company itself would have a monopoly on commercial satellites. As the historical record showed, the FCC was an ineffective regulator of an industry that it had had decades to understand – the chances that it could successfully regulate a more complex, space-age system were miniscule. We must look then at why the corporation was not criticised in this manner at the time. Where were the senators with a free market ideology to criticise the administration’s legislative agenda?

Homer Capehart

It has already been mentioned that, in the Space Committee, Homer Capehart questioned the consistency of Kefauver’s attitudes towards monopolistic enterprises, government or private. We should look at Capehart as a case to decipher attitudes towards enterprises such as Comsat from the Congressional right-wing. By his third term – Capehart was re-elected in 1956 – the Indiana Senator was firmly aligned behind big business interests and the Eisenhower presidency. Decrying government intervention into labour disputes, he once argued that “once we all work for the Government we will find that the worst private industry boss is better than the best governmental boss.”⁷⁶ Capehart opposed the 1947 Truman price-control plan to fight inflation on similar grounds, arguing that the government could not effectively manage the economy over anything other than the short term. Capehart’s advocacy of a carefully-balanced budget placed him at odds with the prevalent economic theory of the Kennedy administration, at least in ideological terms.

⁷⁶ William B. Pickett, *Homer E. Capehart : A Senator's Life, 1897-1979* (Indianapolis: Indiana Historical Society, 1990), 98

One of the foundations of his popularity in Indiana was his defence of large business against government anti-monopoly regulation, and, indicatively, this was also one of the attributes that the Congressional Democrats sought to use against him.⁷⁷

One of the most publicised pro-big business activities of Capehart's congressional career was after the 1948 *Cement* case before the Supreme Court.⁷⁸ This case made illegal the conspiratorial use of a multiple basing point system of delivered prices amongst cement companies.⁷⁹ Prior to the ruling, industry-initiated price controls were fixed to a set formula which left customers with no cost basis for choosing between competitors. The Federal Trade Commission argued that, while the uniformity of such prices could theoretically be understood as consistent with competitive policies, the object of such controls in this case was to build and consolidate a monopolistic enterprise.⁸⁰ Capehart strongly supported the existing cement industry, which maintained that the basing-point system was the only realistic method of maintaining competitive practises. Aware that this Supreme Court ruling would have ramifications outside the cement sector (the steel industry was particularly affected by *Cement*), he chaired a subcommittee to study the alteration of existing legislation – with an eye on re-legalising practise of the basing point system.⁸¹ Like the deliberations over Comsat, the *Cement* case dealt with monopolies of a less clear-cut nature. In both cases, the intention was to ensure that the industries where competitive in nature, but the solutions that were presented would merely herald different forms of monopoly.

While we must be wary of generalisations, Capehart was in many ways a typical conservative congressional Republican. He was a defender of corporate interests - Democratic Congressman Wright Patman stated that “selfish, greedy, big interests... had exerted mesmeric powers on Senator Capehart”⁸² – the ambiguities of the *Cement* case

⁷⁷ Ibid., 98-102

⁷⁸ *Federal Trade Commission vs. Cement Institute*, 333 U.S. 683 (1948).

⁷⁹ Earl Latham, "The Politics of Basing Point Legislation," *Law and Contemporary Problems* 15, no. 2 (1950).

⁸⁰ Earl Latham, "Giantism and Basing-Points: A Political Analysis," *The Yale Law Journal* 58, no. 3 (1949).

⁸¹ Pickett, *Homer E. Capehart : A Senator's Life, 1897-1979.*, 101

⁸² Ibid., 101

showed that the Indiana senator had uncertain views on corporate monopolies. If we take it as read that Capehart was a fairly representative Republican, then how did he view the various satellite bills?

A member of the Aeronautical and Space Sciences Committee, Capehart aggressively attacked the Kefauver bill, S. 2890, as we have seen above. By using the liberal Democrat's charge that the two private ownership bills would create a monopoly, he argued that the government-owned variant would be a larger, more inefficient monopoly. Eventually he forced Kefauver to admit the validity of his argument. But, true to form, Capehart was not solidly behind the alternate proposals. Capehart revealed during Kefauver's testimony that, while he had no substantial disagreements with the bills, he would prefer the model that the FCC's Ad Hoc Carrier Report recommended -



Homer E. Capehart

broadly analogous to S. 2650, Kerr's submission, but instead non-profit.⁸³ Such a non-profit corporate body would, in Capehart's opinion, not necessarily stop a monopoly but alleviate its adverse effects. However, as Kefauver rightly pointed out at the time, there were no bills to support such an enterprise in front of the committees, and – outside this rhetorical argument in committee - there is no reason to believe that Capehart or any other congressional Republicans intended to introduce such a bill.

Can we draw any conclusions from the moderate congressional Republican Party's support of the bill to the GOP of that time, or the conservative movement as a whole? The Republican Party was strongly against the initial socialisation of public utilities as the Capehart-Kefauver exchange clearly shows (One of the sticking points in the discussion was whether Kefauver was in favour of publicly-owned utilities or not.) But their opposition towards socialisation did not swing to the other extreme – Capehart was not in total favour of leaving the satellites to private industry. From his involvement in

⁸³ *Hearings on S. 2650 and S. 2814.*, 376

the Cement case, it can be shown that the senator was not averse to the monopoly industries. His support of the *Cement* industry against FTC regulation is indicative – while, during the hearings, he did not actively defend AT&T's interests in Comsat, it is not unlikely that he would have done so.

It must be noted that the Comsat bill was most likely of minor importance to Capehart. His participation in the Space committee was not significant, at least as far as satellite issues. When he does participate, it is usually either to clarify technological issues or to attack Kefauver.⁸⁴

The breakdown of consensus politics in this period has been rigorously documented,⁸⁵ and it is not the intention of this study to engage substantially in its debates. However, it is important to note that while Capehart was no ideologue as the rising conservative movement tended to be, Goldwater conservatives would not be unhappy with the Indiana senator's congressional record. As far as his attitudes towards business were concerned, Capehart was a conservative Republican – even though, as he defensively pointed out in his final and ultimately unsuccessful 1962 campaign, he had voted for increases to the minimum wage multiple times, and had supported many similar Democratic issues during his career.⁸⁶

The Conservative Media

Outside the branches of government, there was not significant conservative interest in the satellite proposals, or even in telecommunications. AT&T, when it was mentioned, was

⁸⁴ Previously, Capehart's most significant entry into space affairs was four years earlier, when, for national security reasons, he threatened to clear the Senate galleries after Kennedy attacked Eisenhower over the missile gap. Roy F. Houchin, *Why the Dyna-Soar X-20 Program Was Cancelled* ([cited 16 July 2004]); available from [http://www.ninfinger.org/~sven/models/vault/Quest%20Magazine%20%20X-20%20article/Why%20X20%20Cancelled%20\(Word\).doc](http://www.ninfinger.org/~sven/models/vault/Quest%20Magazine%20%20X-20%20article/Why%20X20%20Cancelled%20(Word).doc).

⁸⁵ In particular George H. Nash, *The Conservative Intellectual Movement in America, since 1945*, 1st softcover ed. (Wilmington, Del: Intercollegiate Studies Institute, 1998). Also Rick Perlstein, *Before the Storm : Barry Goldwater and the Unmaking of the American Consensus*, 1st ed. (New York: Hill and Wang, 2001). and Mary C. Brennan, *Turning Right in the Sixties : The Conservative Capture of the Gop* (Chapel Hill: University of North Carolina Press, 1995).

⁸⁶ Pickett, *Homer E. Capehart : A Senator's Life, 1897-1979.*, 170

used merely as a counterpoint to socialised entities. An October 1962 article in conservative magazine *The Freeman* (merely weeks after Kefauver's damning filibuster) was titled "Could AT&T run the Post Office?" It was argued that "despite its monopoly status," AT&T "operates efficiently, with a persistent attempt to cut costs and improve its own organization."⁸⁷ In the face of Long's discussion of the price of a telephone cord, such sentiments from *The Freeman* betray either ignorance or, more likely, a gross rhetorical simplification of the state of US telecommunications.

The National Review, during the floor debate, did comment briefly on the bills in question. But the article, written by L. Brent Bozell, is more of a smug indictment of Kefauver than an attempt to deal with the actual issues involved. *The National Review* in 1962 was actively scornful of the Southern senator. (A February article on Kefauver's investigation of the drug industry was aggressively titled "Is Kefauver a Drug Addict?"⁸⁸) When the magazine does tackle Comsat, it is only sketchily. Bozell's article, "Whose Star is Telstar?" characterises the nature of S. 2890 as a "monopoly in its most rigid and retrogressive form: a total governmental monopoly of all phases – technological, administrative and financial." But criticism is not extended to the Kerr/Administration bills. While "the first law out of the hopper is not likely to be perfect," the results are still "as good as could be expected – in fact much better than was to be expected. It is one bill," Bozell argues, "that should be saved from the shambles of the Kennedy legislative program."⁸⁹

Such a minimal interest in Comsat is unsurprising. *The National Review* article called the bill "complicated." The implications of both the technical aspects and the business aspects were not widely publicised. (Although the June issue of *Fortune* had a relatively dispassionate and non-political series of articles on the technology involved.) 1962 was a year not lacking in subjects for editorialising – and conservative journals at the time were largely focused on foreign policy. Discussion of domestic policy, past the regular diatribes against 'creeping socialism', was often concerned with theoretical matters,

⁸⁷ Melvin Badger, "Could at&T Run the Post Office," *The Freeman* 12, no. 10 (1962), 30-1

⁸⁸ William Rickenbacker, "Is Kefauver a Drug Addict?," *The National Review* 12, no. 7 (1962), 21

⁸⁹ L. Brent Bozell, "Whose Star Is Telstar?," *The National Review* 13, no. 6 (1962), 91

rather than arcane policy. The libertarian side of American conservatism was not quite in its infancy, but still carving out its relationship to the mainstream discourse. As a movement, it was divided between the dogmatic philosophies of Mises and Chodorov, and the more moderate Hayekians.⁹⁰

Populist libertarian thought was similarly unformed. Even the small libertarian presses that did exist in 1961-2 were in their early years and concerned more with definitions of libertarianism than relatively obscure matters of policy. A survey of the smaller right wing literature and ephemera in the *Right Wing Collection of the University of Iowa Libraries*⁹¹ shows a libertarian movement more concerned with philosophy than policy, at least in the early 1960s. The volume of libertarian publications is much less than it was a decade later and most of the more engaged work appears in the 1970s. Libertarian conservative attitudes towards public monopolies were not as strongly defined as they are today – free market doctrine was more concerned with combating socialistic thought than promoting positive radical changes.

We must remember that Comsat was merely one aspect of the Kennedy administration's broader space program. The Apollo missions, military uses of space, and even space ownership law had more instant appeal than the Comsat debate. In this context, Bozell's small article seems more of a measure of tokenism – quickly taking an opinion on an internal Congressional fight than a carefully-studied analysis of the issues involved.

⁹⁰ Nash, *The Conservative Intellectual Movement in America, since 1945.*, 26-7

⁹¹ University of Iowa. Libraries., *The Right Wing Collection of the University of Iowa Libraries* (Glen Rock, N.J.: Microfilming Corp. of America., 1977), microform.

National Interest

It should be quite clear by now that the decisions made regarding the formation of the Comsat Corporation were not motivated by economic factors alone. Nor were they similarly motivated by ideology – the only actors strongly propelled by political philosophy were the Kefauver Democrats with S. 2890 and its companion House bills. It is also clear that the eventual provisions of the Communications Satellite Act did not originate in the legislature, but were largely determined by the Kennedy Administration. If we are to take the argument that Kerr introduced S. 2650 merely to hasten the White House's involvement, then the legislative history of the act is more a rebellion on the left wing of the Democratic Party against their President, than a fight between Congressional factions. (Such an interpretation would help to explain the Republican absence from the committee and floor fights.)

As we have seen, the motivations were not primarily economic or ideological – at least as far as the administration was concerned. The documents of this period consistently refer to the “broad public interest”⁹² as the determining factor in Comsat's structure and purpose. The term is, perhaps deliberately, ambiguous.

Even a cursory study of Kennedy's wider space policy shows that the president was at best apathetic in regards to space matters. His 1960 campaign, which made such use of the “missile gap” concept to humiliate the sitting Vice-President, largely shied away from tabling space as a matter of contention. Kennedy was happy to concede that out of all the issues that he could face as President, he “probably knew and understood the least about space.”⁹³ But what Kennedy did know was foreign policy, and the bulwark of Kennedy-era policy in regards to space was the concept of international prestige. Walter McDougall has convincingly argued that the Kennedy years were those in which

⁹² Letter from Attorney General Robert F. Kennedy to President John F. Kennedy, Oct.25, 1962. quoted in Schwartz, "Governmentally Appointed Directors in a Private Corporation - the Communications Satellite Act of 1962."

⁹³ Walter A. McDougall, *The Heavens and the Earth : A Political History of the Space Age*, Johns Hopkins paperbacks ed. (Baltimore, Md.: Johns Hopkins University Press, 1997)., 302

“American space policy fell captive to the image makers.”⁹⁴ (Of course, it is hard to think of any pro-space presidency in which this was not the case)

American prestige played an important role in discussions over communications satellites. To that end, one of the initial Congressional hearings held on the topic considered the testimony of the Deputy Director of the United States Information Agency, Donald Wilson, along with representatives of the Voice of America. Wilson’s testimony was centred on the argument whether a government or private system would be most beneficial to American prestige. (The Kefauver proposal at that stage had not yet been introduced.) Questions of what was best in the national interest were also raised to the Defense Secretary, Robert McNamara, who argued that the DOD did not have a significant interest in the civilian system, but reiterated the need for a comprehensive system for such reasons of prestige.

However, perhaps one of the more remarkable things about the Communications Satellite Act is that the debate did not pivot on national interest. Considering that the Kennedy administration was arguably the height of U.S.-Soviet rivalry and mutual antagonism, it is notable that the debate concerned government structure. Kefauver’s objections to a private system did not largely focus on Comsat’s use as an agent of foreign policy, but on existing telecommunications monopolies. While we may dismiss the specifics of his proposal as reactionary, it is to the Tennessee senator’s credit that the commercial and social benefits of the new technology were first and foremost in his mind – rather than focusing on the international implications of satellites, Kefauver interest was in defending the public interest against the dominant common carrier, AT&T.

The government felt that it could best encourage the development of the system by creating a formal corporation to administer it. Recognising that the result would be a monopoly over the industry, the legislation made use of government directors to manage the company in a direction that the motive for profit would not lead. The directors were

⁹⁴ Ibid. 305

given the job of ensuring that the loftier national goals for the system were met: goals that included working towards “world peace.”⁹⁵

We can then conclude that both Kennedy and Kefauver thought that their proposals would ensure that the “broad public interest” was defended, but they defined the phrase differently. Kefauver thought in domestic terms – his Department of Communications satellites would provide a domestic, regulatory function. Kefauver’s Department would regulate the telecommunications industry. By taking what was assumed would become a vital part of the American phone network into the government, the capacity to set prices and control would be greatly enhanced .

The Kennedy Administration’s approach was to leave the development of the technology to private industry, but, to be able to exert some influence over the implementation, restrict it to one company – complete with government representatives on the board of directors. The administration was only marginally concerned with telecommunications regulation. The administration bill left setting prices and making business deals up to the corporation itself, within the existing legal framework. In concert with the State Department’s representation in foreign negotiations, it seems most likely that the governmental directors were to regulate in the national interest – not setting prices in the domestic interest like Kefauver, but in order to conduct foreign policy, or at least ensure that the administration’s foreign policy objectives were not contradicted.

⁹⁵ Kennedy, "Statement by the President on Communication Satellite Policy."

CONCLUSION

In his 1968 account of the birth of satellite technology, John Pierce argued that the Communications Satellite Act would, and already had, “considerably delay[ed] the realization of a commercial satellite system.”⁹⁶ With the distance of nearly half a century, such fears seem, at least on the face of it, misplaced. Commercial satellite networks, for a variety of different purposes, have been a fact of life for the past few decades. In 2003, 64 satellites were launched around the world, 16 of them commercial communications satellites.⁹⁷ It is undeniable that these networks have been a successful venture, and that the United States – for whatever reasons – holds the dominant position in the field.

While, in hindsight, the American dominance and economic efficiency of satellite communication may seem historically inevitable, this was certainly not the case in the early 1960s. American efforts in space were clearly situated against the grander Cold War struggle – hence the emphasis on a satellite network as a source of prestige, rather than merely a technological improvement. The Soviet Union’s activities in space were seen by many members of the government, and by a great deal of the American public, as superior to, or at least further advanced than, their own. The prestige that came bundled with success in space was considered to be a basic factor in convincing politically unstable countries of the value of either the communist or capitalist systems.

Even so, the debate over Comsat was not centred on issues of American prestige, but was more simply an ideological debate over the relationship between government and private enterprise. There were three potential directions the legislation could have taken. The first was characterised by Kefauver’s S. 2890, which proposed a centralised, governmentally-financed and administered department to coordinate private activities in space under the standard of the “national” or “public” interest. The second possibility was the one that eventually became the 1962 act – an unusual, hybrid corporation. Incorporated by an act

⁹⁶ Pierce, *The Beginnings of Satellite Communications.*, 28

⁹⁷ Elliot G. Pulham, *2003 - the Year in Space* (Space.com, 2003 [cited 23 August 2004]); available from http://www.space.com/news/commentary_2003_031222.html.

of Congress, Comsat Corporation was given total monopoly control of American communications satellite activity, with a most tenuous form of public oversight. Investment in this initially empty corporation was restricted to common carriers, excluding companies like HAC that had already spent a great deal on the technology.

The final direction that the legislation could have taken was the direction it already was taking when AT&T filed in 1961 with the FCC. Hughes Aircraft saw the technology as a way to enter a market dominated so completely by AT&T and had privately developed a complete, modern satellite. Hughes had even begun negotiations with carrier companies to develop the entire system. AT&T had not only a nearly fully-working satellite system but had, after a series of frustrations with NASA, even begun to investigate the possibility of private launches. AT&T was on track to completing an entire privately developed and financed communications satellite network. The potential economics of the satellites compared to an ever-growing number of undersea cables provided more than enough motivation for investment by a wide range of parties.

The United States government needed to do nothing to encourage these developments, with the exception of authorising NASA to market their launching capabilities. But such a direction was not considered in the legislative debate or even in the media. Even though the act fostered a great deal of floor debate as the liberal Democrats conducted one of the more impassioned Senate filibusters in Congressional history, the topic itself did not hold much broader public interest. The first two years of the sixties were not short of space-related news – as a minor part of the grand Kennedy space program, communications satellites did not dominate the media.

The Communications Satellite Act was a moderate one, avoiding the a radical structure like that which Estes Kefauver advocated. Senator Kerr and the Kennedy administration proposed what they considered to be a framework that left private industry in charge of satellites, yet gave the government a secure position in which to regulate in the national or public interest. But the effect of the act was to hand the development of an innovative

new field to a company, AT&T, which already had an operational monopoly over the telecommunications industry.

The Communications Satellite Act was therefore a missed opportunity. There was no need for legislative interference in what historical research now shows us was the emergence of an independent, private and competitive satellite industry. In defending the S. 2814 and S. 2650 against the centralised Kefauver model for Comsat, those on the economic right did not present an equally radical alternative, one that could have restricted the government's involvement in the field. They did not do so for three major reasons. Firstly, the administration bills presented were not sufficiently radical to react against, and the fight against Kefauver underlined this. Secondly, the economic policies of the Republican party, and indeed the right wing as a whole, were more similar to the consensus of the Eisenhower era than the post-Goldwater period. Conservatism had not yet become the strongly ideological and dogmatic force it would become throughout the 1960s. Finally, the complexities of both the technologies involved and the structure of the proposed corporation, as well as the smaller importance given to communications technology in the Kennedy space program, meant that potential critics were either misinformed, or not even interested.

It is hard to argue against the fact that no matter what specific structure of a communications satellite service the 1962 legislation provided, the technology would be ubiquitous today. Like telephones themselves, satellites solved an immediate and practical engineering problem – the challenge of communicating over long distances efficiently, for whatever purposes. But what this thesis has argued is that there was a missed opportunity for a superior framework within which to operate the satellite network, a non-governmental one. This framework was not considered at the time.

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