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# Radio Spectrum Regulation: The Administrative Process and the Problems of Institutional Reform

Glen O. Robinson\*

*As the use for radio frequencies expands, criticism of the present system of allocating this scarce natural resource has mounted. Professor Robinson reviews the institutions and administrative processes of radio frequency allocation and evaluates the case for administrative reform, including the proposals for adoption of a pricing mechanism. He concludes that this critical problem will not be resolved by major institutional change, but only by the improvement of internal administrative operations.*

## I. INTRODUCTION

Marie Antoinette's milliner is reported to have observed that "nothing is new but what has been forgotten." Whether the comment is accurately attributed I cannot pretend to know, but it is an enduring thought, and one singularly pertinent to the subject of this article: the use and regulation of the radio frequency spectrum. In more than 40 years of radio regulation there have been countless studies, reports and commentaries on the problems of radio frequency allocation, use and regulation. There have been an equal number of recommendations and proposals for changing the regulatory system to create more efficient and effective spectrum utilization. It is necessary, therefore, to make more than the usual obeisances to the work of others. Indeed, for the most part I have not tried to go beyond them, but

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This article is an outgrowth of a study conducted for the National Association of Broadcasters, and their assistance and cooperation is gratefully acknowledged. The study was, however, an independent one and neither its conclusions nor those of this article necessarily represent the views of the NAB or of the broadcasting industry. Any biases which may appear are those which have been indulgently nurtured by the author alone. I also acknowledge with thanks the cooperation and assistance of the current Director of the Office of Telecommunications Management, General James D. O'Connell, as well as that of FCC Chairman Rosel H. Hyde, Commissioner Kenneth A. Cox and FCC staff members in providing material and information on the respective functions and responsibilities of the executive and FCC in regard to radio spectrum regulation. Needless to say they are not responsible for any errors which may appear or for any of the opinions given herein.

have been content with the far more modest aim of reviewing and appraising what already has been said—and in many cases forgotten.

It is a commonplace that the radio frequency spectrum—the backbone of modern telecommunications—is an extremely scarce natural resource which is becoming relatively more so as the types of uses and number of users expand. The variety of uses of radio spectrum is legion. Though radio and television broadcasting are most familiar, the frequency spectrum is also used for military purposes, private and common carrier land mobile communications, maritime and aviation communications, long distance radio relay, space communications, radio navigation, and amateur radio.

A general idea of the current magnitude of radio frequency spectrum use can be acquired from current licensing statistics. At the close of fiscal year 1967, some 9,811 broadcast stations, 11,545 common carrier stations, and 1,640,371 safety and special radio services stations—essentially land mobile, aviation, maritime, citizens radio and amateur radio—were authorized. This is apart from federal government stations not licensed by the FCC, which use over 30 per cent of the spectrum between 30 and 960 mc and over 70 per cent of the spectrum between 960 and 10,000 mc either exclusively or on a shared basis.<sup>1</sup>

In addition, the number of uses and users continues to expand at an accelerating rate, particularly in the field of private land mobile and other safety and special radio services, where the number of authorized stations increased by more than 100,000 between 1966 and 1967.<sup>2</sup> Given the current limitation on the number of frequencies available, this growing demand for new and expanded uses of radio frequencies has resulted in mounting

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1. For statistics on FCC licensed stations see 33 FCC ANN. REP. 160, 213, 216 (1967); for statistics on Government use see OFFICE OF TELECOMMUNICATIONS MANAGEMENT, REPORT ON FREQUENCY MANAGEMENT WITHIN THE EXECUTIVE BRANCH OF THE GOVERNMENT 10, App. 2 (1966). See also text accompanying note 97 *infra*.

"Government," when capitalized, is used throughout to refer to the federal government. State and local government users, who are licensed by the FCC, are referred to as non-Government or private users. This article adheres to the old style classifications for radio frequencies—kilocycles per second (hereinafter "kc"); megacycles per second (hereinafter "mc")—in lieu of the now accepted terms "khz" for kilohertz and "mhz" for megahertz. The older terms are still more widely used and are used by the FCC. The terms are, in any event, interchangeable: one megacycle per second equals one megahertz, etc.

2. 33 FCC ANN. REP. 216 (1967).

concern from both Government and private sectors that the spectrum may soon be saturated. The result of this "silent crisis," as one recent report has (somewhat overdramatically) described it,<sup>3</sup> has been to bring renewed attention to a problem which has been studied and restudied since radio regulation was inaugurated over 40 years ago: how to allocate the spectrum to achieve optimum use of and social benefit from radio. More specifically, how can the conflicting interests and competing demands for the spectrum—both Governmental and private—be reconciled? What priorities must be established among competing uses? What institutional organization and administrative processes are required to deal adequately with the problem?<sup>4</sup>

## II. HISTORICAL PREFACE

The history of radio spectrum management has been extensively explored by others.<sup>5</sup> However, a brief outline of the history of the present regulatory institutions and a review of the

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3. U.S. DEP'T OF COMMERCE, TELECOMMUNICATIONS SCIENCE PANEL, ELECTROMAGNETIC SPECTRUM UTILIZATION—THE SILENT CRISIS (1966).

4. In August, 1967, the President appointed a Task Force to make a comprehensive study of telecommunications policy, including the allocation and use of the spectrum. The Task Force reported its findings in December, 1968. BROADCASTING MAGAZINE, Dec. 16, 1968, at 30. As this goes to print, the official report of the Task Force to the President has not been made public. There are, however, a number of summaries of its findings and proposals purportedly based on final drafts shown to the news media. See, e.g., INDUSTRIAL COMMUNICATIONS, Dec. 13, 1968, at 3-9; *id.*, at 30-38; N.Y. Times, Dec. 10, 1968, at 41. Although these contain only a bare outline of a 450 page report, it is believed that the basic conclusions and proposals of the Task Force are accurately reported. Some of these basic conclusions, as reported, will be discussed in this article.

As will be made apparent below, the Task Force is not breaking new ground. Studies have been conducted repeatedly under either executive or congressional auspices since at least 1944. The present study is, however, the most ambitious since 1951, when a similar investigation was made by a presidential "Communications Policy Board."

5. A valuable resume of important events up to 1959 by the former Office of Civil Defense Mobilization, on which the following discussion relies for many events not elsewhere chronicled, is contained in *Hearings on Spectrum Allocation Before the Sub-Comm. on Communications and Power of the House Comm. on Interstate and Foreign Commerce*, 86th Cong., 1st Sess. 130-44 (1959) [hereinafter cited as 1959 Hearings on Spectrum Allocation]. A recent study of radio spectrum allocations also contains a chronicle of events to the present time. See Metzger & Burrus, *Radio Frequency Allocation in the Public Interest: Federal Government and Civilian Use*, 4 DUQUESNE L. REV. 1-47 (1965) [hereinafter cited as Metzger & Burrus].

major past studies and proposals for institutional reform is a necessary preface to an analysis of the current administrative processes of radio spectrum allocation and management.

#### A. CREATION OF THE REGULATORY FRAMEWORK

Although the history of radio communications regulation dates back at least to 1912, when the first federal law regulating radio communication was enacted,<sup>6</sup> the first attempt at comprehensive regulation was the Radio Act of 1927.<sup>7</sup> This was primarily an attempt to solve the interference crisis which had resulted from the failure of prior efforts at regulation.<sup>8</sup> The Act established the Federal Radio Commission (FRC) with comprehensive regulatory powers, including the power to classify radio stations, to assign frequencies to various classes of and individual stations, and to determine hours of operation, power, and geographical service areas. However, the 1927 Act was concerned only with allocation and use of frequencies by non-Government users. Radio stations "belonging to and operated by the United States" were exempted from regulation.<sup>9</sup> These were to operate on frequencies assigned pursuant to presidential authority, actual assignments being made by coordination of user agencies through the Interdepartment Radio Advisory Committee (IRAC), a group comprised of the various federal government users.<sup>10</sup>

In 1928 the FRC was granted membership on IRAC.<sup>11</sup> But as a mere member of IRAC, the FRC could exercise no more control over Government frequency use than IRAC or the President

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6. 37 Stat. 302 (1912). The Act of 1912 had been preceded by the Wireless Ship Act of 1910, 36 Stat. 629 (1910), but the 1910 Act did not regulate radio communications; it only required ocean vessels to be equipped with radio.

7. 44 Stat. 1162 (1927).

8. For a discussion of the events leading up to the 1927 Act, see J. HERRING & G. GROSS, *TELECOMMUNICATIONS* 242-45 (1936).

9. 44 Stat. 1162, 1165 (1927).

10. IRAC was formed in 1922 with the primary purpose of advising the Secretary of Commerce on various radio matters of common interest to users. However, it soon became involved in the assignment of frequencies to Government stations which were also exempt under the Act of 1912, this becoming its primary function. This role was formalized shortly after the 1927 Act when the President advised the Secretary of Commerce that he wished to have all radio frequency applications from Government agencies submitted to IRAC. 1959 Hearings on Spectrum Allocation at 130. For a history of IRAC, see *id.* at 106-08; Coase, *The Interdepartment Radio Advisory Committee*, 5 J. LAW & ECON. 17-20 (1962) [hereinafter cited as Coase].

11. 1959 Hearings on Spectrum Allocation at 106.

could exercise over private allocations and use.<sup>12</sup> And, since the Act drew no distinctions between Government and non-Government use, the dual jurisdiction created an obvious potential conflict between the FRC and IRAC over Government and non-Government allocations—a conflict for which no means of resolution other than compromise had been provided. This potential conflict now seems so evident that it might be wondered why so little attention was given to creation of a unified authority. However, the War and Navy Departments were particularly apprehensive about giving control to an independent outside agency such as the FRC, which might not adequately consider military needs.<sup>13</sup> Also, at this time the supply of frequencies was considered sufficient to accommodate all users—Government and non-Government—so that the occasion for serious conflict between the FRC and IRAC presumably was not foreseen.

In January, 1934, the Interdepartmental Committee on Communications recommended to the Senate Commerce Committee that a single agency be formed to regulate all radio communications.<sup>14</sup> In June, 1934, the Communications Act of 1934 was enacted.<sup>15</sup> The substance of the Radio Act of 1927 was retained with relatively little change since the primary purpose of the new Act was not to modify the structure of radio regulation but to create a single permanent, independent agency to regulate all forms of electrical communication whether by telephone, telegraph, cable or radio. Thus, the Federal Communication Commission was created to take over the functions previously exercised by the FRC and the Interstate Commerce Commission,<sup>16</sup> which then had jurisdiction over telephone and telegraph.

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12. *Id.* at 136.

13. See 67 CONG. REC. 12497, 12631 (1926); *Hearings Before the House Comm. on Merchant Marine and Fisheries*, 69th Cong., 1st Sess. 92-93 (1926).

14. *Message by Franklin D. Roosevelt*, in *STUDY OF COMMUNICATIONS*, S. Doc. No. 144, 73d Cong., 2d Sess. (Comm. Print 1934).

15. 48 Stat. 1064 *passim* (1934), as amended, 47 U.S.C. § 1 *passim* (1964). For a history of the various bills leading to the Act of 1934, see H. WARNER, *RADIO AND TELEVISION LAW* 783-88 (1948).

16. The FCC was also given certain rate regulation authority over telegraph companies previously exercised by the Postmaster General. S. REP. NO. 781, 73d Cong., 2d Sess. 1 (1934).

It is apparent that a major motive for the consolidation of functions, particularly in the Senate, was not unification for its own sake so much as it was a concern that telephone and telegraph regulation under the jurisdiction of the ICC was not adequate. See *id.* at 2. Indeed, the Senate bill called for organization of the FCC into two divisions, one for telephone and telegraph and one for radio (principally broadcasting), the effect of which would have been similar to creation of two separate

The provisions of the Radio Act exempting federal government stations from FRC regulation—and authorizing the President to take over radio communications facilities in time of national emergency—were carried over into sections 305(a) and 606(a), (c), (d) of the 1934 Act respectively.<sup>17</sup> Even at this early date there was dissatisfaction with the failure to coordinate the needs of Government and private stations, and there existed the feeling on the part of some that there had been excessive demands on behalf of some Government departments.<sup>18</sup> Despite all this, it does not appear that any extended consideration was given to a possible alteration of the administrative structure for frequency allocation or bestowing authority over both Government and non-Government users on a single administrative body.<sup>19</sup>

## B. THE EMERGING PROBLEM

Through the 1930's, dual jurisdiction over the radio spectrum seems not to have created serious impediments to effective management. If there was conflict between the demands of the private and Government sectors, it appears to have been more a theoretical than an actual problem. The FCC succeeded to the FRC's membership on IRAC and the coordination between the two bodies appears to have been adequate at this time. In part, the successful coordination in the early management of the spec-

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agencies. This was rejected by the House, which merely permitted such a division by the Commission if it deemed it appropriate. See H.R. REP. No. 1850, 73d Cong., 2d Sess. 2-3 (1934). The House version was enacted. See notes 219-20 *infra*, and accompanying text for further discussion.

17. To those radio facilities which the President was authorized to take over were added wire facilities. 48 Stat. 1064, 1083, 1104 (1934), *as amended*, 47 U.S.C. §§ 305(a), 606(a), (c) & (d) (1964).

18. *Hearings on S. 6 Before the Senate Comm. on Interstate Commerce*, 71st Cong., 1st Sess. 52 (1929) (testimony of Louis Caldwell, former General Counsel to the Radio Commission).

19. In the Senate hearings on one of the principal forerunners of the 1934 Act, Louis Caldwell made the rather vague suggestion that "Government departments . . . handle Government stations, and the Federal Radio Commission will handle private stations with a common authority to which their conflicting demands may be submitted, say, to the President." *Id.* at 53. This was not pursued by Caldwell or the Senate Committee. A few other scattered references to the question of allocations and allocations authority appear in the hearings on the earlier bill, but there is no significant discussion of the problem. *Id.* at 204-05, 254, 1067. No references were found in the hearings on the House Rayburn bill which subsequently became the Act of 1934. See *Hearings on H.R. 8301 Before the House Interstate and Foreign Commerce Comm.*, 73d Cong., 2d Sess. (1934)

trum can be attributed to the fact that radio communications was still in its infancy and frequency demands for new and expanded radio uses had not yet begun to press against the supply which a maturing technology was able to make available. However, this favorable balance of supply and demand was to change with the great expansion of private and Government radio uses during the 1940's.

Given the increased demand for frequencies, particularly by the military during World War II, the problem of effective management and coordination between the FCC and IRAC became a matter for concern. In 1943 Congress appointed a select committee to investigate the FCC.<sup>20</sup> Although it was not primarily concerned with spectrum allocation, the committee did inquire into the problem. Because of the growing competition between Government and non-Government use, the committee sought to discover whether the FCC and IRAC:

worked together satisfactorily as two agencies with complementing jurisdiction in the matter of making assignments and whether or not they were making wise and equitable divisions of the limited available radio spectrum among the services under their respective jurisdictions.<sup>21</sup>

It is apparent, however, that the committee was less concerned with whether the system was producing equitable allocations than with whether the federal government users, particularly the military, were getting what they wanted—an entirely natural concern given the paramount concern for meeting wartime needs. During the committee hearings it was proposed that IRAC be made an “independent agency,” though the proposal was evidently premised not on the belief that IRAC should be free of the executive, but that since the Chairman of the FCC was also serving as the Chairman of IRAC, it was necessary that the Commission be prevented from “dominating” IRAC.<sup>22</sup> However, efforts to bring about a reorganization of IRAC by executive order were tabled and not revived.<sup>23</sup>

The fear of possible “dominance” by the FCC—a curious contrast to later complaints that the FCC is too subservient to

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20. See H.R. REP. No. 2095, 78th Cong., 2d Sess. 1-2 (1945).

21. *Id.* at 13.

22. *Id.* at 14. The term “independent” was not defined, but it appears that what was intended was an agency with some formal status within the executive branch rather than an independent agency such as the FCC.

23. *Id.*



the demands of federal government users<sup>24</sup>—was clearly groundless, as the select committee's report indicates. The committee concluded that the system "seems to have functioned with reasonable satisfaction" and that the broad division of jurisdiction between the FCC and IRAC "seems to be a logical one."<sup>25</sup> There continued to be dissatisfaction with the system, however, particularly with what was regarded as a failure to establish broad policy objectives of telecommunications. To assist in the formulation of policies and the development of plans for the most effective use of wire and radio, the Telecommunications Coordinating Committee (TCC) was established under the sponsorship of the State Department in 1946. The Committee was comprised of the FCC, the Departments of State, Treasury, War, Navy, Commerce, and later the Air Force.<sup>26</sup> Although the TCC still exists, it has not developed into the high level policy planning organization that was anticipated. It has become in fact little more than an advisor to the State Department.<sup>27</sup>

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24. See, e.g., Coase at 29; 1959 Hearings on Spectrum Allocation at 87-88.

25. H.R. REP. No. 2095, *supra* note 20, at 13-14.

26. 1959 Hearings on Spectrum Allocation at 132.

27. *Id.* See also the analysis of the failure of the TCC by the President's Communications Policy Board which affords an insight not only into the problems of the TCC but the entire problem of joint planning and coordination:

At the outset it was thought this committee [the TCC] could formulate policies and develop plans and programs which would promote the most effective use of wire and radio facilities. The FCC, however, pointed to its statutory responsibility for policy formulation and advice to Congress on such matters, and stated that its participation in any group such as TCC could not relieve it of these obligations or bind it in any way. The State Department reiterated its initial view that the TCC could work only by unanimity, and that there must be no intrusion on the statutory or other authorized responsibilities of any of the component agencies. . . . TCC is weighted with representatives of military interests and functions, who besides are chiefs of the communications services of the three departments—that is, users and operators of specialized services rather than officials charged with agency-wide responsibilities. . . . The difficulty here arose from the fact that much of telecommunications policy formation has to do with dividing scarce resources among military claimants, other Federal Government claimants, and non-Government claimants. Officials heading extensive service agencies, with larger potential demands on their services than they can expect to meet, can hardly be expected to take an impartial view of such questions as the national requirement for a share of the world's frequencies, or division of the national share among all claimants.

PRESIDENT'S COMMUNICATIONS POLICY BOARD, TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS 201-03 (1951) [hereinafter cited as TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS].

In the same year in which the TCC was created the Bureau of the Budget released the report of a study on allocation of radio frequencies to Government agencies.<sup>28</sup> The study rejected the possibility of vesting the authority to assign radio frequencies to Government users in the FCC or in any single executive department. It concluded: (1) If the FCC was charged with making all frequency assignments, it would be subject to much greater political pressure and to accusations of bias from both sides. As a result, its regulation of private radio would be made more difficult. (2) Creation of a Department of Communications was not feasible: "the regulation of one department by another generally has been quite unsuccessful" since executive agencies will not permit a co-equal agency to control their internal operations.<sup>29</sup> In lieu of these alternatives the study recommended executive establishment of an office of Coordinator of Government Radio to advise the President in telecommunications matters and to coordinate Government allocations.

Despite the Budget Bureau study's rejection of major institutional change, dissatisfaction with the handling of Government allocations and the belief that federal users were getting more than their fair and necessary share of frequencies continued. This led to a 1950 legislative proposal for fundamental reorganization of allocations authority, introduced by Representative Sadowski, Chairman of the Radio Subcommittee of the House Committee on Interstate and Foreign Commerce.<sup>30</sup> In addition to proposing certain changes in FCC broadcasting regulation,<sup>31</sup> the Sadowski bill proposed to deal with the problem of allocations by creating a five man independent executive agency known as the "Frequency Control Board." The Board would have had authority to: (1) allocate, cancel, and modify frequencies; (2) assign, cancel and modify federal government station frequencies; and (3) prescribe regulations to govern FCC assignment of frequencies to non-Government stations. The Board would have been directed to

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28. SEIDMAN & MOORE, ALLOCATION OF RADIO FREQUENCIES TO GOVERNMENT AGENCIES, BUREAU OF BUDGET PROJECT 46-40, *cited in* 1959 Hearings on Spectrum Allocation at 132.

29. *Id.*

30. H.R. 6949, 81st Cong., 2d Sess. (1950); *see* 96 CONG. REC. 838-40 (1950).

31. The Sadowski bill would have (1) given the FCC additional administrative sanctions with respect to radio station licensees and permittees, (2) rendered licensees immune from criminal or civil actions as a result of statements made in the course of political broadcasts and (3) broadened section 315 to include not only political candidates themselves but their designated spokesmen.

disapprove proposed FCC assignment of any frequency to non-Government stations, if such assignment would (a) cause harmful interference with any federal government use of radio, or (b) violate any regulation of the Board with respect to assignments by the FCC. Finally, the bill would have authorized a "Military Liaison Committee" to advise the Board. On any matter involving national defense, this Committee would be authorized to refer the question to the Secretary of Defense, who in turn could appeal to the President, who would then make the final decision.

That the provisions of the bill would have given control over *all* allocations to the executive—principally to the military<sup>32</sup>—seems somewhat incongruous in view of Sadowski's evident concern that the federal government was getting more than its share of allocations due to the inadequacy of the existing structure to control Government demands.<sup>33</sup> The ostensible reason for not vesting this allocation authority in the FCC, a logical alternative given the concern over federal-user dominance, was that the Commission was already overburdened and that the proposal to create a separate agency would hopefully "so lighten the workload of the Commission that the . . . backlog can be eliminated and that the Commission can become current in its work."<sup>34</sup> Given the attacks on the Commission at that time for its backlog of work,<sup>35</sup> this explanation may offer a plausible reason for not giving the FCC complete allocation authority, but

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32. The OCDM later commented on this proposal that: By virtue of right of appeal to the President through the Secretary of Defense, the [Military Liaison] Committee, in matters of national defense, would have a virtual veto power over the Board.

1959 Hearings on Spectrum Allocation at 133.

33. Introducing his bill in the House, Sadowski stated: [T]he charge has been made that, as a result of the inadequacy of this machinery, private applicants for space in the spectrum have come out second best. It has been contended that the Federal Communications Commission has been given, to distribute among private applicants, that portion of the spectrum that has been left over after the Federal Government agencies took the space that they desired. . . . [I]t is poor business to leave the apportionment of an important natural resource like the radio spectrum . . . to a planless system of compromises between two public bodies, each sovereign in its own field, neither of which is responsible to the people for the apportionment that results from their respective actions.

96 CONG. REC. 839 (1950).

34. *Id.*

35. The McFarland Bill, S. 1973, 81st Cong., 1st Sess. (1949), proposing a number of basic reorganizations in the FCC, its staff and its procedure, was motivated in part by the delays and backlog of work. See *Hearings on S. 1973 Before a Subcomm. of the Senate Comm. on Interstate and Foreign Commerce*, 81st Cong., 1st Sess. *passim* (1949).

it does not explain why the authority should be given to the federal executive if the concern was with inadequate controls on federal use of frequencies. It is more probable that this was the only way the proposal to create a single authority could be made palatable to the military establishment and executive.

Sadowski's proposal failed for a number of reasons. First, there was general industry opposition to the bill.<sup>36</sup> Second, the bill's nonallocation features overlapped and competed for attention with the McFarland reorganization bill which had already passed the Senate.<sup>37</sup> Third, the subsequent establishment of the President's Communications Policy Board pre-empted the allocation proposals.<sup>38</sup>

### C. THE PRESIDENT'S COMMUNICATIONS POLICY BOARD

The President's Policy Board, headed by a former FCC Commissioner, Dr. Irvin Stewart, was created in 1950 for the broad purpose of studying the present and potential use of radio and wire communications by Government and non-Government users and to make policy and implementation recommendations.<sup>39</sup> Among the central issues with which the study dealt was that of formulating policies and/or changing or strengthening existing organizations to deal with the "conflicting interests and needs of Government and private users of the spectrum space."<sup>40</sup>

In 1951 the Policy Board released its report.<sup>41</sup> Regarding the current organizational structures for dealing with the problem of spectrum allocation and management, the Board concluded that the "whole Government telecommunications structure is an uncoordinated one" and that "there is need for a better determination of the division in the national interest of frequency space between Government and non-Government users."<sup>42</sup>

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*See also* COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, SPECIAL SUBCOMMITTEE ON LEGISLATIVE OVERSIGHT, 85th Cong., 2d Sess., REGULATION OF BROADCASTING 116-21 (Subcomm. Print 1958).

36. Industry opposition was aimed at both the Frequency Control Board proposal and the bill's non-allocation features. COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE, *supra* note 35, at 126.

37. *See id.* at 122, 126-38. The McFarland bill with some modifications was enacted into law as the Communications Act Amendments of 1952, 66 Stat. 711.

38. *See* 1959 Hearings on Spectrum Allocation at 133.

39. TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 2-3.

40. *Id.* at 8-9.

41. The report is often referred to as the "Stewart Report," and that title is sometimes used in this article.

42. TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 18.

The Policy Board's dissatisfaction with the present administrative structure was directed principally at the inadequacies of IRAC and the lack of effective control over federal government and private use.<sup>43</sup> However, the Board rejected sweeping institutional change. Believing that the problems of spectrum management could be solved within the framework of the existing dual allocations authority,<sup>44</sup> it rejected as unwise the unification of allocations control by vesting full authority in either the FCC or an executive agency.<sup>45</sup> The Board concluded that a simpler and better solution—at least one which should be attempted before more drastic reorganization was undertaken—was for the federal government to “bring its house in order and then try to match its needs with those of the Federal Communications Commission.”<sup>46</sup>

To accomplish these goals, the Stewart Report recommended the creation, by executive order, of a three-man “Telecommunications Advisory Board” whose primary responsibility would be to carry out the planning and executive functions of the President with respect to assignment of frequencies, to advise the President of Telecommunications policy, and particularly to:

establish and monitor a system of adequate initial justification and periodic rejustification and reassignment of frequencies assigned to Federal Government users, and, in cooperation with the Federal Communications Commission, supervise the division

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43. *Id.* at 183-206.

44. 1959 Hearings on Spectrum Allocation at 78 (testimony of Dr. Stewart).

45. TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 216. Elsewhere in its report the Board further elaborated on its objections to vesting of authority in the FCC:

The two most important considerations against placing new functions in [the] FCC, and in our opinion the conclusive ones, are these: First, the FCC in its capacity as representative of the interest of non-Federal communications agencies, is in effect a user. As such, it would never be accepted as an impartial arbiter by other Federal users. Second, it would be unwise and improper to give to the FCC the power to make decisions which affect the administration of executive agencies, or which relate closely both to foreign relations and to national defense.

*Id.* at 197. Also mentioned was the FCC's existing workload and its hesitancy about acquiring this additional responsibility. *Id.* at 196. The Board's report does not elaborate on its objections to vesting allocations authority in an executive agency under the control of the President, but implicit is the same reasoning as that which underlies its rejection of FCC control: it would involve a serious conflict of interest. An independent “super board” was rejected for reasons similar to the rejection of FCC control: it would interfere with executive prerogative. *Id.* at 208.

46. 1959 Hearings on Spectrum Allocation at 78 (testimony of Dr. Stewart).

of frequency spectrum space between Government and non-Government users.<sup>47</sup>

IRAC would continue as "a specialized agency to perform the detailed work of assigning frequencies to federal government users but under [the policies and supervision of the Telecommunications Advisory Board]."<sup>48</sup>

In April, 1951, shortly after the release of the Stewart Report, Senator Johnson introduced a bill which would have given the FCC authority to assign frequencies to federal government users in accordance with regulations approved by the President.<sup>49</sup> Coming on the heels of the Board's study which not only had recommended a different solution but had strongly rejected the idea of giving the FCC such allocations authority, it is not surprising that the Johnson proposal enjoyed no success. The FCC was not eager to take on this responsibility and pointed to the contrary recommendations of the Stewart Report, stating that it would be preferable to wait until its recommendations could be implemented.<sup>50</sup>

#### D. ATTEMPTS AT REFORM AFTER THE STEWART REPORT

##### 1. *The Telecommunications Advisor*

At least partially to implement the Stewart Report's recommendations, President Truman established the position of Telecommunications Advisor in October of 1951. The Advisor was to "assist and advise" the President in "coordinating the development of telecommunications policies and standards applying to the executive branch of the Government" with respect to the assignment of radio frequencies to Government users; in "establishing policies and procedures governing such assignments and their continued use;" and finally in "developing U.S. Government frequency requirements."<sup>51</sup> He was directed to "perform his functions with the aid, or through the facilities, or appropriate departments and agencies of the Government," IRAC being specifically directed to report to and assist the advisor.<sup>52</sup>

The Telecommunications Advisor effected a number of re-organizational changes in IRAC. Among the most important was the establishment in 1952 of a Frequency Assignment Sub-

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47. TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 18-19.

48. *Id.* at 207.

49. S. 1378, 81st Cong., 2d Sess. (1951).

50. 1959 Hearings on Spectrum Allocation at 135.

51. Exec. Order No. 10297, 3 C.F.R. § 828 (1951).

52. *Id.*

committee (FAS) comprised of representatives of IRAC members and the FCC to handle all routine frequency assignments to federal users.<sup>53</sup> The purpose was to free IRAC itself for higher level policy planning. Although it was reported that the new Telecommunications Advisor was making "real progress" towards improving federal frequency allocations and overall policy planning, the position was abolished by President Eisenhower only two years after its creation. In June, 1953, the functions and responsibilities of the former advisor were transferred to the Director of the Office of Defense Mobilization (ODM), and in turn subdelegated to an ODM Assistant Director for Telecommunications.<sup>54</sup> Although the responsibilities were unchanged, the position and authority were downgraded. A further downgrading of the position and functions of the Telecommunications Advisor came with the 1958 merger of ODM and the Federal Civil Defense Agency into the Office of Civil and Defense Mobilization (OCDM). The telecommunications functions were assigned to the Director of the OCDM but delegated to an Assistant Director for Resources and Production and further delegated to a Deputy Assistant Director for Telecommunications.<sup>55</sup>

## 2. *The Potter and Bowles Recommendations*

The failure to establish effective control over spectrum use by federal agencies as had been urged by the Stewart Report resulted in other proposals for reform.<sup>56</sup> In 1957 Senator Potter introduced a resolution in the Senate proposing to establish a special commission to investigate federal government use of the spectrum.<sup>57</sup> The resolution was approved by the Senate. How-

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53. 1959 Hearings on Spectrum Allocation at 109.

54. Exec. Order No. 10460, 3 C.F.R. § 947 (1953). See also 1959 Hearings on Spectrum Allocation at 134, 136. The responsibilities of the ODM were expanded in 1957 by delegating to it full presidential authority under sections 305(a) and 606(a), (c) & (d) of the Communications Act. However, this delegated authority was to be exercised only in time of war. See Exec. Order No. 10705, 3 C.F.R. § 363 (1957).

55. 1959 Hearings on Spectrum Allocation at 105, 134, 142.

56. One proposal in 1953 warrants passing mention. In August, 1953, Representative Wolverton introduced a bill in the House proposing to establish a Telecommunications Policy Committee consisting of representatives of the FCC and the Departments of State, Defense and Commerce. The purpose of the proposed Committee was to coordinate the development of telecommunications policy and formulate plans with respect to the best utilization of the spectrum. Not surprisingly, nothing came of the proposal which, as later described by the OCDM, would have done no more than "to establish a high level IRAC." 1959 Hearings on Spectrum Allocation at 136.

57. *Id.* at 139.

ever, acting on the suggestion of the ODM, the House reported out the resolution with an amendment calling for an investigation of the use of the spectrum by federal and nonfederal users alike. The amended resolution, although concurred in by the FCC, was opposed by the broadcast industry as well as Senator Potter himself and subsequently failed.<sup>58</sup>

In 1955 the Senate Commerce Committee, motivated principally by the UHF/VHF television difficulties,<sup>59</sup> convened an ad hoc Advisory Committee headed by Edward Bowles to make a survey and reappraisal of television allocations. For the most part the Bowles study is only tangentially relevant to the general allocations problem. Its principal concern was with the specific regulatory policies of the FCC, ranging from deintermixture of UHF and VHF channels problems to the problems of color television, educational television, and the exercise of licensing power by the Commission. The Committee's report also gives a lengthy and detailed analysis of the multiple functions, problems and failure of the FCC.<sup>60</sup>

Pertinent to the allocations problem, however, was a recommendation to establish a communications authority as part of the executive structure.<sup>61</sup> The proposal was intended to reinstate the recommendations of the President's Policy Board in 1951. As the Bowles committee concluded:

The Stewart report was an enlightening contribution by competent authorities. If one is to judge from the results, the report was irresponsibly handled at the Executive level and ignored at the Congressional level. The record shows there is a legislative job yet to be done.<sup>62</sup>

### 3. Cooley Committee Study

In November, 1958, the Director of OCDM appointed a Spe-

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58. 1959 Hearings on Spectrum Allocation at 140. An editorial in *BROADCASTING MAGAZINE*, Aug. 18, 1958, at 34, explained the reason for the broadcasters' opposition:

The . . . bill was killed because broadcasters felt, in their battle for self preservation, that they had no alternative. . . . More had to be known about the reason for shift in emphasis from military to broadcast use of the spectrum.

59. The story of these difficulties is now well known. For a history of the problem prior to 1962, see Note, *The Darkened Channels: UHF Television and the FCC*, 75 *HARV. L. REV.* 1578 (1962). See also *Hearings on Television Allocations Before the Senate Comm. on Interstate and Foreign Commerce*, 86th Cong., 2d Sess. 4585-4601 (1960).

60. *AD HOC ADVISORY COMMITTEE ON ALLOCATIONS TO THE SENATE COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE*, 85th Cong., 2d Sess., *ALLOCATION OF TV CHANNELS* (Comm. Print 1958).

61. *Id.* at 256.

62. *Id.*



cial Advisory Committee on Telecommunications, chaired by Victor E. Cooley, a past Deputy Director of OCDM. The Committee was to review the current administrative organization and procedures for dealing with day-to-day matters relating to telecommunications management within the executive branch, analyze the growing demands for frequency assignments by both Government and non-Government users, and make recommendations for change. On December 29, 1958, the Cooley Committee submitted its report to the Director of OCDM.<sup>63</sup>

The central problem discovered by the Committee was virtually the same as that identified by the President's Communications Policy Board in 1951: inadequate control of federal government use of the spectrum.<sup>64</sup> The Committee concluded that an extensive study of the current uses of the spectrum—particularly Government uses—was necessary before consideration of any sweeping change in the regulation and control of telecommunications by the Government. In advance of such a study, however, it recommended congressional creation of a three-man National Telecommunications Board within the Executive Office of the President, having direct access to the President and the heads of Government agencies using telecommunications. The Board's function would have been to formulate telecommunication policies and standards designed to assure efficient telecommunication management, including formulation of criteria, engineering standards, and procedures for allocation of frequencies to various Government agencies. As part of its "special duties" the Board was also to (1) review the national table of frequency allocations employed by Government and non-Government users, and (2) study the role of the FCC and the executive agencies in telecommunications management. The Board was to

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63. The report is printed in 1959 Hearings on Spectrum Allocation at 40-49.

64. In reviewing the structure as it has evolved, the Committee was continuously struck by the absence of adequate provision for high-level consideration on the Government side of a variety of matters of vital national importance in the area of telecommunications. The Federal Communications Commission provides a vehicle for adequate consideration in the non-Government area. In sharp contrast, as indicated earlier, decisions in the area of Government use or of conflict between Government and non-Government use, are often made by compromises at the operational level by staff members, who though competent in their fields, do not necessarily have the total picture of national interest. There is also an unfortunate absence at present of anyone in the executive branch with adequate knowledge, experience, and stature to act for the President in these matters . . . .

*Id.* at 42.

report its findings and recommendations, including any recommendations for changes in existing administrative organization.<sup>65</sup>

The proposed Board would not have had authority over non-Government allocations; the jurisdiction and functions of the FCC was to be unaffected. Although the whole question of the dual, FCC-executive control of allocations was to be studied by the Board, the Cooley Committee was not primarily occupied with that problem. The primary concern of the proposed Board was to put the executive's house in order.<sup>66</sup> The purpose was thus to substitute a framework in which two agencies, the FCC and the Board, could effectively work together, in lieu of the FCC and a host of "independent" executive agency-users who could not.<sup>67</sup>

It is evident that the Board would not have had *final* authority over those Government allocation matters which would have continued to lie with the President.<sup>68</sup> While the question whether there should be an "overriding board" to rule on *all* Government allocations was one of the questions to be studied by the Board,<sup>69</sup> the Committee evidently felt that even without formal, overriding authority the Board would be able to control Government allocations and consolidate Government needs.<sup>70</sup>

The Cooley Committee's approach of attempting to consolidate Government allocations into one executive body acting under the President, while leaving intact the dual FCC-executive jurisdiction over the spectrum generally, was thus virtually the same approach taken by the President's Policy Board in its 1951 report. The only notable difference, as explained by the head of the 1951 Board—who was also a member of the Cooley committee—was that the Policy Board would have left the creation of the executive board to the President rather than Congress.<sup>71</sup>

In May, 1959, Oren Harris, Chairman of the House Interstate and Foreign Commerce Committee, introduced a bill<sup>72</sup> recommended by the Cooley Committee to implement its proposals. Though hearings were held on the bill and on the problem of allo-

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65. *Id.* at 43-44.

66. *See id.* at 50.

67. *See id.* at 54-55.

68. *Id.* at 54.

69. *Id.* at 44, 53.

70. *Id.* at 50, 55, 78.

71. *Id.* at 78.

72. H.R. 7057, 86th Cong., 1st Sess. (1959).

cations generally,<sup>73</sup> the only result was the introduction of another bill by Harris in July.<sup>74</sup>

Harris' second bill would have created a so-called "Government Frequency Administrator" with authority similar to that of the so-called "National Telecommunications Board" proposed earlier. However, the second Harris bill went beyond the earlier bill and the Cooley Committee's recommendations. In addition to creating the Government Frequency Administrator it would have created a three man "Frequency Allocation Board" in the executive branch to: (1) conduct continuing investigation of, and develop long-range plans for, the utilization of the spectrum; (2) allocate, modify or cancel on its own initiative—or on application by the FCC or the Frequency Administrator—radio frequencies for federal and non-federal government use "as the Board deems appropriate;" and (3) advise the President on foreign relations matters concerning use and division of the spectrum. Finally, in cases involving "questions of national security or foreign relations" the President would have express power of review, including the power to modify or completely override an order of the Board.

In its essential terms, the second Harris bill was little more than a revival of the Sadowski bill of 1950. Both bills would have unified final allocations authority in a so-called "independent" agency in the executive branch, something of a contradiction in terms. Harris' proposed creation of a Government Frequency Administrator to handle directly the allocations among Government users—evidently replacing IRAC—is a refinement of the earlier Sadowski bill, but apart from this the thrust of the proposals seems pretty much the same. Like the Sadowski bill, the Harris bill was never reported out of committee.

#### 4. 1960 and After: *The Continued Pursuit of Reform*

In 1960, prompted by the continuing concern over the growing need for more effective radio frequency control, the Senate Committee on Aeronautical and Space Sciences issued a staff report on "Policy Planning for Space Telecommunications."<sup>75</sup> Although primarily concerned with problems of space communications, the report's conclusions and recommendations were

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73. 1959 Hearings on Spectrum Allocation.

74. H.R. 8426, 86th Cong., 1st Sess. (1959).

75. POLICY PLANNING FOR SPACE TELECOMMUNICATIONS, REPORT TO THE SENATE COMMITTEE ON AERONAUTICAL AND SPACE SCIENCES, 86th Cong., 2d Sess. (Comm. Print Dec., 1960).

broader. It concluded that there was no effective coordination of spectrum management nor any developed policy regarding spectrum use. It recommended a comprehensive study of telecommunications policy, including a study of the mechanisms of policy formulation and coordination between the Departments of State and Defense, NASA, the FCC, the OCDM (OEP) and the Bureau of the Budget.<sup>76</sup>

These conclusions were reinforced by those of James Landis in his report on regulatory agencies to the President-elect in December, 1960, which concluded that there was an urgent need for greater coordination among the various agencies concerned with radio frequency allocation and management.<sup>77</sup> Although Landis' evaluation suggested rather pervasive weaknesses throughout the system, his proposal for institutional reform was a relatively modest and simple one. Landis proposed the creation of an Office for the Coordination and Development of Communications Policy within the Executive Office of the President, and the transfer to this office of all of the powers vested in the OCDM.<sup>78</sup>

Acting partially on these recommendations, President Kennedy in 1962 established the Office of Telecommunications Management (OTM) within the Office of Emergency Planning (OEP). The OTM was responsible for coordinating the telecommunications activities of the executive branch, promoting uniform policies and standards, developing data with regard to frequency requirements, encouraging research and development activities, and contracting for studies and reports related to these responsibilities. The President's authority under section 305(a) of the Communications Act to assign, amend, modify or revoke frequencies was delegated to the Director of the OEP with specific authority to redelegate to the OTM.<sup>79</sup> The Director of the OEP did redelegate this authority to the OTM to be exercised with the assistance of IRAC.<sup>80</sup> The responsibilities and functioning of the OTM and the extent to which this reorganization has altered frequency allocation and management in the federal sec-

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76. *Id.* at 76.

77. J. LANDIS, REPORT ON REGULATORY AGENCIES TO THE PRESIDENT-ELECT, 86th Cong., 2d Sess. 26-28 (1960) (printed for the Senate Judiciary Committee).

78. *Id.* at 86.

79. Exec. Order No. 10995, 3 C.F.R. § 535, 47 U.S.C. § 305 (1962).

80. MILITARY OPERATIONS SUBCOMMITTEE OF THE HOUSE COMMITTEE ON GOVERNMENT OPERATIONS, 88th Cong., 2d Sess., SATELLITE COMMUNICATIONS 80 (Comm. Print 1964).

tor will be discussed in greater detail below. Of course, the authority of the FCC over allocations to nonfederal users and the absence of any control over the division of the spectrum between federal and nonfederal users were unchanged by the Presidential reorganization of 1962.

Notwithstanding the persistence of criticism, and a growing number of private studies urging institutional reform,<sup>81</sup> the basic regulatory structure and administrative processes of spectrum allocation have not changed since 1962. A closer look at this structure and process of regulation is now necessary.

### III. THE ADMINISTRATIVE PROCESSES OF SPECTRUM MANAGEMENT

At the outset brief mention should be made of the basic international framework within which both federal government and nonfederal government allocations are made. The current framework is that established in Geneva by the 1959 International Telecommunication Convention<sup>82</sup> and supplemental regulations,<sup>83</sup> as modified in 1963.<sup>84</sup> The radio spectrum is allocated on a world-wide basis<sup>85</sup> among broad service classes such as "broadcasting," "land mobile" and "radionavigation." Although some service allocations are exclusive, many frequency bands are allocated for shared use by several services. For non-exclusive allocations, three priorities are established: "primary," "permitted" and "secondary." The first two have equal status except that in the preparation of frequency plans the "primary" service has priority. Stations of "secondary" service are required to protect "primary" or "permitted" stations against harmful interference. In addition, the Convention establishes certain minimum technical standards and provides methods for eliminating or minimizing interference and for registration of fre-

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81. *E.g.*, Coase; Metzger & Burrus; Rosenblum, *Low Visibility Decision Making by Administrative Agencies: The Problem of Radio Spectrum Allocation*, 18 *AD. L. REV.* 19 (1965) [hereinafter cited as Rosenblum].

82. Radio Regulations, Dec. 21, 1959, 12 U.S.T. 1761, T.I.A.S. No. 4892.

83. Radio Regulations, Dec. 21, 1959, 12 U.S.T. 2377, T.I.A.S. No. 4893.

84. Partial Revision of Radio Regulations, Geneva 1959, and Additional Protocol, Nov. 8, 1963, 15 U.S.T. 887, T.I.A.S. No. 5603.

85. For purposes of allocation the world is divided into three regions which *very* roughly are: region 1—Europe and Africa; region 2—Asia and Australia; and region 3—North and South America. Article 5, nos. 125-36.

quencies with the International Frequency Registration Board, an organ of the International Telecommunications Union, which in turn is an organ of the United Nations.

The Geneva Convention makes provision for regional and bilateral agreements among members so long as such agreements are consistent with the Convention. The United States is a party to many such agreements,<sup>86</sup> some of the more noteworthy being the North American Regional Broadcasting Agreement between the United States, Canada, Cuba, Dominican Republic and the United Kingdom on behalf of Jamaica and the Bahama Islands;<sup>87</sup> the United States-Mexico Agreement on Radio Broadcasting;<sup>88</sup> the Canadian-United States Television Allocations Agreement;<sup>89</sup> and the United States-Mexico UHF and VHF television allocations agreements.<sup>90</sup>

Within this international framework, domestic frequency allocations and management are subject to the dual authority of the FCC and the OTM. The discussion which follows describes briefly the basic allocations process with respect to the private sector and the federal sector, as well as the coordination between the two. No attempt will be made to go into extensive detail with respect to the particular procedures and operational policies relevant to the allocations process. Even to list all of the pertinent regulations, manuals, and policy directives would be an exhaustive task—and largely a fruitless one from the standpoint of examining the basic institutional structure and processes.

#### A. SPECTRUM MANAGEMENT IN THE PRIVATE SECTOR

Three very broad classifications of services have been established for purposes of allocating frequencies among nonfederal users as well as for regulating and licensing: (1) Common Carrier, (2) Safety and Special Services and (3) Broadcast. Each of these broad classifications is in turn broken down into more specific categories of services. For example, the Safety and Special Radio Services includes: (1) Industrial Radio Services, (2) Public Safety Radio Services, (3) Land Transportation Radio

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86. For a current list see 47 C.F.R. § 2.603 (1968).

87. Nov. 15, 1950, 11 U.S.T. 413, T.I.A.S. No. 4460.

88. Jan. 29, 1957, 12 U.S.T. 734, T.I.A.S. No. 4777.

89. June 23, 1952, 3 U.S.T. 4443, T.I.A.S. No. 2594.

90. Ultra High Frequency Channel Allocation Agreement with Mexico, July 16, 1958, 9 U.S.T. 1091, T.I.A.S. No. 4089; Border Television Assignment Agreement with Mexico, April 18, 1962, 13 U.S.T. 997, T.I.A.S. No. 5043.

Services, (4) Marine Radio Services, (5) Aviation Radio Services, (6) Citizens Radio Services, and (7) Amateur Radio and Disaster Communications Service.<sup>91</sup> Finally, each of the Safety and Special Services is further subdivided. For example, the Industrial Radio Service includes some 10 services: (1) Petroleum Radio Service, (2) Forest Products Radio Service, (3) Special Industrial Radio Service, (4) Manufacturing Radio Service, (5) Power Radio Service, (6) Business Radio Service, (7) Motion Picture Radio Service, (8) Relay Press Radio Service, (9) Industrial Relocation Service, and (10) Telephone Maintenance Radio Service.<sup>92</sup>

### 1. *Service Allocations*

Allocations planning, development of technical allocation standards, consideration of international treaty matters, and coordination with the executive are all a part of the initial responsibility of the Frequency Allocation and Treaty Division of the Office of the Chief Engineer. Allocations among the various services and among classes of users within each service are handled through administrative rule-making proceedings. The rule-making procedures, conducted in conformance with section 4 of the Administrative Procedure Act,<sup>93</sup> characteristically entail widespread participation by members of the industry with some limited participation by members of the public. Although participation is in many cases confined to submission of written comments, oral argument is frequently permitted in major proceedings. Also, since rule-making proceedings are not generally "restricted" proceedings within the meaning of the Commission's *ex parte* communications rules,<sup>94</sup> direct, off-the-record contact with the Commission by interested persons may be permissible. However, rule-making proceedings may be subject to the prohibition against *ex parte* contracts where (1) the proceeding involves a particular contest of issues among parties or between interested parties and the Commission, or (2) the Commission in its notice of rule-making has expressly restricted the proceeding, requiring all communications to be made on the record.<sup>95</sup>

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91. See 33 FCC ANN. REP. 88-105 (1967).

92. 47 C.F.R. §§ 91.251-.755 (1968).

93. 5 U.S.C. § 553 (1964).

94. See 47 C.F.R. §§ 1.1201-.1251 (1968). See generally *Ex Parte Presentations*, 1 F.C.C. 2d 49, 5 P & F RADIO REG. 2d 1681 (1965).

95. *Sangamon Valley Television Corp. v. United States*, 269 F.2d 221 (D.C. Cir. 1959). The Commission has not promulgated rules applicable to rule-making proceedings generally, but has indicated its intention to specify on an ad hoc basis those rule-making proceedings

The basic structure of allocations and the division of the spectrum among the different services in the private sector has been largely fixed since 1949.<sup>96</sup> Very broadly, the spectrum, from .01 to 90,000 mc, is divided as follows:<sup>97</sup>

<i>Allocation</i>	<i>Frequencies (mc)</i>	<i>Percentage of total spectrum</i>
Government	17,667.3	19.6
Non-Government	11,485.3	12.8
Broadcasting	517.0	0.6
Land Mobile	42.7	0.1
Others (miscellaneous; e.g., aeronautical, maritime, amateur, citizens radio astronomy)	10,874.6	12.1
Nonallocated	26.0	0.03
Shared (Government and non-Government)	60,872.4	67.6

The controversy with respect to private user allocation—principally that of accommodating the growth of the land mobile users—has focused primarily on the portion of the spectrum between 30 and 960 mc,<sup>98</sup> particularly on the 470-890 mc band which is currently allocated exclusively to UHF television. The non-broadcast users—chiefly land mobile—have fought vigorously for reallocation of a major segment of this band to nonbroadcast use.

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to which *ex parte* prohibitions will be applied. *Rule Making Procedures*, 30 Fed. Reg. 9277, 5 P & F RADIO REG. 2d 1701 (1965). Some rule-making proceedings such as those establishing rates are required by statute to be decided on the record after notice and hearing. These are, of course, subject to the *ex parte* rules. 47 C.F.R. § 1.1207 (1968).

96. 32 FCC ANN. REP. 48-49 (1966); General Mobile Radio Service, 13 F.C.C. 1190 (1949).

97. Derived from 47 C.F.R. § 2.106 (1968). Frequencies are given to the nearest tenth of a megacycle and percentages to the nearest tenth percentile.

All frequencies below 25 mc are included within the "shared" category. Most of these are shared by Government and non-Government users, although this is not specifically indicated in the rules. It should be noted that although these figures include all frequencies up to 90,000 mc, all frequencies above 40,000 mc, except for a two mc band assigned for radio astronomy, are used only for amateur or experimental purposes. The 50,000 mc above 40,000 are included in the "shared" category.

98. Broadcasting and Government users have 55.3 per cent and 25.8 per cent of this portion of the spectrum respectively. Some 8.2 per cent is shared use; 4.4 per cent is allocated to land mobile; 3.5 per cent to "other" (mostly aeronautical and maritime) and 2.8 per cent is not allocated. See OFFICE OF TELECOMMUNICATIONS MANAGEMENT, REPORT ON FREQUENCY MANAGEMENT WITHIN THE EXECUTIVE BRANCH OF THE GOVERNMENT 10, App. 2 (1966) (The OTM figures have been adjusted to reflect the recent transfer of 26 mc from Government to private use).



In its 25 to 890 mc proceeding in 1964<sup>99</sup> the Commission declined to do so but proposed instead to meet the immediate needs of land mobile users by "channel splitting" in one important band of frequencies already allocated, a measure recently put into effect,<sup>100</sup> and to continue to study other possible measures including shared use of some television channels. However, more recently the Commission has instituted rule-making proceedings to investigate possible reallocation of the upper UHF TV band to land mobile use in part as a consequence of the Government's relinquishing some 26 mc above 890 mc from Government allocated frequencies to private use.<sup>101</sup> It has instituted similar proceedings to investigate the possibility of land mobile sharing of certain lower UHF frequencies as a "short term" measure.<sup>102</sup>

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99. *Report and Order, Allocation of Frequencies Between 25 and 890 mc*, 29 Fed. Reg. 4820, 2 P & F RADIO REG. 2d 1513 (1964). This proceeding was instituted in 1957 to review existing allocations policies and to examine all allocations made in this band. The Commission found that the land mobile services were not only making full utilization of their frequencies for a variety of important uses, but that they were looking forward to continuation and expansion of such uses. But the problem of finding spectrum space was not as easily resolved as that of identifying the need for it. There was only one existing source of additional usable but unused space—those frequencies between 470 and 890 mc allocated to UHF television. However, the Commission in 1964 concluded that, while reallocation of UHF television channels was "worthy of consideration" in 1957, since there was (a) uncertainty as to the viability of UHF television and (b) some possibility of expansion of the number of VHF channels available, subsequent developments were considered to have changed both of these circumstances. The OCDM had closed the door to any possibility of obtaining additional VHF channels, and the passage of the all-channel receiver law in 1962, 47 U.S.C. § 330 (1964), had made possible a viable VHF-UHF television system. These considerations, coupled with increased need for additional television services—commercial and educational—led the Commission to conclude that the 82-channel television system should be retained "as against usage of this frequency space for the other various purposes considered in this proceeding." 28 Fed. Reg. 4830, 2 P & F RADIO REG. 2d at 1541.

100. *Report and Order, Frequencies in 450-470 mc Band*, 13 F.C.C. 2d 866, 12 P & F RADIO REG. 2d 1556 (1968).

101. *Notice of Inquiry and Notice of Proposed Rule Making*, 33 Fed. Reg. 10807 (1968). The proposal, if adopted, would result in the reallocation of 40 mc for private land mobile use and 75 mc for common carrier use in the 806-960 mc band (some 26 mc remains allocated to the Government and the remainder of the frequencies now allocated to private use would not be modified). This would involve reallocation of UHF TV channels 70-83 to land mobile uses to be shared with television translators.

102. *Notice of Proposed Rule Making*, Dkt. No. 18261, F.C.C. 68-743 (July 17, 1968). The Commission's proposal is to study the possibility of shared use of certain of the lowest seven UHF frequencies in the

Once allocations are made among the various services, assignment of frequencies to individual users is made through licensing.<sup>103</sup> The processing of licenses is initially the responsibility of three service bureaus. Though detailed analysis of the licensing processes for the various services is beyond the scope of this article, a brief survey of broadcast and private land mobile services licensing may be helpful.

(a) Assignment to Broadcast Users

Licenses in the broadcast services are issued for a three year term, but are renewable, and generally renewed, over an indefinite number of terms. Applicants must satisfy a variety of nontechnical qualifications regarding citizenship, character (absence of some past misconduct such as violation of antitrust laws), financial matters (ability to construct and operate station), legality of operation (conformance with multiple ownership rules) and program proposals. If these qualifications are satisfied and the license application meets all technical specifications a license is normally issued unless the application is protested or a competing, mutually exclusive application is filed. In that case an adjudicative hearing may be required.<sup>104</sup>

Broadcast licenses confer exclusive use of the assigned frequencies within a specified area with the corresponding protection against co-channel and adjacent channel stations. Technical standards for frequency assignment and use vary greatly among the three broadcast services. The AM radio band—535-1605 kc—

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largest 25 urbanized areas where demands upon the spectrum are greatest. The Commission regards this proposal as a short term approach on the assumption that there is an immediate need for spectrum space for land mobile use and that the equipment changes by land mobile users to use these frequencies could be made easily.

103. An excellent general summary of the structure of broadcast licensing is set forth in W. JONES, *CASES ON REGULATED INDUSTRIES 1050-76* (1967). A more detailed outline of the technical aspects of licensing on which the following discussion draws substantially is FCC OFFICE OF THE CHIEF ENGINEER, REPORT No. F-6601, *TECHNICAL ASPECTS OF CONSIDERATIONS OF FREQUENCY ASSIGNMENTS 9-20* (1965) [hereinafter cited as FCC REP. No. F-6601]. The licensing standards, procedures and requirements for the Broadcast Service are set forth in 47 C.F.R. pt. 73 (1968).

104. On the requirement of hearing, see, *e.g.*, *Ashbacker Radio Corp. v. FCC*, 326 U.S. 327 (1945) (mutually exclusive applications); *FCC v. NBC (KOA)*, 319 U.S. 239 (1943) (hearing on protest of electrical interference); *Office of Communication of United Church of Christ v. FCC*, 359 F.2d 994 (D.C. Cir. 1966) (hearing on public protest to program practices); *Carroll Broadcasting Co. v. FCC*, 258 F.2d 440 (D.C. Cir. 1958) (hearing on protest of economic injury).

is divided into 107 channels with 10 kc separation between assignable frequencies.<sup>105</sup> The channels are divided into three general classes: (a) clear channels for high-powered stations (Classes I & II) intended to provide primary (groundwave) and secondary (nighttime, skywave) service over an extended area; (b) regional channels for medium-powered stations (Class III) intended to provide primary service to larger cities and contiguous rural areas; and (c) local channels for low-powered stations (Class IV) intended to provide primary service only to a city or town and contiguous area. Each class of stations has well defined protected contours within which its signal is intended to be free of "objectionable interference"—as defined by the Commission's rules—from co-channel and adjacent channel stations. The degree of protection also varies depending on the class of station.

The FM band—88-108 mc—is divided into 100 assignable channels, each 200 kc in width. The first 20 channels are reserved for use by noncommercial, educational stations, the remaining 80 for regular commercial use. Somewhat analogous to the AM structure, commercial FM channels are divided into three classes, A, B, and C. Class A channels are designed for low-power stations intended to serve relatively small communities and surrounding area. Class B channels are designed for medium-power stations intended to serve a sizeable city or town or the principal city of an urbanized area. Class C channels are for high-power stations intended to serve a community or city and large surrounding areas. Noncommercial, educational FM stations operate with very low power on a fourth class of channel, Class D. Unlike the AM allocation scheme, however, commercial FM channels are assigned through rule-making proceedings to

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105. The Commission has recently implemented a "freeze" on the filings of further applications for AM stations pending a study to determine whether:

- (i) a significant national need for new AM stations or major changes in existing stations which would not serve underserved areas still exists;
- (ii) presently available frequency space should be conserved for future use in developing areas and to eradicate what "white" area remains;
- (iii) any future allocation system should view AM and FM as a single aural service; and
- (iv) further AM assignments on a demand basis constitute unwise use of valuable spectrum space.

*Report and Order, Freeze on AM Applications*, 13 F.C.C. 2d 866, 867-68, 13 P & F RADIO REG. 2d 1667, 1669 (1968). The freeze is the second in recent years to be put on AM applications. The earlier freeze resulted in a tightening of technical and service needs criteria for AM licensing, see *Report and Order, AM Assignment Standards*, 2 Fed. Reg. 9492, 2 P & F RADIO REG. 2d 1658 (1964), but the number of AM stations has continued to expand greatly without, however, meeting the needs of populations in unserved ("white") or underserved ("grey") areas.

specific communities and can only be used in that community or within a 25 mile radius. The table of assignments is based on a system of minimum mileage separations between co-channel and adjacent channel stations. Protection against interference derives solely from these minimum mileage separations and from the specification of maximum power and antenna height for stations of the various classes. For assignment purposes the country is divided into three zones, I, I-A and II. Class A low-power stations operate solely on Class A channels in all three zones. Class B medium-power stations may operate on either Class B or Class C channels, but only in Zones I (roughly the northeast quarter of the country) and I-A (most of California). Class C stations may use either B or C channels, but only in Zone II, which is that portion of the country not in the other two zones. The mileage separation varies depending on the class of stations involved so that, for example, the co-channel separation between two A stations is 65 miles, and between a Class A and Class B it is 150 miles.

In television, there are 82 channels of 6 mc each. Channels two to four occupy 54-72 mc; channels five and six, 76-88 mc; channels seven to 13, 174-216 mc. The 70 UHF channels occupy a single band, 470-890 mc. As in the case of FM, television channels are assigned by rule-making to specific communities. The system of assignments is based on a plan of minimum mileage separation requirements similar to that for FM, but there is only a single class of service. As in the case of FM, television licensees are protected from interference solely by means of the minimum mileage separation requirements<sup>106</sup> and the specification of maximum powers and antenna heights. These three specifications—mileage separation, power, antenna height—vary depending on the channel involved and on the zone of the country. For television the country is divided into three zones, analogous to but not entirely identical with those for FM.

(b) Assignment to Private Land Mobile Users<sup>107</sup>

The licensing of private land mobile users varies consider-

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106. In some exceptional cases the mileage separation requirements have been waived and "equivalent protection" provided by means of directionalization. See generally *Interim Policy on VHF TV Channel Assignments*, 29 Fed. Reg. 9942, 21 P & F RADIO REG. 1695 (1961).

107. On the technical standards and requirements for private land mobile licensing see FCC REP. No. F-6601; 47 C.F.R. pts. 89 (public safety), 91 (industrial radio), and 93 (land transportation). No attempt has been made to describe the licensing of common carrier services, the

ably from the licensing of broadcasters. Licenses are generally issued for five year terms, but are renewable an indefinite number of times. Nontechnical qualifications, apart from that of citizenship, are virtually nonexistent and technical requirements are generally not exacting. If minimal technical requirements are met, a license is generally issued as a matter of course.

The principal bands allocated to non-Government land mobile use are 30-50 mc (alternate one megacycle segments are assigned to Government and non-Government respectively), 150.8-162 and 450-470 mc. As technology has progressed, the separation between channels has been reduced. The spacing varies, some services in the 150.8 mc band using frequencies separated by 15 kc, others by 30 kc. In the 30-50 mc band, 20 kc is the standard separation while in the 450-470 kc band, separation has now been cut to 25 kc.

Unlike broadcast and common carrier licensees, private land mobile frequencies are licensed on a nonprotected, nonexclusive basis. Thus individual users within a particular service and in a particular area share the frequencies on a "party line" basis. Also, some frequencies are assigned to two or more different services where the services tend to operate in different geographical locations.

Although individual users are not protected against interference, some measures are taken to minimize it. License applicants seeking assignment of a frequency must file a statement that existing licensees operating on the same or adjacent channels within a specified area have been notified of the application. Additionally, the applicant must submit a report based on a field study of the same area indicating the probability of interference to existing users. As an alternative, however, an applicant may submit a statement from a frequency advisory committee comprised of other users in the same service area which contains the opinion of the committee as to the most desirable assignment. Because of the expense of notification and engineering studies, the latter alternative is the prevailing method of frequency coordination. Although neither the applicant nor the Commission is bound by the recommendations of the coordinating committee, in practice the recommendations are accepted.

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standards for which are more akin to those for broadcast stations than private land mobile stations. See generally FCC REP. No. F-6601; 47 C.F.R. pt. 21 (1968).

In addition to user coordination, the Commission in some instances makes service assignments on a geographical basis. For example, the 30-50 mc band provides longer range communication for a given combination of power and antenna height than do higher bands. Accordingly, it is highly suitable to services requiring coverage over larger areas, such as police, highway maintenance or forestry-conservation. However, the band is also subject to long distance interference during periods of high solar activity. To prevent this effect, the Commission assigns one of these frequencies to a limited number of adjoining states and does not assign it again except to another group of states approximately 2,500 miles away.

## 2. *Supervision of Use*

Supervision of use and compliance with Commission regulations, licensing standards and policies are the initial responsibility of three major bureaus—the Broadcast Bureau, the Safety and Special Services Bureau and the Common Carrier Bureau—corresponding to the three major services. In the Broadcast Service probably the most important method of supervision is the process of renewal by which the licensee has at least the burden of demonstrating compliance with regulations and regulatory policy.<sup>108</sup> However, renewal of individual licenses is the norm from which there are infrequent deviations.

License renewal is not the only means of ensuring compliance and, outside the Broadcast Service, is probably not even the most important means. The Commission's Field Engineering Bureau maintains a system of monitoring, inspecting and investigation of both broadcast and nonbroadcast stations, principally to detect unlicensed stations and to ensure compliance with non-interference and other technical regulations.<sup>109</sup> Where enforcement action may be warranted, the information gathered by the monitoring or inspection is forwarded to the bureau having primary responsibility for the service.<sup>110</sup> Violations are punishable by a variety of formal sanctions, including cease and desist orders for nonlicensed stations, license revocation, forfeiture, and even criminal penalties.<sup>111</sup> The FCC's monitoring capa-

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108. *E.g.*, Office of Communication of United Church of Christ v. FCC, 359 F.2d 994 (D.C. Cir. 1966).

109. See 33 FCC ANN. REP. 106-16 (1967).

110. *Id.* at 110.

111. 47 U.S.C. § 312(a) (1964) (revocation); 47 U.S.C. §§ 312(b) & (c) (1964) (cease and desist order); 47 U.S.C. §§ 501, 502 (1964) (criminal penalties); 47 U.S.C. § 503(b) (1964) (forfeiture).

bility, however, is far from complete, particularly in the Safety and Special Services area where the number of users is vast and the nature of the use varied. Thus the Commission does not now have adequate information on frequency loads and utilization in the land mobilization services, although it has contracted for a partial study of the problem by the Stanford Research Institute.<sup>112</sup> It is understood, however, that this study is limited to quantitative loading and does not entail investigation into the manner in which frequencies are being used.

#### B. SPECTRUM MANAGEMENT IN THE FEDERAL SECTOR

From 1922 to 1951, the President's powers over allocation and use of frequencies by the federal government under section 305<sup>113</sup> were implemented solely through IRAC, a committee comprised of the principal Government users, which assigned frequencies chiefly through coordination, negotiation and compromise among the users themselves. In 1951 IRAC was nominally placed under the direction of the Telecommunications Advisor, subsequently coming within the authority of the ODM, and still later the OCDM. Essentially, however, the process of allocation remained unchanged through these various reorganizations.<sup>114</sup> As earlier noted, in 1962 the President's authority under section 305 was delegated to the Director of the Office of Emergency Planning (now the Office of Emergency Preparedness). Also delegated to the Director were the telecommunications functions and responsibilities previously vested in the OCDM, including those contingent on a declaration of emergency by the President.<sup>115</sup> At the same time the position of Director

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112. See *Notice of Proposed Rule Making*, Dkt. No. 18261, FCC 68-743 (1968). The Commission has undertaken some special monitoring studies of utilization. *E.g.*, FCC OFFICE OF THE CHIEF ENGINEER, REPORT No. F-6701, REPORT AND ANALYSIS OF NEW YORK CITY MONITORING SURVEY OF 150.8-162.0 MEGACYCLE LAND MOBILE BAND (1967). Also some private studies have been made of frequency usage in certain cities and areas.

113. 47 U.S.C. § 305(a) (1964). Under § 305(d), the President also has authority to authorize use of low power radio by foreign governments at their embassy or legation in Washington, D.C. In addition, he has emergency powers to control all communications in the event of war or national emergency under § 606. See 47 U.S.C. §§ 606(a), (c), (d) (1964).

114. For a description of IRAC and its processes under the OCDM, see 1959 Hearings on Spectrum Allocation at 144-65.

115. Exec. Order No. 10995, §§ 3, 4, 3 C.F.R. § 535, 47 U.S.C. § 305 (1962). Later in 1962 subsection (d) was added to section 305 to give the President authority to license foreign governments to operate low

of the Office of Telecommunications Management (OTM) was created within the OEP, with a general mandate to:

(a) Coordinate telecommunications activities of the executive branch of the Government and be responsible for the formulation after consultation with appropriate agencies of overall policies and standards therefor. He shall promote and encourage the adoption of uniform policies and standards by agencies authorized to operate telecommunications systems. Agencies shall consult with the Director of Telecommunications Management in the development of policies and standards for the conduct of their telecommunications activities within the overall policies of the executive branch. (b) Develop data with regard to United States Government frequency requirements. . . . (d) Contract for studies and reports related to any aspect of his responsibilities.<sup>116</sup>

The Director was instructed to establish interagency advisory committees and working groups composed of representatives of interested agencies and consult with them as necessary. IRAC was directed to serve the Director in an "advisory capacity" as he "deems it necessary."<sup>117</sup> The order further expressly authorized the Director of OEP to redelegate to the OTM the responsibility for frequency assignments and the authority under section 606. This re delegation followed.<sup>118</sup>

Subsequent responsibilities delegated to the OTM include "policy direction of the development and operation" of the National Communications System which President Kennedy in 1963 ordered to be established to link together the communications facilities and components of the various federal agencies.<sup>119</sup> The Director is, in addition, an advisor and liaison between the President and Comsat.<sup>120</sup> Finally, he is the Special Advisor to the President on Telecommunications.<sup>121</sup>

As presently organized,<sup>122</sup> the Office of Telecommunications Management is comprised of five principal staff assistants and a

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power radio stations at their legations or embassies in Washington. This authority was subsequently delegated to the OEP by Exec. Order No. 11084, 3 C.F.R. § 719, 47 U.S.C. § 305 (1963) and redelegated in turn to the OTM.

116. Exec. Order No. 10995, § 2, 3 C.F.R. § 535, 47 U.S.C. § 305 (1962).

117. *Id.* § 5.

118. OEP Order No. 1100.

119. *White House Memorandum*, Aug. 21, 1963, 28 Fed. Reg. 9413 (1963). The directive grew out of the Cuban missile crisis when President Kennedy found he was unable to contact U.S. ambassadors and other U.S. representatives abroad.

120. Exec. Order No. 11191, § 2(b) (4), 3 C.F.R. § 273 (1965).

121. *White House Memorandum*, *supra* note 119.

122. For a current organization chart see *Hearings on Government Use of Satellite Communications Before the Military Operations Sub-*



legal counsel; three "directorates" which handle (a) national communications, (b) research and technology, and (c) frequency management; and two major committees, a Frequency Management Advisory Council and IRAC. As of August, 1968, the staff numbered less than 70 persons, of whom about half are clerical.

IRAC, subject to the direction and authority of the OTM Director, remains the primary organ for making routine frequency assignments. IRAC is presently comprised of representatives of the Departments of State, Treasury, Army, Navy, Air Force, Interior, Agriculture, Justice, Commerce, Transportation (U.S. Coast Guard and the FAA), the AEC, USIA, NASA and GSA. Though these are the principal Government users of the spectrum, they are not the only users. Others, such as the Federal Reserve Board, obtain representation on the Committee when applying for an assignment.<sup>123</sup> The officers and subcommittee members of IRAC are chosen by the OTM Director from the staff of the Frequency Management Directorate.

The IRAC substructure consists of the FAS, the Technical Subcommittee, the Spectrum Planning Subcommittee, the International Notification Group, the Secretariat, two special groups—the Aeronautical Assignment Group and the Military Assignment Group—and ad hoc groups established as needed.

The detailed processes of frequency assignment are not as easily described as the institutional structure. In marked contrast to the processes of the FCC, which are open to public notice and, in some measure, to participation by "interested" members of the industry and even the general public, those of IRAC/OTM are not open to public view or public participation. In 1965 the OTM did issue a "Manual of Regulations and Procedures for Radio Frequency Management," a codification of the regulations, procedures and policy guidelines for the assignment and use of frequencies. However, except for a few excerpts of very general import, the manual is classified.

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*comm. of the House Comm. on Government Operations, 89th Cong., 2d Sess. 265 (1966).* The discussion of the OTM and IRAC organization and functions which follows is based principally on a memorandum furnished by the OTM and draws also upon discussions with the Director and staff members and with the FCC liaison representative.

123. The FCC has not been a member of IRAC since 1952, but the FCC is represented on the full committee by a liaison. See text accompanying notes 128-29 *infra*. Also, somewhat curiously, the FCC does have membership on the Frequency Assignment Subcommittee (FAS) since its monitoring activities give it the status of a frequency user.

Within the limits set by this classification the process is described generally by the OTM as follows:

[T]he Government agency analyzes its mission to determine communications-electronics requirements. Next, the agency frequency manager examines applicable policies, rules, regulations, frequency allocations, available equipment, frequencies already available to the agency, and determines that frequency support is possible before obligating funds for development or procurement of communication-electronic equipment or station sites. When it is evident that frequency support is not available without an impact on existing operations, the IRAC and/or the DTM are consulted. When new types of communications-electronics equipments are required an electromagnetic compatibility analysis is made . . . to determine whether there will be an adverse impact upon existing operations. . . .

In cases where frequency support is considered possible without any electromagnetic incompatibility, the agency frequency manager consults frequency assignment usage records, makes the necessary technical studies, selects possible frequencies, makes any required engineering evaluations, coordinates the selection with the other agencies involved at the local and headquarters level, and files an application with the Executive Secretary of the IRAC. If the proposal is not technically compatible with existing authorizations, adjustments are made or the process is repeated until a solution is found.

The FCC Liaison Representative to the IRAC submits memoranda requests for coordination on non-Government use of frequencies in shared frequency bands, and in other bands where he considers that there might be incompatibility with Government operations.

The IRAC Secretariat screens the applications for accuracy, completeness, and compliance with procedures; assigns a docket number for identification; includes the particulars on the Agenda of the IRAC Frequency Assignment Subcommittee (FAS), including an ADP interference analysis for high frequency use when appropriate; and distributes a copy of the Agenda to each agency and the FCC for study.

The Frequency Management Directorate, OTM, meanwhile reviews the Government applications to ensure adequate justification, compliance with policy and regulations, technical appropriateness, probability of major problems, and whether there is a technical conflict with assignments of non-members of the IRAC.

Each month the FAS . . . considers pending items and takes agreed action within policy guidance. When policy guidance is needed [or] agreement cannot be reached [or] the IRAC has so directed, or an agency so requests, applications are referred to the IRAC. . . . Matters which cannot be resolved within the IRAC . . . or when so directed by the DTM, or (when) requested by an agency, are referred to the Frequency Management Directorate where they are resolved or referred to the DTM. Matters of considerable importance, such as changes to the Table of Frequency Allocations, significant Government use of non-Government frequency bands, and advice to the Department of State, are recommended to the DTM for consultation with the Commission or other appropriate agencies. . . .

As soon as possible after each FAS/FCC meeting, the IRAC Secretariat enters the action into the Master Record, prepares, has printed, and submits the list of Frequency Assignments to Government Radio Stations to the DTM for consideration for approval. Following DTM approval, distribution of the list is made to the agencies.<sup>124</sup>

It should be noted that if a Government agency is greatly dissatisfied with a decision of the OTM Director it can take the matter to the President. This would be an extreme situation, however, and the present Director has indicated that no such appeal to the President has been made since he took office in 1964.<sup>125</sup>

As the individual assignment proceedings are classified, so, of course, are the specific assignments themselves. However, a general listing of the number of frequency assignments, as of January, 1968, is given by the OTM as follows:<sup>126</sup>

Department or Agency	Frequency Assignments		
	Number*	%*	Rank
Agriculture	4,345	3.7	7
Air Force	24,916	21.2	1
Army	19,927	16.9	4
Atomic Energy Commission	2,763	2.4	8
Coast Guard, DOT	(5,868)	(5.0)	
Commerce	2,595	2.2	9
Federal Aviation Administration, DOT	(17,688)	(15.0)	
Federal Communications Commission	706	0.6	
Federal Reserve System	22	0.02	
General Services Administration	50	0.04	
Health, Education & Welfare	250	0.21	
Housing & Urban Development	1	0.001	
Interior	6,943	5.9	5
International Boundary & Water Commission	19	0.016	
Justice	5,209	4.4	6
Library of Congress	1	0.001	
National Science Foundation	68	0.06	
National Aeronautics and Space Administration	895	0.76	
Navy	22,083	18.7	3
Office of Economic Opportunity	11	0.009	
Post Office	99	0.084	
Smithsonian Institution	15	0.013	
State	58	0.05	
Tennessee Valley Authority	488	0.42	
Transportation	23,675	20.1	2

124. OTM memorandum, *supra* note 122. The process appears to be basically similar to that under the OCDM. See 1959 Hearings on Spectrum Allocation at 144-65. For a description of the typical clearance procedures within user agencies, see Coase at 22.

125. It is not known how many occasions there have been when IRAC could not resolve an assignment matter creating the necessity for a personal decision by the Director himself, or even by the Associate Director. Reportedly there have been few such occasions.

126. OTM memorandum, *supra* note 122.

(other than USCG & FAA)	(119)	(0.1)	
Treasury	1,142	0.97	
U.S. Capitol Police	3	0.003	
United States Information Agency	1,162	0.99	10
Veterans Administration	138	0.117	
Architect of the Capitol	1	0.001	
Dual Listings (Q & W)	272	0.27	
All Government Agencies	16	0.013	
Other	100	0.085	
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Totals * (exclude figures in parentheses)	117,973	100	

Formerly, once assignments were made there was no system for monitoring or periodic review to ascertain frequency load or utilization. Indeed, there was no monitoring capability for even the detection of interference. Such monitoring as was done was by the FCC. The present Director has undertaken to correct this. Contracts have been let for private interference monitoring in selected locations. More important from the standpoint of general spectrum management, the OTM has undertaken a program of inspecting Government stations and reviewing frequency utilization with a view to making a complete review of frequency usage every five years.<sup>127</sup> The effectiveness of this program and the sufficiency of OTM resources to carry it out successfully have yet to be established.

### C. COORDINATION BETWEEN FCC AND OTM/IRAC

Since the FCC and OTM have independent jurisdiction over the same radio spectrum, obviously it has been necessary to establish means of coordinating their respective allocations activities. From 1928 to 1952 such coordination was effected through FRC/FCC membership on, and subsequent chairmanship of, IRAC, despite some hostility on the part of federal agency members to the FCC's role.<sup>128</sup> After 1952, the FCC established liaison with IRAC which continues today. Liaison is the responsibility of the Frequency Allocation and Treaty Division of the Office of the Chief Engineer. The Assistant Chief Engineer and other representatives of the Division sit on IRAC and on each of its subcommittees, including the important FAS. FCC representatives also attend meetings of the OTM's Frequency Management Advisory Council.<sup>129</sup>

127. *Id.* The present Government list is to be made "current" by 1972.

128. See note 22 *supra*, and accompanying text.

129. 33 FCC ANN. REP. 126-27 (1967).

The need for coordination is more or less continuous. There are some bands above 25 mc which have been allocated for exclusive federal or nonfederal use by FCC-IRAC agreement;<sup>130</sup> these do not necessitate routine coordination. However, all of the bands below 25 mc and a large number of those above are allocated for shared use. Prior to making allocations in these bands, the FCC notifies the FAS to such effect. Similarly, federal agencies requesting frequencies in the shared bands notify the FCC. The FCC also receives notification through its FAS liaison representative. The FCC has no vote on executive assignments and vice versa, but a negative reaction apparently does result in the assignment being reviewed by the OTM Director.

In addition to routine allocations matters, coordination is also necessary to resolve interference problems between private and federal stations. These problems are resolved by liaison at the subcommittee level.<sup>131</sup> At the policy level the FCC maintains liaison directly with the Director of the OTM<sup>132</sup> and it is at this level that major allocations planning, such as adjustments in the allocations for exclusive federal or nonfederal use, is considered.

#### IV. THE SYSTEM'S CRITICS AND THE CASE FOR ADMINISTRATIVE REFORM

As evidenced in the earlier resumé of past critical studies and reform proposals, the most enduring feature of radio spectrum regulation has been criticism of the regulatory processes and an insistent call for reform. The following discussion is an attempt to evaluate some of the central criticisms and the case for administrative reform.

##### A. DUAL VERSUS UNIFIED CONTROL OF SPECTRUM ALLOCATIONS

To most critics, the central flaw of the regulatory system has been the division of allocations authority between the FCC and the executive, which allegedly is administratively inefficient insofar as it requires continuous coordination, results in at least partially overlapping functions and creates a potential for conflict between two agencies exercising "coequal" jurisdiction. In

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130. The establishment of exclusive bands goes back to a 1940 FCC-IRAC agreement (still in force), set forth in 1959 Hearings on Spectrum Allocation at 124.

131. 33 FCC ANN. REP. 126 (1967).

132. *Id.* at 127.

the judgment of a number of the critics, this division of authority is conducive to the dominance of executive interests over private interests in the use of the spectrum.<sup>133</sup> These criticisms have furnished the basic rationale for proposals to eliminate the division of authority and unify authority and responsibility in a single agency, department, board or other form of "spectrum czar."

### 1. *Executive Control*

Most advocates of unified authority have urged a single executive agency or department. Various approaches have been suggested. One possibility is simply to expand the present office of telecommunication management to give it central authority to allocate frequencies within both the private and federal government sectors. Alternatively, a separate office within the Executive Office of the President could be established with similar authority and responsibility.<sup>134</sup>

The proposal most frequently urged is the creation of an "independent" executive "super board" or agency outside the Executive Office of the President—again with authority to allocate frequencies to federal and nonfederal users. Both the Sadowski proposal in 1950 and the Harris proposal in July, 1959, would have substantially adopted such a scheme.<sup>135</sup> This is also the evident thrust of the President's Task Force proposal. It would establish a single "spectrum manager" in the executive branch which would have full allocations authority and other telecommunications policy and planning responsibilities.<sup>136</sup>

An alternative to the "super board" is the creation of a cabinet-level "Department of Telecommunications" to take over the allocation, policy and planning functions of the FCC, the Di-

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133. See critical studies reviewed in pt. 1, 1215-23. See also MILITARY OPERATIONS SUBCOMM. OF THE HOUSE COMM. ON GOVERNMENT OPERATIONS, 88th Cong., 2d Sess. 86, SATELLITE COMMUNICATIONS (1964); Coase at 20-40; Metzger & Burrus at 79-83; Rosenblum at 49, 53. The President's Task Force draws similar conclusions as to the inefficiency of dual jurisdiction although not apparently as to executive dominance. See the summary of its findings in BROADCASTING MAGAZINE, Dec. 16, 1968, at 30-38.

134. Compare Statement of the present OTM Director in *Hearings on Government Use of Satellite Communications Before the Military Operations Subcomm. of the House Comm. on Government Operations*, 90th Cong., 1st Sess. 72 (1967).

135. See notes 30 & 74 *supra*, and accompanying text.

136. See BROADCASTING MAGAZINE, Dec. 16, 1968, at 36, 38.

rector of the Telecommunications Management and IRAC.<sup>137</sup> These allocation and planning functions might also be vested in an existing department such as the Department of Transportation.<sup>138</sup> Proponents of these plans generally assume, however, that the regulatory and licensing functions would remain with the FCC or another independent agency.

To date, proposals to unify authority and responsibility for private and Government frequency use within the executive have not attracted widespread support. However, the recent endorsement by the President's Task Force of the idea of unifying all allocations authority in a single "spectrum manager" promises to stimulate renewed study of such proposals. Since only brief summaries of the Task Force report are now available it is not possible here to discuss its findings in full detail, but the general case which has been advanced for such a reorganization can be examined.

(a) Administrative Efficiency

*As a theoretical matter*, I cannot disagree with those who criticize the system of divided authority and responsibility on grounds of inefficiency, since there are burdens of continuous coordination and waste of manpower and agency resources inherent in the overlapping and duplication of functions.

However, the problem of administrative efficiency can be exaggerated. If one examines the respective staffs and activities of the FCC and the OTM, it is not evident that consolidation would substantially reduce the effort currently required to make allocations decisions. Because of the disparate interests and problems reflected in allocations to Government agencies and private users, apart from housekeeping details, there is little promise of meaningful economy of effort—particularly when one

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137. This appears to be the thrust of the proposal by Doyle, but the discussion is too general to know precisely what is proposed. Doyle, *Do We Really Need a Federal Department of Telecommunications?* 21 *FED. COM. B.J.* 3, 14-16 (1967).

138. Compare suggestions of the present Director in *Hearings on Government Use of Satellite Communications*, *supra* note 134, at 72-73. The proposal is to make the OTM, but not the FCC, a part of the Department of Transportation, presumably assimilating both into DOT. Congressman Dingell, Chairman of the Subcommittee on Regulatory Agencies of the House Select Committee on Small Business, has recently proposed legislation to transfer all allocations authority to the Secretary of Commerce. *BROADCASTING MAGAZINE*, Jan. 13, 1969, at 36. An alternative Dingell proposal would retain the dual jurisdiction but reorganize regulation in the private sector. See note 229 *infra*.

considers the already meagre staffs and resources committed to spectrum management in these two agencies.<sup>139</sup>

At the policy level some economies might be achieved by the elimination of the need for interagency policy coordination. Yet, although some policy matters obviously affect both the Government and private sectors, there are many which do not. In such cases any attempt to unify all policy judgment might result in positive diseconomies. As pointed out by one observer:

If central control is instituted, the necessity of referring all questions to the center involves expense in compiling and transmitting information and delay before decisions can be made.<sup>140</sup>

The problem here is not merely a problem of institutional size—which in itself should probably not be a major concern—<sup>141</sup> but is rather the problem of effective, efficient central control over the diversified interests reflected by all frequency users.

Finally, if one looks at the size of the FCC and the OTM, whose *combined* appropriations in fiscal 1968 were only slightly more than \$21 million,<sup>142</sup> it must be asked whether administrative efficiency is not a distinctly minor problem. For anyone really concerned about efficiency and economy in government, surely there are fatter fish to fry.

#### (b) Effective Overall Spectrum Management

A far more credible argument for unified authority is that divided jurisdiction does not ensure adequate supervision over spectrum utilization generally because there are no effective means of ensuring fair, efficient, socially desirable division of frequencies between Government and private use.<sup>143</sup> According to some critics this has resulted in the Government—particularly the military—taking too much for itself. Occurrences such as the Bendix incident,<sup>144</sup> where the FCC was “persuaded”

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139. See note 243 *infra*.

140. Coase at 39. Coase evidently believes this true not only of central authority over all federal and private users, but also of central control over federal users alone.

141. Doyle, *supra* note 137, at 3, 15.

142. BUREAU OF THE BUDGET, BUDGET OF THE UNITED STATES GOVERNMENT 216, 420 (1968).

143. This is one of the basic conclusions of the President's Task Force. See BROADCASTING MAGAZINE, Dec. 16, 1968, at 36. See also TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 204-06; Coase at 37; Metzger & Burrus at 78-84; 1959 Hearings on Spectrum Allocation at 34.

144. See Bendix Aviation Corp., Bendix Radio Div. v. FCC, 272 F.2d 533 (D.C. Cir. 1959), *cert. denied*, 361 U.S. 965 (1960). Bendix involved the reallocation of two frequency bands, 420-50 mc and 8500-9000 mc, previously shared by private aviation and Government users. In April,



to relinquish private frequencies to exclusive Government users, is an often cited<sup>145</sup> example which tends to support the conclusion that the present system is, in practical effect, biased towards the Government. On the other hand, FCC requests for Government frequencies have been rejected.<sup>146</sup> The recent action of the OTM in releasing to the FCC for private use 26 mc previously allocated exclusively to the Government<sup>147</sup> suggests the possibility of a more enlightened cooperative arrangement between the FCC and the executive than has prevailed heretofore. But this unprecedented generosity does not alter the teaching of the past: the system tends to favor Government users without assuring that Government need is paramount to private need.

However, insofar as unreasonable discrimination against private use has resulted from the present structure, it seems naive to suppose that establishing central authority *in the executive* will alleviate the problem. It is far more likely that this

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1958, the Office of Defense Mobilization, acting on behalf of the executive, urgently "requested" that the FCC withdraw these bands from private use, thereby permitting exclusive Governmental use for "vital defense" needs—"radiopositioning." The FCC granted the request and issued an order withdrawing the frequencies from private use. Bendix and others challenged the order on several grounds, including failure to comply with the public notice provisions of the Administrative Procedure Act, failure to grant a hearing, and on the ground that the Commission's reallocation of the frequencies was arbitrary. All of the challenges were rejected, and the court upheld the Commission's actions as reasonable:

We are satisfied that the Commission, confronted by the demands of the Executive for exclusive use of the frequency in question, had thus undertaken to do whatever was reasonably open to it in the light of national defense needs. . . . [T]he Commission possesses the authority to . . . accommodate the requirements of the Government itself.

*Id.* at 542.

The principal criticism of the Commission's action in the *Bendix* controversy is not that it acceded to the interests of national defense, but rather that it appeared not to give any close scrutiny to the basis for or validity of the defense claims asserted. See 1959 Hearings on Spectrum Allocation at 87-88. Insofar as this may carry the implication that the FCC did not know to what use the frequencies were to be put or the general need for the frequencies, this criticism is probably unjustified. In fact the Commission has access to information regarding executive use and is not without some capability for ascertaining need. Whether it might have been a little too "compliant" with executive wishes in this case is another matter, but it is unknown since the court honored the privilege asserted by the OCDM and held all particulars to be secret information affecting national defense.

145. *E.g.*, Coase at 29-30; Metzger & Burrus at 75-77.

146. A Commission request for VHF channels was turned down in 1956, see 1959 Hearings on Spectrum Allocation at 138, and again in 1960, 26 FCC ANN. REP. 44 (1960).

147. See note 101 *supra*.

will only exacerbate it. First, even though the executive agency having control would presumably not be a user, there would likely be strong, continuous pressure by sister agencies and departments to give them priority over competing private uses. And in cases where the demand is represented to be of vital importance to the federal government—particularly to national security or foreign policy or other comparable high aims—it strains belief to suppose that the allocation agency would presume to examine the demand with complete objectivity. There is likely to be no more critically objective or carefully balanced judgment than the FCC has rendered in acquiescing to the frequency demands of the Government. Nor would the judgment be any more subject to public scrutiny. Indeed, it could be less so. In the *Bendix* case at least the existence of the conflict—if not the particulars of the Government demands—was made public. It is doubtful that even this would have been known had the decision been made within a single, executive agency with indisputable jurisdiction. Second, even if such an agency attempted to be completely objective and independent and gave federal user demands the same critical, detached analysis that it gave competing private users, the fact remains that the pretense of independence would in the final accounting be largely just a pretense, *i.e.*, subject to presidential control, and dealing with such giant users as the military, Department of State or NASA, even a *cabinet-level* department of telecommunications would not be complete master of its own house.

Apart from the possibility of achieving a more equitable distribution between Government and private users of those frequency bands which are allocated on an exclusive-use basis, it has been contended that unifying allocations authority in a single executive agency would facilitate cooperative sharing of bands between executive users and private users. The President's Task Force study notes, for example, that certain Government frequencies go largely unused in areas where private needs are greatest; in such areas a sharing arrangement between Government and private users might alleviate the scarcity problem. However, it also notes there is at present no *single* agency which can make a decision implementing such a solution, and therefore all allocations authority should be unified in a single executive agency.<sup>148</sup>

Without disputing the Task Force findings as to the need and feasibility of such sharings, I do not see how they lead to the

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148. See BROADCASTING MAGAZINE, Dec. 16, 1968, at 36.

remedy proposed. The Task Force recommendation must rest on two assumptions: (a) that the present system of divided authority either precludes or hinders such a sharing arrangement, and (b) that the creation of unified authority in the executive would overcome whatever obstacles presently stand in the way of such a sharing arrangement. Either of these assumptions would seem difficult to substantiate. If such sharing is technically feasible, there is no reason to believe that private users would object to sharing what are now exclusively Government frequencies; nor does it seem probable that the FCC would interpose any objection. The only source of objection would seem to be the Government users and/or the OTM, which now has full authority over Government allocations. The option would thus seem to lie entirely with the executive even under the present system of divided jurisdiction. It is thus difficult to see what obstacle to a solution is presented by the present institutional structure, and it is equally difficult to see how giving the *executive* control over private allocations would remove whatever obstacles may presently exist. Arguably, unified authority in a single agency might facilitate the formulation and implementation of the technical and other conditions and requirements of such a sharing arrangement. But, why unify control in the executive branch? Why not in an *independent* agency free of the serious conflict-of-interest problems inherent in granting the executive unqualified authority to manage the entire spectrum?

(c) Improved Allocations Within Private and Federal Sectors

If it is unlikely that unified executive allocations control would bring about a better allocation of the spectrum between federal and nonfederal users, it is even less likely that allocations among federal or nonfederal users as a class would be improved over the present system of divided FCC-executive authority. The same considerations which lead to the expectation of continued dominance of major federal users over nonfederal users leads equally to the conclusion that among federal agencies, the major agencies would predominate over those with less exalted missions but with perhaps equally important frequency needs. If the Department of the Army, for example, made a demand for a frequency band "in the interest of national security," it seems highly improbable that a demand by the General Services Administration for the same frequencies would fare any better under such a system than would that of the VHF broadcasters or private land mobile users.

It has also been argued that the vesting of authority in an executive agency would improve allocations among nonfederal users. Although the Cooley Committee in 1959 concluded that the FCC's allocations responsibilities were "well carried out,"<sup>149</sup> this is disputed by many of the FCC's critics. But whether one accepts the Cooley Committee's judgment or that of FCC critics, the FCC's performance seems of doubtful relevance to the present issue.

Consider first the charge of bias. Nonbroadcast users in particular have long felt that the FCC has been too broadcast oriented<sup>150</sup> and have accordingly favored proposals to transfer the FCC's allocations authority to an executive department. Whether this criticism of FCC allocations policy is justified is beyond the concern of this article. The point here is simply that if such deficiencies do exist they can be altered within the existing institutional framework. That a policy may be deficient—even if it reflects a basic bias of the agency's members—scarcely warrants reorganization unless it can be demonstrated that the agency's performance is somehow the product of a defective administrative form. This has not been demonstrated. It is noteworthy that the Hoover Commission Task Force on Regulatory Commissions, although critical of the FCC's performance in a number of areas, concluded that these failures did not reflect a flaw in the administrative form, and recommended retention of the independent commission in its present form as the appropriate agency for regulation in the field.<sup>151</sup> This conclusion seems no less correct as applied to the Commission's handling of frequency allocations than it is as applied to its

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149. 1959 Hearings on Spectrum Allocations at 50.

150. See, e.g., the criticism by one of the principal advocates for the land mobile users:

In the band 25 - 890 megacycles (mc) . . . we find less than 41 mc available for land mobile operations, 492 mc allocated to TV, and 20 mc allocated to FM broadcasting. This allocation—41 mc versus 512 mc—is regarded by the mobile radio services as grossly unsatisfactory and unfair and is, in the legal sense, arbitrary, unreasonable and discriminatory.

Courtney, *The Double Standard*, 20 FED. COM. B.J. 152-53 (1966). See also Courtney & Blooston, *Development of Mobile Radio Communications—The "Work-Horse" Radio Services*, 22 LAW & CONTEMP. PROB. 626 (1957), criticizing the FCC's allocations policies and also its policy of licensing land mobile users on a nonprotected, party-line basis.

151. COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT COMMITTEE ON INDEPENDENT REGULATORY COMMISSIONS, TASK FORCE REPORT 96 (1949). See also the supporting STAFF REPORT ON THE FCC 22 (1948), which concluded that the defects which it found "do not appear to be inherent in the Commission form."

regulatory responsibilities in general. If, as sometimes charged, the Commission is "biased" toward broadcasters, I cannot understand how the Commission's particular form or organization has contributed to it. Certainly the FCC's status as an independent agency does not *inherently* incline it to one particular group or another or immunize it from legal or political change. If Congress or the courts directed the Commission to give higher priority to nonbroadcast users, surely it would be done. There has been no such directive despite occasional statements of dissatisfaction by some Congressmen. Indeed, it seems fair to say that Congress has been no less preoccupied with broadcasting than has the FCC.

Further, and most important, insofar as it reflects an attempt to purge the FCC of bias, elimination of the FCC's independent status and reconstitution of its allocations functions and responsibilities within the executive is not likely to result in any real purification of the administrative process. It may be noted that the criticism of special interest bias is not one uniquely directed at the FCC; it is a criticism which has been leveled at the independent regulatory agencies generally, and urged as a reason for abolishing them and revesting their authority in the executive, where it will not be dominated by special interest groups.<sup>152</sup> However, Professor Jaffe seems entirely correct in his statement that this sweeping attack "transcend[s] analysis."<sup>153</sup> It is more ideological than analytical. Jaffe notes:

[I]ndustry representation is not peculiar to the agencies. It is to my mind not a little curious that the critics limit their examination of this phenomenon to the independent agency. I would suppose that it was necessary first to establish the executive agencies as the norm and then to show how the independent agencies tend to depart from that norm. Yet anyone who follows the activities of the Department of Agriculture, for example, comes to feel (though this too is no doubt an exaggeration) that the Department is a glorified farmer's lobby.<sup>154</sup>

Other examples might be added to Jaffe's. Few would suppose that the Commerce Department is other than strongly loyal to, if not an apologist for, business, or that the Labor Department is other than pro-labor or that the Highway Administration is not warmly responsive to highway interests. Moreover, such loyalties are not confined to executive agencies with largely "pro-

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152. *E.g.*, M. BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION (1955).

153. Jaffe, Book Review, 65 YALE L.J. 1068, 1076 (1956).

154. *Id.* at 1071.

motional" responsibilities. Consider, for example, the Department of Health, Education and Welfare's Food and Drug Administration, whose empathy with the drug industry has been the subject of intensive criticism by many, including Congress.<sup>155</sup>

It is possible, moreover, that placing full authority in the executive might have the effect of enhancing special interest bias and making it less observable and less subject to public or Congressional correction. This possibility is suggested by experience with the process of executive decisions in the international air carrier field.<sup>156</sup> Indeed, the susceptibility of the executive to the same pressures, influences and biases to which the FCC is subject is compounded by the fact that, as a user of frequencies, the executive has its own inherent bias favoring federal uses over nonfederal users.

## 2. *Independent Agency Control*

Many of the conflict-of-interest problems which militate against unifying authority in the executive might be eliminated by vesting unified authority in the FCC. This possibility was considered in the Stewart Report in 1951, but was rejected on the grounds that the FCC would not be accepted as an impartial arbiter, and that such a scheme would improperly intrude upon executive power, particularly in the fields of foreign relations and national defense.<sup>157</sup>

### (a) *The Objections on Principle*

Analytically, the objections to unified FCC authority are not entirely convincing. First, contrary to the suggestion that the FCC might not be accommodating to federal users, the history of FCC-executive relations suggests that the FCC may have been too accommodating to federal users.<sup>158</sup> However, the Stewart Report suggests that whether or not the FCC would be an "ob-

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155. See M. MINTZ, *THE THERAPEUTIC NIGHTMARE* 93-146 (1965). One critic succinctly characterized the attitude of the FDA under former Commissioner George Larrick as "one of sweetness and light, togetherness, of loving one's neighbor [industry and Congress] as one's self." *Quoted id.* at 95.

156. See notes 167-72 *infra*, and accompanying text.

157. TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 196-97. Following release of the Board's Report, a bill to vest full allocations authority in the FCC was introduced in the House but seems to have gone nowhere. See 1959 Hearings on Spectrum Allocation at 135.

158. The classic example is the *Bendix* litigation. See note 144 *supra*.

jective" arbiter, it would *not be accepted* as such. This seems an inadequate basis for rejecting control by an independent agency. It is clear that the establishment of *any effective* control on executive uses would not be warmly greeted by those whose interests are adversely affected.

In any event, there are executive controls. First, a measure of control is inherent in the presidential nomination of FCC members. While this is not an effective means of ensuring day-to-day control, it does seem adequate to assure that FCC members are receptive and responsive to federal government needs in the long run. Second, it is assumed that the presidential emergency powers as set forth in section 606 of the Communications Act would be retained.

The objection that unified FCC authority would constitute an unwise intrusion upon presidential prerogatives with respect to national defense and foreign policy is also unconvincing. Radio frequencies are, of course, vital to the military, and frequency allocations decisions are therefore obviously important to national defense. But this is true of countless other activities—for example, the manufacture of steel—which are not committed to the exclusive control of the executive as matters of presidential prerogative. Similarly the need for international agreement on radio frequency allocations ties such allocations to foreign affairs, but no more so than international trade, which is committed to presidential prerogative.

It has even been suggested that the allocation and control of frequencies to federal users, at least insofar as national defense and foreign policy is concerned, is *constitutionally* vested in the President, that the Act of 1934 and its predecessors merely recognized this authority.<sup>159</sup> Whatever the ambit of the intrinsic constitutional powers of the President, it would scarcely appear this broad.<sup>160</sup> It is difficult to take seriously the suggestion that Congress could not exercise its own constitutional prerogatives to dispose of and control federal resources or otherwise regulate interstate commerce, or to delegate it to an agency of its choice, thereby divesting the President of authority.<sup>161</sup> In any event,

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159. 1959 Hearings on Spectrum Allocation at 59, 61 (statements of Mr. Everitt).

160. See *Youngstown Sheet & Tube Co. v. Sawyer*, 343 U.S. 579 (1952).

161. See *id.* at 593, 602 (concurring opinion of Justice Frankfurter); *id.* at 655, 660 (concurring opinion of Justice Burton).

any possible constitutional necessity for giving the President authority is satisfied by his emergency powers under section 606 of the Act.

Wholly apart from these separation-of-powers considerations, it has been contended by one critic of the FCC that although unified allocations authority is desirable and should be separated from presidential direction, the FCC is not a fitting repository in view of its poor performance in exercising its existing regulatory authority. Accordingly, a new independent agency should be established to exercise FCC and executive allocations.<sup>162</sup> Concededly, the FCC's performance has in many areas been deficient, but as pointed out above,<sup>163</sup> the deficiencies have not demonstrated any fatal institutional flaw, and there is no reason to suppose that a newly created agency—within or without the executive branch—will be any less susceptible to the ills that have beset the FCC.

#### (b) Practical Problems

Although the objections to vesting full allocations authority in the FCC are analytically unconvincing, a sense of the practical indicates that they nevertheless would certainly prevail to defeat any such proposal. Given the present system of military and foreign policy priorities and the executive prerogatives of implementation, it is unreal to expect that the FCC, or any independent agency, would be given the proposed authority.<sup>164</sup> Indeed, to divest the executive of powers which are asserted to be vital to national defense, foreign policy and other important executive functions would, I think, require nothing less than heroic effort by Congress, even were the spirit willing.

Although a vesting of complete and final allocations authority in the FCC might be precluded by practical politics, a recent proposal by Professors Metzger and Burrus might be politically

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162. Rosenblum at 53-54. Compare the recent proposal by FCC Commissioner Bartley to create a "Telecommunications Resources Authority" within the Legislative Branch. "Let's Abolish the FCC," Address by Commissioner Robert Bartley before the Illinois Broadcaster's Association, May 23, 1968, FCC Release No. 17280. See notes 228-41 *infra*, and accompanying text.

163. See notes 150-56 *supra*, and accompanying text.

164. It is probable that the FCC would not welcome such authority. The Commission opposed such a bill in 1951. 1959 Hearings on Spectrum Allocation at 135.



acceptable. Concluding that unified FCC authority would be preferable to the other unification proposals, they support vesting initial authority in the FCC. But, in order to assure that "security considerations have a 'proper voice' in the determination of frequency allocations," this authority would be subject to review and final decision by the President at the request of the Director of Telecommunications Management.<sup>165</sup>

While this proposal might make FCC authority politically acceptable, it does so by extracting from the FCC the very independence the need for which precipitated the placement of this authority somewhere other than in the executive in the first place. In effect the executive would be left with full control—a control which could only have the result of continuing the preferred status of federal users. Metzger and Burrus concede this might be a possibility but dismiss it as an insignificant problem:

For if Congress were to legislate the changes in the Federal Communications Act which would be necessary to create the system herein recommended, it would be making it quite clear to all agencies and to the President that it expected the FCC's frequency allocation determination to be the final decision except in the unusual case where the President, upon the carefully considered advice of his DTM, was convinced that an important national interest urgently demanded that the FCC be overridden. In consequence it is very doubtful that the DTM would seek to have the President overturn every FCC determination which might be less than satisfactory to the requesting federal agency, and still more unlikely that the President would do so even were he so advised.<sup>166</sup>

This conclusion seems rather overidealized in its assumptions regarding the workings of the executive in general and the anticipated presidential deference to vague congressional restrictions on executive prerogative in particular. To suggest that the President would override an FCC decision only when some "important national interest" was at stake is simply to hide behind a phrase. "Important national interest" is as flexible as "public interest, convenience and necessity;" who can say what it encompasses? Of course, one would not expect every frustrated federal user automatically to seek White House review. But any user agency which believes strongly in the importance of its frequency application will find little in the phrase "important national interest" to deter it from pressing its claim as far as possible. Nor is it likely that channeling such appeals through the OTM will

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165. Metzger & Burrus at 92-94.

166. *Id.* at 94.

greatly alter the situation. If the Department of the Army, for example, strongly desired review of an adverse FCC decision, it seems naive to suppose that the OTM would oppose review, or could in any event preclude it. And if the Secretary of the Army, through the OTM or over its opposition, seeks reversal of an FCC allocation I would not look for the FCC to emerge victorious whatever the merits of the case from an objective viewpoint. In short, it seems improbable that this scheme would prove any different in ultimate effect than giving full authority to the executive in the first instance.

The Metzger-Burrus proposal might well produce a situation similar to that in the certification of overseas and foreign air transport. Under the Federal Aviation Act such functions as the issuance, denial, transfer, amendment, and suspension of certificates for overseas or foreign air transport are subject to the approval of the President.<sup>167</sup> The presidential authority is paramount; his decision is absolute and immune from judicial review.<sup>168</sup> With such powers the White House<sup>169</sup> has become in effect a decision-maker rather than a reviewer. Moreover, the White House has not been reluctant to exercise its authority, and from a number of notable instances it is evident that the White House decisions, which need not be explained or justified, are often made on grounds unrelated to foreign policy or other "national interest" considerations which provided the basis for granting this power to the President.<sup>170</sup>

Perhaps the most significant aspect of this scheme is that there is no effective restraint on the exercise of the White House authority. No matter how demonstrably wrong the decision—

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167. 49 U.S.C. § 1461 (1964).

168. *Chicago & Southern Airlines, Inc. v. Waterman S.S. Corp.*, 333 U.S. 103 (1948). The Board's action was held similarly unreviewable in *Waterman* on the ground that otherwise, until the President acted, there could be no final order. *Id.* at 112-13. However, recent lower court decisions have created an exception to this rule of nonreviewability when the Board is found to have acted outside its statutory authority. *E.g.*, *Pan American World Airways, Inc. v. CAB*, 380 F.2d 770 (2d Cir. 1967); *American Airlines, Inc. v. CAB*, 348 F.2d 349 (D.C. Cir. 1965).

169. "White House" more properly defines the repository of the authority, since the President personally is not commonly involved in the decisions. H. FRIENDLY, *THE FEDERAL ADMINISTRATIVE AGENCIES* 154 (1962).

170. See Landis, *Meddling From the White House*, N.Y. Herald-Tribune, March 20, 1958, at 18, excerpted in W. GELLHORN & C. BYSE, *CASES ON ADMINISTRATIVE LAW* 996-99 (4th ed. 1960).

indeed, no matter how palpable an abuse of authority—there is no review<sup>171</sup> and in most cases not even public scrutiny. Not only has this power of White House “approval” been used to substitute secret, executive fiat for open, reasoned decision-making in the matter of international air routes, it has provided a basis for White House meddling in domestic air routes as well, even though the White House lacks statutory authority in this latter area.<sup>172</sup>

The case for unification is not made stronger by the analogies which Metzger and Burrus invoke. They point out that prior to the Federal Aviation Act,<sup>173</sup> responsibility for air safety was divided between the executive and the CAB in much the same manner that frequency allocations authority is now divided.<sup>174</sup> This bifurcated authority proved inadequate to assure air safety and this led to the vesting of unified air safety control in a single independent agency, the FAA. The successful unification of authority in the FAA might appear to offer support for the soundness of their proposal.<sup>175</sup> The crucial difference,

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171. See *TWA v. CAB*, 184 F.2d 66 (2d Cir. 1950).

172. See Landis, *supra* note 170. Such White House intermeddling is suggested in *Western Airlines, Inc. v. CAB*, 351 F.2d 778 (D.C. Cir. 1965). The Board, in an airline route proceeding to consider additional trans-Pacific service to Hawaii and beyond, released two decisions. One related to service to Hawaii—a domestic route not subject to presidential approval—and a second to service beyond Hawaii—an international route subject to presidential approval. The Board awarded new domestic route authority and recommended to the President the award of new international routes. The White House rejected the Board's recommendation regarding the International routes and, in its notification to the Board, expressed the “hope” that the additional authority between the mainland and Hawaii would be reconsidered. The Board thereupon terminated the domestic route proceeding and Western's award was not allowed to become effective. The only explanation was that the domestic and international aspects were “intimately intertwined”—a fact not supported by the record and which apparently went unnoticed until the White House expressed its “hope” for a termination of the route award. Although the court of appeals fortunately reversed the Board's termination order, the case remains as an example of the dangers inherent in the vesting of regulatory authority in the White House when such authority is subject to rules other than its own sense of propriety.

173. 72 Stat. 731 (1958), *as amended*, 49 U.S.C. § 1301-1657 (Supp. 1968).

174. Metzger & Burrus at 86-89.

175. The control of air safety by the FAA does, of course, entail a degree of control over private and federal use, but it does not entail the granting or denial of use itself. A communications analogy would not be the power to allocate frequencies, but rather, for example, the power to impose regulations concerning type of transmitters or regulations governing operation of transmitters to curb interference.

however, is that when unified authority was vested in the FAA, it was not subject to presidential review or approval as proposed for frequency allocations.<sup>176</sup> The appointment of a military man as Deputy Administrator to represent the military establishment does not change the fact that the "military representative" had no independent authority, no right to appeal to the President and, indeed, was expected to have first loyalty to the agency.<sup>177</sup> Of course, with the reorganization of the FAA into the Department of Transportation, unified control has now shifted to the executive<sup>178</sup>—a shift which Metzger and Burrus themselves would evidently agree would not be wise in the case of frequency allocations for reasons discussed earlier.

The second analogy which Metzger and Burrus draw in support of their proposal is the regulation of the Atomic Energy Commission (AEC). Under the Atomic Energy Act of 1954,<sup>179</sup> the AEC has broad regulatory and licensing powers over virtually all activity relating to the development, use and control of atomic energy. Because of the obvious importance of atomic energy to the military, the Act provides that:

The Commission shall advise and consult with the Department of Defense. . . . If the Department of Defense at any time concludes that any request, action, proposed action, or failure to act on the part of the Commission is adverse to the responsibilities of the Department of Defense, the Secretary of Defense shall refer the matter to the President whose decision shall be final.<sup>180</sup>

The control of atomic energy is not, however, analogous to the present problem. First, the authority to refer AEC decisions to the President for final decision is limited to decisions which are adverse to the responsibilities of the Department of Defense. Those matters to be considered Defense responsibilities are limited to:

military applications of atomic weapons or atomic energy including the development, manufacture, use, and storage of atomic weapons, the allocation of special nuclear material for military research, and the control of information relating to the

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176. Also, it should be emphasized that the actions of the FAA continue to be subject to judicial review and control, 49 U.S.C. § 1655 (c) (Supp. 1968), which would not evidently be the case under the Metzger and Burrus proposal giving the President final decisional authority.

177. See 49 U.S.C. § 1343(a)(2) (1964). See also H.R. REP. NO. 2360, 85th Cong., 2d Sess. 9 (1958).

178. 49 U.S.C. § 1655 (c) (Supp. 1968). Executive control is not complete, however. See 49 U.S.C. § 1654(f) (Supp. 1968).

179. 42 U.S.C. §§ 2011-2296 (1964).

180. 42 U.S.C. § 2037 (1964).

manufacture or utilization of atomic weapons. . . .<sup>181</sup>

Second, the mere fact that the military and the President possess certain prerogatives with respect to atomic energy development means little. It is necessary to know something about the success of this system. Unfortunately, Metzger and Burrus do not inform us how the Presidential prerogative in the AEC example has worked: whether it has, for example, resulted in giving the military an *undue* influence in atomic energy development, or whether—as they imply—it has not. Without attempting to explore this question here, two points might be noted: First, unlike the situation in the radio communications field there is no inherent conflict between civilian and military aims in the use and development of atomic energy. Indeed, in its early years the AEC's primary function was that of a "weaponer for the military."<sup>182</sup> While this narrow purpose has been expanded to include civilian use since 1954,<sup>183</sup> it has been said that "the weapons program remains the firm anchor which gives the Commission a sense of security concerning its role on the national scene."<sup>184</sup> Second, where conflicts have arisen between military and civilian atomic energy programs—as over the establishment of priorities—the military seems to have generally, if not invariably, prevailed.<sup>185</sup> I do not suggest here that either of the above are the results of presidential prerogative or undue subordination of civilian interests to military programs. But these considerations do indicate that the AEC example is not a persuasive precedent for executive review of FCC radio allocations.

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181. *Id.* The Senate Report on the Predecessor Act of 1946, substantially similar in this regard, indicates that referral was to be confined to these matters. See S. REP. NO. 1211, 79th Cong., 2d Sess. 12 (1946).

182. H. ORLANS, *CONTRACTING FOR ATOMS* 4, 204 (1967).

183. H. GREEN & A. ROSENTHAL, *GOVERNMENT OF THE ATOM: THE INTEGRATION OF POWERS* 252-54 (1963).

184. Quoted in H. ORLANS, *supra* note 182, at 204. See also D. LILIENTHAL, *CHANGE, HOPE AND THE BOMB* 115-16 (1963) (emphasis added):

The AEC functions chiefly as a designer, developer, maker, and tester of atomic weaponry. . . . [A]s the reason for a sharp separation between civilian and military atomic roles has faded, so the distinctive role of the AEC has changed. *The AEC as weaponer has in fact become very much a part of the military establishment, serving the needs and goals of that military establishment as defined by the military . . . .* Realistically, the AEC essentially is not too different from any major technical contractor to the Defense Department in the area of missiles . . . or some other weapons system.

185. See H. Orleans, *supra* note 182, at 175-78.

## B. REFORM WITHIN THE PRESENT INSTITUTIONAL FRAMEWORK OF DUAL FCC-EXECUTIVE AUTHORITY

After a brief review of the frequency allocation problem, the Military Operations Subcommittee of the House Committee on Government Operations in 1964 concluded that "dual control . . . seems to be a permanent feature, and therefore the need is one of better coordination and administration."<sup>186</sup> Based on previously explored considerations, this conclusion seems correct not only as a practical assessment of political realities but also as a statement of normative principle. It remains therefore to consider the possibilities of institutional improvement within the present allocations framework.

### 1. *Reorganization of Executive Authority*

Finding that a central problem lay with the management of frequency allocations among federal users, the Stewart Report in 1951 concluded that the first necessary step in reform was the creation of a Telecommunications Advisory Board within the Executive Office of the President, which would exercise positive management over governmental allocations and use. The Advisory Board would then cooperate with the FCC in dividing the spectrum between Government and non-Government users and in planning general spectrum utilization.<sup>187</sup>

The Office of Telecommunications Advisor was subsequently created and given substantially the responsibilities outlined by the Stewart Report. Although the office showed early promise of improvement in executive management, the position was later downgraded by transfer of its functions to the ODM, and later to the OCDM.<sup>188</sup> That the impairment of the Telecommunications Advisor's effectiveness is attributable solely to these subsequent reorganizations seems doubtful. Rather, the reorganizations merely reflect a more basic problem—lack of real presidential concern over the need for strong, central management and control of executive frequency allocations and use. Congress proved to be no more responsive to this need. When the Bowles and Cooley Committees advocated stronger central management

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186. MILITARY OPERATIONS SUBCOMMITTEE OF THE HOUSE COMMITTEE ON GOVERNMENT OPERATIONS, 88th Cong., 2d Sess., *SATELLITE COMMUNICATIONS* 86 (1964).

187. See notes 39-48 *supra*, and accompanying text.

188. See notes 54 & 55 *supra*, and accompanying text.

authority in accordance with the Stewart Report recommendations, the response was discussion without action.<sup>189</sup> In 1962, the present Office of Telecommunications Management was created in the Office of Emergency Planning. However, this has not appreciably quieted the critics who insist that little has changed.<sup>190</sup>

In terms of formal power, the delegation of frequency assignment authority to the OTM is somewhat broader than that delegated the Telecommunications Advisor, and subsequently to the OCDM, in 1951. Whereas the latter delegation is couched in terms of "advising and assisting" the President, the OTM is authorized to *act for* the President. In this respect the scope of the formal OTM delegation is at least as broad as that proposed by the Stewart Report, so often raised as the standard.<sup>191</sup> Practically, the difference between "advising and assisting" and acting for the President may seem a thin one.<sup>192</sup> However, it has been suggested that there is inadequate authority to control federal users effectively. If this ever was a problem, it scarcely seems a problem today, since the delegation of authority to the OTM under the 1962 reorganization clearly provides adequate authority.

But other factors have retarded the effectiveness of the OTM. The first Director, Dr. Stewart, resigned after a little more than a year in office because, it is said, "he couldn't convince anybody why he was at the White House,"<sup>193</sup> because he could not get the money he needed, and because of reported difficulties with the military.<sup>194</sup> For a year after Stewart's resignation the post remained vacant—a circumstance scarcely conducive to effective development of the OTM. In April, 1964, the present Director, Lieutenant General James D. O'Connell—retired head

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189. See notes 60-74 *supra*, and accompanying text.

190. See, e.g., Doyle, *Do We Really Need a Federal Department of Telecommunications?* 21 *FED. COM. B.J.* 3, 14 (1967); Metzger & Burrus at 45.

191. Stewart, *Telecommunications Management: The Strategy of Organizational Location*, 23 *PUB. ADM. REV.* 149, 151 (1963). Stewart states that in 1962 the delegation actually went beyond what was proposed in 1951, but a careful reading of the 1951 report of the Communications Policy Board indicates that the proposed advisor's formal authority and responsibilities would have been substantially similar.

192. However, Dr. Stewart mentioned the distinction. *Id.*

193. *Hearings Before the Subcomm. on Communications and Power of the Senate Comm. on Commerce*, 89th Cong., 2d Sess. 71 (1966) (remarks of Senator Pastore).

194. *BROADCASTING MAGAZINE*, April 22, 1963, at 5.

of the Army Signal Corps—was appointed.<sup>195</sup>

Whether there has now developed an adequate vehicle for effective spectrum management is an open question. Because of the record of executive frequency management one is inclined to view the OTM's own list of accomplishments and its future plans and programs<sup>196</sup> with some skepticism. Nevertheless, it is possible to be too cynical and thus ignore the existence of some important organizational improvements since 1964. These include tighter control over IRAC processes, increased control over assignments and technical standards and an ambitious program of reviewing agency utilization. Whether these and other measures will be permanently successful in achieving more effective executive spectrum management and use is uncertain. However, many of them are similar to those contemplated by the Stewart Report in 1951, and do represent important steps forward.

There is nevertheless a case for more basic reorganization of the executive management function. Several executive structures have been suggested by Director O'Connell which generally parallel the proposals for unifying FCC and executive authority, except that the dual FCC-executive jurisdiction would continue:

One alternative is to leave the office as it is—which has certain disadvantages. . . . OEP is in a different line of work. They are concerned with emergency planning; accordingly, they have somewhat different interests and are guided by different priorities.

Another alternative is to make the office a part of the Department of Transportation. This . . . presents a great many problems. There are bound to be difficulties in developing an overall set of national policies in a situation where one department is charged with coordinating the communications policy of others. Also there could be conflicts of interest if one user of the spectrum were in a position to exercise the President's authority over all of the other departments.

The third alternative is to combine Telecommunications with the Office of Science and Technology in the Executive Office of the President. The two offices have similar responsibilities in considering the impact of research and the pace of technology on national policy. . . .

The fourth alternative is to create a separate agency reporting directly to the President.<sup>197</sup>

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195. MILITARY OPERATIONS SUBCOMMITTEE, *supra* note 186, at 83.

196. See OFFICE OF TELECOMMUNICATIONS MANAGEMENT, REPORT ON FREQUENCY MANAGEMENT WITHIN THE EXECUTIVE BRANCH OF THE GOVERNMENT 16-17 (1966).

197. *Hearings on Government Use of Satellite Communications Before the Military Operations Subcomm. of the Comm. on Government Operations*, 90th Cong., 1st Sess. 72-73 (1967).



## (a) The Need for Reorganization

With respect to the alternative of retaining the present OTM structure, General O'Connell's views on the tenuous relationship between OTM and OEP seem valid, although major change would probably not be warranted were it not for other, stronger considerations. First, there is the matter of budget and staffing. The current budget of less than \$2 million and staff of less than 70 persons<sup>198</sup> seem woefully inadequate to achieve and maintain effective management of Government frequency assignments and use. In this vein it is noteworthy that the inability to obtain adequate funds was a major factor in Dr. Stewart's resignation as Director in 1963.<sup>199</sup> A significant contributing factor to this disability, according to Dr. Stewart, is the location of the OTM in the OEP with the result that "its financial support is affected by the Congressional response to the needs of the total OEP operation."<sup>200</sup> While it is true that the OTM budget is identified and justified independently of the OEP's,<sup>201</sup> as long as the OTM remains without a visible identify of its own, it can be expected that its budget will conform to that of the OEP generally; the total OEP appropriation for fiscal 1969, *including that of the OTM*, is less than \$10 million.<sup>202</sup>

A second consideration underscoring the need for reorganization is the need to enhance the prestige and stature of the office and its functions. This need was viewed by the Stewart Report in 1951 as a central one: the aim was to provide a director who "was right next door to the President, [who] . . . had the ear of the President—nobody . . . between him and the President."<sup>203</sup> When the Office of Telecommunications Advisor was created in 1951 there was no intervening agency between it and the President. However, President Eisenhower felt that too many persons were reporting directly to the President, and shifted the Advisor's functions to the ODM, and later to the OCDM.<sup>204</sup> The obvious result was a reduction in the office's stature and importance. As Dr. Stewart has noted:

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198. The staff figure includes clerical help.

199. Stewart, *supra* note 191, at 154.

200. *Id.*

201. *Hearings, supra* note 197, at 74.

202. Independent Offices and Department of Housing and Urban Development Appropriation Act of 1969, 82 Stat. 937. The OTM's 1969 appropriation is \$1,675,000, of which \$500,000 is earmarked for research.

203. 1959 Hearings on Spectrum Allocation at 78 (remarks of Dr. Stewart).

204. Stewart, *supra* note 191, at 151.

[t]he direct contact with the President which was the source of strength for the office was lost and with it much of the benefit which had been sought by the Communications Policy Board.<sup>205</sup>

This prestige and stature must be re-established if the OTM is to function effectively, particularly in dealing with high level executive agencies such as the State and Treasury Departments, NASA and—most of all—the military establishment. So long as the OTM remains a mere adjunct of the OEP, with its responsibilities at least partially submerged in that office, the development of a strong, independent and prestigious body is jeopardized.

#### (b) The Reorganization Alternatives

What kind of reorganization is best suited to these aims? The present Director has suggested three other possible alternatives:<sup>206</sup> transferring the OTM to the Department of Transportation (DOT), merging the OTM and the Office of Science and Technology or creating a new office. These do not necessarily exhaust all of the possibilities, but they state the basic alternatives.

##### (1) OTM as Part of the Department of Transportation

A transfer of the OTM to DOT seems the least attractive possibility. The only discernible connection between telecommunications management and the functions of DOT is that DOT, particularly the FAA, is a major federal user of frequencies. But far from being a reason for assimilation of the OTM into DOT, this is one of the most persuasive reasons against it. As General O'Connell acknowledges, this would create a major conflict of interest. Even apart from this problem, however, it is difficult to envision how this scheme would serve the aims of establishing the independent identity and enhancing the prestige of the OTM. The assumption underlying such a proposed transfer appears to be that it would extend the prestige and importance of a cabinet-level position to the OTM, thereby further strengthening it. But this is highly questionable. Consider first the relationship between OTM and DOT in terms of present budget alone. The appropriation for DOT for fiscal 1969 exceeds \$6 billion; OTM's is less than \$2 million, less than half

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205. *Id.*

206. See text accompanying note 197 *supra*.

the budget for one of DOT's smaller offices, the National Transportation Safety Board.<sup>207</sup> The transfer of the OTM to DOT is likely to result in little more than the creation of another bureau or office in an immense administrative superstructure. OTM would be placed on a par with such subordinate offices as the Safety Board, the Federal Railroad Administration, or at best the Highway Administration. Far from enhancing or establishing a visible identity for telecommunications management, such a transfer would probably bury that which now exists. If the present subordination of OTM to OEP has impaired its ability to attract needed budget support, only greater impairment can result from forcing the OTM to compete with such departments as the FAA or the Highway Administration, both of which possess strong political support.

Finally, even assuming that the OTM could maintain a substantial independent identity and importance within DOT, the assumption that it could effectively carry out its present responsibilities must be questioned. In 1946 a study conducted for the Bureau of the Budget discouraged the placing of allocations control in a single department because "the regulation of one department by another generally has been quite unsuccessful."<sup>208</sup> While there are no doubt exceptions, this appraisal seems valid insofar as it applies to the situation in which one "independent" executive agency or department has authority to regulate important functions of another. If so, an attempt to give DOT the responsibility of assigning and managing the use of radio frequencies by other agencies such as NASA, the State Department or the military service agencies, will not produce the kind of strong central management that is needed. More probably the "management" will degenerate into the type of "cooperative coordination" which has characterized the work of IRAC and resulted in a failure to bring about a more effective management of executive use of the spectrum. This problem does not necessarily exist, however, if the regulating agency is located in the Executive Office of the President and speaks with his direct authority and support. The authoritative influence wielded by the Bureau of the Budget is a case in point, and this is the rationale of the Stewart Report's recommendation for

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207. Department of Transportation Appropriation Act of 1969, 82 Stat. 654; Independent Offices and Department of Housing and Urban Development Appropriation Act of 1969, 82 Stat. 937.

208. 1959 Hearings on Spectrum Allocation at 132.

locating the telecommunications advisor as close to the President as possible.

(2) Combining the OTM with the Office of Science and Technology

The merger of the OTM and the Office of Science and Technology (OST) offers some advantages: it would keep the OTM within the Executive Office of the President, and it would strengthen its technological research capability. However, such a merger seems ill-designed to meet the essential aims of reorganization. If the OTM is to accomplish more efficient, effective utilization of the spectrum by executive agencies, its primary function must be an operational, not a research, function. It must *manage* the use of the spectrum; it must be designed to facilitate and implement authoritative decision-making in the assignment of frequencies, and the establishment of use priorities. A merger with the OST might tend to obscure these management responsibilities through an excessive emphasis on technological research. Scientific research has not yet been able to eliminate the core problem of spectrum scarcity and seems unlikely to do so in the foreseeable future; also science cannot establish priorities among competing users with technologically equivalent claims.

Moreover, even conceding the need for more research as an adjunct of policy planning and use management, there is nothing uniquely important in the research capability of the OST. Since its concern goes far beyond telecommunication technology<sup>209</sup> only a portion of OST's capability would be useful to telecommunications. More important, however, in terms of money committed to telecommunications research, various other executive agencies already spend several times as much on telecommunications research as the OST spends on its entire research effort.<sup>210</sup> Thus, even if additional research capability is as important as seems to be implied in the proposal for merger with OST, one can think of better partners for the OTM than the Office of Science and Technology.

(3) Establishment of an Independent Office

The only satisfactory alternative to the present OTM struc-

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209. See *Hearings, supra* note 197, at 74-75.

210. Cf. Stewart, *supra* note 191, at 154.

ture is the establishment of an independent office. Since the OTM is largely an autonomous entity within the OEP, such a reorganization need entail little if any additional overhead costs. Any additional costs would be due to increased operational and research capability, which would be the case under any reorganizational scheme.

In light of the previous discussion regarding regulation of one executive agency by another, it seems essential that the new agency be retained in the Executive Office of the President and have a direct presidential delegation of telecommunications responsibility and authority. The reorganization should be accomplished by executive order, thereby assuring maximum flexibility to make further organizational adjustments as required.

The extent to which the creation of an independent office outside the OEP should also call for internal reorganization of the present OTM processes and structure would necessarily be the subject of a full management study. There is, however, one extremely important facet of the existing process which cannot be ignored when contemplating OTM reorganization: the secrecy of the processes by which assignments are made and reviewed and the absence of any opportunity for participation by "interested parties." A major criticism of the existing process is what one commentator has called "low visibility decision-making."<sup>211</sup> Perhaps a more accurate characterization would be the *invisibility* of decision-making. Without question, an executive user's mission often prevents disclosure of particular information regarding its frequency. In such cases secrecy is essential and there is no way in which the assignment or utilization can be held open to public scrutiny. The suggestion that the handling of such assignments be subject to the formal requirements of the Administrative Procedure Act<sup>212</sup> can scarcely be taken seriously, since the requirement of nondisclosure of all essential facts concerning the assignment<sup>213</sup> would preclude any meaningful pub-

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211. Rosenblum at 19-21.

212. *Id.* at 53-54. In fairness to Professor Rosenblum, it should be noted that his proposal to apply APA requirements is meant to apply generally to all frequency assignments; perhaps he would acknowledge an exception in the case of the military and other "secret mission" users, although he does not do so in his article.

213. See, e.g., *United States v. Reynolds*, 345 U.S. 1 (1953); *Republic of China v. National Union Fire Ins. Co.*, 142 F. Supp. 551 (D. Md. 1956). These privileges are preserved by the "Freedom of Information Act," 5 U.S.C. § 552(b) (1) (Supp. 1968).

lic notice, participation or scrutiny. However, acknowledging the necessity for secrecy in the assignment of frequencies to some Government agencies, the pervasive secrecy which presently hides the allocation process and its results from public participation and scrutiny should not be condoned. One difficulty is that there has been no distinction between, for example, assignments to the Post Office and to the Air Force. Such distinctions need to be drawn to ensure, to the greatest possible degree, public participation in and scrutiny of the processes of frequency management where no claim for secrecy can reasonably be honored.<sup>214</sup>

## 2. *Reorganization of the FCC*

Few agencies of Government have been so doggedly pursued by critics as the FCC. Almost since its creation it has been a favorite whipping boy of Congress, the bar, the academe and the general public. Most of the criticism has been directed at its licensing and regulatory activities within the broadcast field. For example, its licensing procedures have been the subject of repeated and intensive criticism, as have been most of its related regulatory policies.<sup>215</sup> More generally, the Commission has been repeatedly attacked for its failure to formulate and implement policy planning. In 1949, the Hoover Commission Task Force on Regulatory Commissions concluded that "the Commission has . . . been found to have failed both to define its primary objectives and to make many policy determinations required for efficient

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214. This would not necessarily entail the establishment of elaborate formal proceedings. Certainly there should not be any process of adjudication as is required in formal FCC licensing hearings. But in cases where there can be no valid claim of secrecy, public notification of assignment applications, together with opportunity of "interested parties" to file written comments or objections should be provided for. Cf. section 4 of the APA, 5 U.S.C. § 553 (Supp. 1968). In addition, information pertinent to such assignments should be subject to disclosure in accordance with the "Freedom of Information Act." 5 U.S.C. § 552 (Supp. 1968).

215. For a small sample of the critical literature covering a broad range of Commission activities, see H. FRIENDLY, *THE FEDERAL ADMINISTRATIVE AGENCIES 53-73* (1962) (licensing; comparative criteria); Ad Hoc Advisory Committee on Allocations to the Senate Committee on Interstate and Foreign Commerce, 85th Cong., 2d Sess., *ALLOCATION OF TV CHANNELS* (Comm. Print 1958) (licensing policies; television allocations); Robinson, *The FCC and the First Amendment: Observations on 40 Years of Radio and Television Regulation*, 52 *MINN. L. REV.* 67 (1967) (program regulation); Note, *The Darkened Channels: UHF Television and the FCC*, 75 *HARV. L. REV.* 1578 (1962) (television allocations).

and expeditious administration."<sup>216</sup> In 1960, James Landis repeated the charge:

The Commission has drifted, vacillated and stalled in almost every area. It seems incapable of policy planning, of disposing within a reasonable period of time the business before it, of fashioning procedures that are effective to deal with its problems.<sup>217</sup>

Though most of the criticism of the FCC's licensing and regulatory policies in the field of broadcasting would appear only indirectly relevant to the problem of interservice frequency allocations and spectrum management, there has been some tendency to apply the criticism of Landis, the Hoover Commission and others to the Commission's spectrum allocations.<sup>218</sup> This is rather indiscriminating, however, and it assumes findings and conclusions about the FCC's performance in the area of spectrum allocations which were not made. To the extent the FCC's performance is relevant at all here, the focus should not be on its general performance in licensing and regulating broadcast stations but on its actions and policies in specific regard to interservice frequency allocations and general spectrum management. However, even focusing specifically on problems of spectrum management policy it must again be emphasized that the pertinent question is not whether present policies are deficient, but whether the deficiency reflects the kind of basic institutional flaw for which administrative reorganization is appropriate.

#### (a) Past Reorganizations

For the most part the FCC has not been unresponsive to proposed reorganizations. After its creation in 1934, the Commission organized itself into three separate and integrated divisions for broadcast, telegraph and telephone regulation. However, in 1937, when it became apparent that the division plan had in practical effect divided the Commission into three separate agencies, the plan was abolished.<sup>219</sup> The Commission

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216. COMMISSION ON ORGANIZATION OF THE EXECUTIVE BRANCH OF THE GOVERNMENT, COMMITTEE ON INDEPENDENT REGULATORY COMMISSIONS, TASK FORCE REPORT 95 (1949).

217. J. LANDIS, REPORT ON REGULATORY AGENCIES TO THE PRESIDENT-ELECT 53 (1960) (printed for the use of the Senate Committee on the Judiciary, 86th Cong., 2d Sess.).

218. See Coase at 36-37.

219. In abolishing the division plan in 1937, the Commission noted that:

. . . it was found that to subdivide a small commission in such

was then organized into four professional units comprising the Engineering, Accounting, Law and Secretary Departments. Each department was subdivided into broadcast, common carrier, safety and special services and handled licensing and regulatory functions in these fields. The seven member Commission itself functioned as a single unit after 1937.<sup>220</sup> This proved to be inefficient. Following the recommendations of the Hoover Commission Task Force on Regulatory Commissions in 1948 and 1949,<sup>221</sup> the FCC reorganized its staff along functional instead of professional lines. This reorganization was paralleled by the 1952 McFarland amendments requiring functional reorganization of the Commission.<sup>222</sup>

In 1961 one further major reorganization plan was implemented. It originated as one of a series of executive plans for reorganization of the major independent agencies pursuant to the Reorganization Act of 1949.<sup>223</sup> Though the FCC opposed certain features of the reorganization and the plan was defeated, its basic features, which were supported by the Commission, were subsequently authorized by specific legislation.<sup>224</sup> The principal

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a manner had a divisive effect and was not conducive to cooperation and mutual understanding among the members of the Commission . . . .

The organization of the members of the Commission into divisions also prevented a rounded development of each Commissioner's knowledge and experience in the whole field of the Commission's activity.

4 FCC ANN. REP. 3 (1938). For a brief discussion of the legislative background and the Commission's reorganization, see H. WARNER, RADIO AND TELEVISION LAW 803-05 (1948).

220. See 5 FCC ANN. REP. 9 (1939). A fifth department, the "Examining Department," operating in 1938, see 4 FCC ANN. REP. 4 (1938), was eliminated after that year.

221. See HOOVER TASK FORCE REPORT, *supra* note 216, at 97. See also STAFF REPORT ON THE FCC (1948). These recommendations were supported by the President's Communications Policy Board in 1951, although its comments on FCC reorganization were little more than a note in passing that "the Commission's present efforts to reorganize itself as recommended by the Hoover Commission should be pressed" and that the Commission should have "more funds and a stronger staff." TELECOMMUNICATIONS: A PROGRAM FOR PROGRESS at 208.

222. 66 Stat. 711 (1952). See *Hearings on S. 1973 Before a Subcomm. of the Senate Comm. on Commerce*, 81st Cong., 1st Sess. (1949); *Hearings on S. 658 Before the House Comm. on Interstate and Foreign Commerce*, 82nd Cong., 1st Sess. (1951) (a later version of S. 1973).

223. Now 5 U.S.C. § 1332 (1964). For a history of the reorganization plans of 1961, see Note, *The Progress of Federal Agency Reorganization Under the Kennedy Administration*, 43 VA. L. REV. 300 (1962).

224. 47 U.S.C. § 155 (1964). For a comparison of the defeated executive plans and that subsequently adopted, see Note, *supra* note 223, at 321-34.



thrust of the 1961 reorganization plan was to permit delegation of Commission authority to an employee or employee board<sup>225</sup> in order to free agency members from such routine tasks as review of interlocutory and other routine adjudicatory decisions. Following enactment of legislative authorization for such delegation, the Commission in 1962 established a review board to carry out certain delegated functions including review of initial decisions and related orders.<sup>226</sup> Contemporaneous with the 1961 reorganization plan, the Bureau of the Budget commissioned an organization and management study of the Commission. Following the study's recommendations in substantial part, the Commission made a series of internal changes in its organization and procedures in 1962 and 1963.<sup>227</sup> Since 1963 there have been no other major changes.

Such internal changes by the FCC have not silenced those critics who have pressed for more fundamental reform. One of the most drastic reorganization proposals has been advanced by FCC Commissioner, Robert Bartley, who has advocated nothing less than the abolition of the FCC and a redistribution of its functions among two independent agencies, one legislative and one executive.<sup>228</sup> More recently, legislation has been proposed along the lines of the Bartley plan.<sup>229</sup>

#### (b) The Bartley Plan

In proposing what is essentially the abolition of the FCC, Commissioner Bartley has borrowed a page from former FCC Chairman Minow's recommendations for separating and reconstituting the FCC's "planning," "enforcement" and "quasi-judicial" functions.<sup>230</sup> Unlike Minow's proposal, however, Bartley's scheme of reorganization is not aimed at separation of the policy

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225. The Commission already had authority to delegate authority to one or a panel of its members.

226. 28 FCC ANN. REP. 16 (1962).

227. The changes are detailed in the 29 FCC ANN. REP. 13-15 (1963).

228. Address by Commissioner Robert Bartley before the Illinois Broadcaster's Association, May 23, 1968, FCC Release No. 17280. Though the Bartley proposal is not evidently motivated by the problems of spectrum management, it does have clear and significant relevance, and therefore must be considered.

229. See BROADCASTING MAGAZINE, Jan. 13, 1969, at 36 (proposal by Congressman Dingell).

230. See N. MINOW, EQUAL TIME: THE PRIVATE BROADCASTER AND THE PUBLIC INTEREST 277-304 (1964).

planning, enforcement and adjudication functions. Also, in contrast to the Minow proposal which presumably would have resulted in unification in an executive agency, the Bartley proposal would retain the present dual jurisdiction with respect to Government and non-Government use of the spectrum.<sup>231</sup>

More specifically, the Bartley proposal would reconstitute the FCC's authority and functions as follows: First, there would be established a "Federal Broadcast Commission," an independent regulatory commission with five commissioners appointed by the President. The Commissioners would have staggered terms of 3, 6, 9, 12 and 15 years with only the 3 and 6 year appointees eligible for reappointment. Second, a similarly constituted "common carrier commission" would be established to regulate common carriers in the domestic and international telecommunications service. Third, the Safety and Special Radio Services Bureau functions of the FCC would be transferred to the Department of Transportation, since much of that bureau's work relates to mobile radio. Fourth, the spectrum allocations functions of the FCC, including treaty responsibilities, would be transferred to an office within the legislative branch, to be headed by a Director appointed by the President for a term of 15 years.<sup>232</sup>

Of his proposal Bartley believes:

[T]here would be a more responsible administration of the differing functions now administered by the FCC if they were the responsibilities of separate agencies. I think they would each fare better in their appeals for manpower and money; they would each be able to concentrate more and become more expertise [sic] in their more specialized field; the members could give greater guidance to their staffs on policy planning and in supervision.<sup>233</sup>

Bartley's central premise that more effective regulation could be achieved by "more expertise" in a "more specialized field" must be challenged. Emphasis upon the importance of specialized expertise is by no means unique. One can scarcely pick up a

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231. First, let us face a few fundamentals. The Congress, especially in the field of communications, must not surrender its constitutional responsibilities for the regulation of commerce. Nor should the President surrender his responsibilities as Commander-in-Chief and over Foreign Affairs. So we must accept, without arguing interminably and unproductively, a dichotomy of control over the radio spectrum.

Bartley, *supra* note 228, at 8.

232. *Id.* at 14-18. This reorganization would not alter the present authority and functions of the OTM.

233. *Id.* at 6.

court opinion in the field of administrative law and not find therein some encomium on expertise and the necessity of entrusting administrative responsibilities to those who have it. No doubt expert judgment plays an important role in the administrative process. But it is doubtful that what the administrative process needs is more of it. Professor Louis Schwartz' observation that "expertness has been oversold in this country,"<sup>234</sup> seems closer to the point.

What is lacking in the FCC, as in many other agencies, is not specialized expertise, but quite the opposite: a broader vision, a wider perspective on the interrelationship of the functions regulated by the Commission with others in society. A major failing of the FCC has not been the failure of its members to give adequate guidance to the staff on matters requiring specialized knowledge, but rather the failure to provide a broad perspective within which specialized concerns can be judged. It is said that FCC members are preoccupied with minor concerns,<sup>235</sup> that they cannot "see the forest for the trees."<sup>236</sup> Bartley's plan seems ill-designed to correct this. It is true, as Bartley reasons, that narrowing the range of subjects of attention will allow agency members greater time for thoughtful reflection on both decisions and policy. But his proposal does so not by separating the trivial from the important; rather it simply reduces the number of matters to be considered. Instead of attempting to widen the vision of the forest, it simply reduces the forest to a single tree.<sup>237</sup> There are other more practical objections. Bartley assumes that the functions and responsibilities of the FCC's three operating bureaus and frequency allocation-treaty division are so disparate that their presence in a single agency is not only unnecessary but is an impediment to effective regulation and planning. In fact it appears that there is a close

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234. Schwartz, *Legal Restrictions of Competition in the Regulated Industries: An Abdication of Judicial Responsibility*, 67 HARV. L. REV. 436, 471 (1954).

235. This was, of course, a principal reason for the 1961 reorganization plan and the creation of the review board. See note 226 *supra*, and accompanying text. It is obvious, however, that while this has somewhat diminished the problem, it has not entirely eliminated it.

236. A variation on the simile has been offered by former FCC Chairman Newton Minow: "The Commission is a vast and sometimes dark forest, where FCC hunters are often required to spend weeks of our time shooting down mosquitoes with elephant guns." N. MINOW EQUAL TIME, THE PRIVATE BROADCASTER AND THE PUBLIC INTEREST 280 (1964).

237. Compare *id.*: "[T]he forest must be thinned out and wider, better marked roads have to be cut through the jungles of red tape."

and complex interrelationship among all facets of telecommunications. Consider, for example, the *Above 890 mc* proceeding<sup>238</sup> which involved the proposed licensing of private, noncommon carrier land mobile stations on microwave frequencies previously assigned to common carriers. Frequency allocations were involved since one of the central issues was whether private use of microwave would pre-empt frequencies which would be needed for future space communications. On the other hand, to the common carriers the most crucial issue was not one of inter-service allocations policy, but one of licensing and regulatory policy, since they contended that their status conferred on them a protection against this competition and the resulting diversion of revenues. This is a classic issue of common carrier-public utility regulation. Finally, the private applicants argued that the expanded need for private land mobile radio frequencies dictated their access to these frequencies. Can it be said that any of these three major issues is separate in any meaningful sense? How would such a case be resolved under the Bartley scheme where the issues would fall within the separate jurisdictions of (a) a "legislative agency," the "Telecommunications Resources Authority;" (b) an independent regulatory commission, the "Telecommunications Common Carrier Commission;" and (c) an executive agency, the Department of Transportation? Presumably in the cases of overlapping jurisdiction we would have to revert to inter-agency coordination. Perhaps this could be accomplished, but given the continuous efforts to reduce the necessity for burdensome and often ineffectual coordination of related telecommunications functions in the executive branch, it seems a curiously backward step to create the same problem in the private sector by splintering the one central authority that does exist into four separate pieces and trusting to providence that they can be brought together again when necessary.

There also can be little doubt that this multiple agency system would substantially increase the cost of regulation. That such an increase would not be warmly endorsed by a budget conscious Congress would seem too obvious to mention were it not for Bartley's assumption that Congress would be *more* generous in providing adequate funds for telecommunications regulation as a result of his proposed reorganization:

Another significant advantage would be that criticism—both

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238. *Allocation of Frequencies in the Bands Above 890 mc*, 27 F.C.C. 359, 18 P & F RADIO REG. 1767 (1959); Note, 70 YALE L.J. 954 (1961).

constructive and otherwise—would be directed to specific areas and thus not involve an entire agency responsible for many other problems. Radio and television are sitting ducks for unjust criticism by competitive media. . . . [S]ince it licenses the private and competitive radio and television stations, the FCC reaps its full share of adverse publicity. But it is the whole FCC which is damned—this includes our Common Carrier, our Safety and Special and our Field Bureaus. Now, this criticism reaches the ears of Congress and, I believe, adversely affects the . . . [FCC's] appropriations.<sup>239</sup>

Bartley's conclusion is that by splitting off the various functions into separate agencies, each function would "fare better in their appeals for manpower and money."<sup>240</sup> This is speculating on conjecture. True, the FCC has been severely hobbled by inadequate appropriations. But a comparison of the FCC's appropriations with those of other major independent agencies shows that the Commission has fared about as well as most of its less criticised sister agencies. For example, since fiscal 1966, increases in FCC appropriations have kept pace with those of comparable agencies such as the CAB, the ICC, the FPC or the SEC.<sup>241</sup> Yet during this time the FC has come under more repeated and continuous criticism from Congress and the public than any of the others. Doubtless there are many situations in which agency criticism does have an influence on appropriations. But if such reaction were as common, or as indiscriminately casual as Commissioner Bartley suggests, the FCC would have to sell pencils on the street to exist.

The Bartley proposal has been discussed at some length because it illustrates a common tendency to relate all FCC failures to alleged institutional flaws and, therefore, to believe that the solution lies in some sweeping reorganization or other institutional change. As stated earlier, this approach is misdirected. It may be that the FCC's performance in carrying out many of its licensing and regulatory responsibilities is deficient and should be re-evaluated. It may also be that its policies of frequency allocations should be re-evaluated. But to change the FCC's religion it hardly seems essential to tear its tabernacle down. Whether it might be useful to change the icons or fire the choir is another question, beyond this general survey. It is suf-

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239. Bartley, *supra* note 228, at 7. See also *id.* at 4.

240. *Id.* at 6.

241. See Independent Offices and Department of Housing and Urban Development Appropriation Acts for 1969 and 1968, 82 Stat. 937, 81 Stat. 341; Independent Offices Appropriation Acts for 1967 and 1966, 80 Stat. 663; 79 Stat. 520.

ficient to note here one conclusion of the 1962 management study—that the “principal underlying cause of FCC administrative deficiency is the lack of an adequate level of appropriation support in both manpower and equipment terms.”<sup>242</sup> The appropriation problem is particularly serious in the frequency allocations area where insufficient manpower and equipment have greatly limited the Commission’s monitoring and investigative capacity and have almost precluded any substantial technical research<sup>243</sup> capacity, both of which are essential to an effective management of the spectrum. The appropriation problem is not likely to be resolved in the immediate future, given the commitment of funds to higher priorities. In any event, the Bartley proposal for inducing additional appropriations does not seem realistic: the one thing least likely to produce more funds is to restructure the system to make even the routine functions more costly than they now are.

Beyond the matter of appropriations, staff and equipment, there is, finally, the matter of leadership from the Commission itself. Although the point may seem obvious, one must respect James Landis’ conclusion concerning the Commission’s processes that “no patent solution . . . exists other than the incubation of vigor and courage in the Commission by giving it strong and competent leadership.”<sup>244</sup> It is a commonplace observation, but it is a sound and durable judgment as to which there would likely be little dispute except over how to obtain such leadership. In this respect the Bartley proposal seems least likely to achieve this aim insofar as its proposed reconstitution of the FCC’s responsibilities would create offices far inferior in importance and stature to the FCC today.

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242. Quoted in 28 FCC ANN. REP. 16 (1962).

243. The inadequacy of the current budget and staff of both the FCC and the OTM and the correspondingly inadequate research and technical capability is emphasized by the President’s Task Force and by the Stanford Research Institute, which has been studying aspects of the spectrum problem for the FCC. See BROADCASTING MAGAZINE, December 16, 1968, at 36, 38; April 7, 1969, at 49. See also *Hearings on Independent Offices and Department of Housing and Urban Development, Appropriations for 1969 Before a Subcomm. of the House Comm. on Appropriations, 90th Cong., 2d Sess. 103-08 (1968)*. In the entire area of frequency management, including allocations planning, research and related activities, the Commission employed an estimated average of only 102.4 persons in 1968. *Id.* at 108.

244. J. LANDIS, *supra* note 217, at 54.

## V. ECONOMIC REFORM: THE PRICING SYSTEM AS A MEANS OF SPECTRUM ALLOCATIONS

In recent years, increasing attention has been given to proposals for an "economic" rather than administrative approach to frequency allocation. Advocates of this approach are concerned less with *specific* defects in the present administrative structure than with the economic inefficiency of the entire system of making allocations by administrative choice. They argue that the problem is simply one of distributing resources, a function normally accomplished not by administrative fiat, but by the workings of the market place.

It has been proposed that a pricing system be established for the distribution of frequency allocation in lieu of administrative allocation, or at least as a major complement of it. Under such a system, frequency allocations would be made, at least in part, through open market sales and purchases, or through some form of Government supervised bidding or simulated pricing system. Proponents of this approach point out that the system would make allocations automatically, eliminating the need for administrative judgment. Professor Coase, one of the principal advocates of such a system, explains it as follows:

Since the amount which a user will pay for a resource reflects the value of that resource in whatever employment he is contemplating using it, the pricing system tends to result in that allocation of a resource between its various uses which maximizes the value of production. If a price had to be paid for radio frequencies, Government departments would not use them unless they felt that, by spending their money in this way, it would serve the purposes of the department better than by spending that money in any other way. And if the price was made sufficiently high so as to bring the demand for radio frequencies into equality with the supply, this would both eliminate the need for an administrative allocation and ensure that radio frequencies were used for those governmental purposes which justified the greatest monetary sacrifice. Since radio frequencies are also demanded by private users (to whom they are now allocated by the FCC), if pricing is to be introduced for Government departments, it would seem desirable that the pricing system should be applied to private users as well. Private users and Government departments could then compete for radio frequencies. In this way the price paid by Government departments would reflect the value of the frequencies to private users and the price paid by private users would reflect the value of the frequencies to Government departments.<sup>245</sup>

Coase's proposal builds on his earlier suggestion that a pricing mechanism be used in lieu of the licensing system for distri-

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245. Coase at 40-41.

bution of broadcast frequencies among competing applicants.<sup>246</sup> Although the earlier proposal seems a radical change, it should be noted that it called for a change within the existing basic framework of spectrum allocations. Thus it would have modified only a small part of the allocations process—the licensing of broadcast stations. The present proposal is more ambitious. It appears to be a substitute for substantially all of the present processes by which allocations are made.

The pricing system proposal, which has in recent years received the support of a number of other economists,<sup>247</sup> and has been considerably discussed,<sup>248</sup> is based on the premise that radio frequencies are essentially the same as other scarce economic resources which are allocated by the market pricing system.<sup>249</sup>

To date, the proponents of the pricing system have been content to talk in abstract terms of the establishment and operation of the system, making it difficult to define the actual proposal. Having set forth some vague generalizations about pricing as a means of allocations, Coase notes simply that:

radio frequencies could be disposed of for long or short leases or by the creation of property rights. . . . But it is not the purpose of this article to consider the legal framework within which the pricing system would operate.<sup>250</sup>

But the problem is not, as Coase suggests, merely a matter of deciding on an appropriate “legal framework” in which the system *would* operate. The problem is finding an economic and technical framework in which the system *could* work.

It should be emphasized that, as generally used in price theory, the resource allocation function of price is based on a free market in which prices are set, *independent of Government decision*, by the consumer who is the judge of his needs or

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246. Coase, *The Federal Communications Commission*, 2 J. LAW & ECON. 1, 4 (1959). See also Levin, *Federal Control of Entry in the Broadcast Industry*, 5 J. LAW & ECON. 49 (1962).

247. E.g., Levin, *The Radio Spectrum: Economic-Physical Characteristics*, quoted in Jones, *Use and Regulation of the Radio Spectrum: Report on a Conference*, 1968 WASH. U.L.Q. 71 *passim* [hereinafter cited as Jones Report]; Meckling, *Management of the Frequency Spectrum*, 1968 WASH. U.L.Q. 26 [hereinafter cited as Meckling]. The Jones article is a summary of the Airlie House Conference on the Use and Regulation of the Radio Spectrum.

248. See, e.g., Jones Report; Note, *The Crisis in Electromagnetic Frequency Spectrum Allocation: Abatement Through Market Distribution*, 53 IOWA L. REV. 437, 472-79 (1967).

249. See, e.g., J. BONBRIGHT, *PRINCIPLES OF PUBLIC UTILITY RATES* 43-46 (1961); P. SAMUELSON, *ECONOMICS* 42-43, 615 *passim* (7th ed. 1967).

250. Coase at 47.



wants. Also, by virtue of the absence of Government intervention, the consumer becomes judge not only of the private value but the social value of the service or product being purchased.<sup>251</sup> Thus, it will first be assumed that what is contemplated is some form of freely competitive market in which competing users' demands are the exclusive determinant of price. Explicit modifications on this free market approach by those who advocate a system of "simulated pricing," will be discussed subsequently.

#### A. ALLOCATION AMONG DIFFERENT SERVICES THROUGH INDIVIDUAL BIDDING AND "OPEN MARKET" PURCHASE AND SALE

Although proponents of the pricing system have not been very precise in describing how their "market system" would be implemented, one feature which appears to be central to the market concept is that individual frequency "rights" would be created. These rights would be freely transferable to anyone willing and able to purchase them.<sup>252</sup>

An initial difficulty is, of course, how to define frequency "rights" which are capable of being transferred among different classes of users. Under the existing system, "rights" are defined largely in terms of "inputs"—the use of particular equipment, at a particular location, with prescribed limits on power, antenna height, and other factors, all designed to make optimum utilization of particular frequencies with minimal interference. Under this structure of regulation, each right would be limited to a particular use and free transferability among different kinds of use would be impossible.<sup>253</sup>

The problem of redefining frequency rights in terms relevant to different classes of users does not seem insurmountable, however. It would not be inordinately difficult, for example, to redefine "inputs" in terms of "output"—the ability to radiate signals of defined strength within particular areas or, alternatively, the right to exclude other signals from a particular area—which could be applied to varying classes of use.<sup>254</sup> However, defining frequency rights in terms applicable to varying classes of use does not overcome all the problems posed by the free-transferability concept. Rather, it brings into focus more difficult technical, economic and social problems. The following

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251. J. BONBRIGHT, *supra* note 249, at 45.

252. Meckling at 31-32.

253. Jones Report at 85-86.

254. *Id.*

discussion is not intended to provide an exhaustive list nor a complete analysis of the problems, but simply outlines them and discusses the major considerations that must be evaluated.

### 1. *The Effect on Existing Uses*

Any attempt to reorganize the system of spectrum utilization must recognize that most of the presently usable spectrum has been allocated not only to the various services, but also to individual users. While in theory existing users have no vested property rights in their frequencies, existing and often long-standing use cannot be ignored. Wholly apart from the difficult legal problems of interfering with existing use,<sup>255</sup> any wholesale readjustment of frequencies could affect billions of dollars of investment made on the strength of present allocations. As of 1963, depreciated United States investment in systems, equipment and research and development facilities related to the use of the radio spectrum was estimated at some \$26 billion. In broadcasting alone the consumer investment in receivers exceeded \$9 billion and the industry investment in equipment, over one-half billion dollars.<sup>256</sup> Such an investment should not and, indeed, could not be easily disturbed by a wholesale offering of present uses to open market competitive bidding.

It has been suggested, however, that simply creating "property rights" in present users and allowing these to be freely transferred by individual purchase and sale would accomplish an economical, efficient and rational distribution of frequencies.<sup>257</sup> This assumption must be examined.

### 2. *Greater "Economy" of Spectrum Use*

The assumption of proponents of the pricing system appears to be that placing a price on frequencies will result in more economical use, alleviating if not eliminating stockpiling of frequencies and discouraging inefficient, uneconomical use. Doubtless some administrative economies would result, but with respect to a large portion of the spectrum it may be questioned

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255. Consider, for example, the nearly endless litigation that attended just one small effort to re-allocate a few television channels in the deintermixture controversy. See Note, *The Darkened Channels: UHF Television and the FCC*, 75 HARV. L. REV. 1578 (1962).

256. DEPARTMENT OF COMMERCE, TELECOMMUNICATIONS SCIENCE PANEL, ELECTROMAGNETIC SPECTRUM UTILIZATION—THE SILENT CRISIS 8 (1966).

257. Meckling at 31-32.

whether the economies would be substantial enough to justify the complex and expensive mechanisms required to implement the pricing system. Consider, for example, the military establishment which is not only one of the largest users, but by many estimates, one of the largest holders of unused or inefficiently used frequencies. Market system proponents tend to assume that once a price tag is placed on frequencies there will be a sudden realization of their value and holders of frequencies will accordingly use them more efficiently—either utilize the frequencies or sell them to others who can make “better use” of them. And if the military does not recognize such economies, the process of budget review will force it to do so. However, this picture of economy in Government seems overidealized. If the present standards of “economy” in defense spending are taken as a guide to what could be expected in this area, there is little to kindle enthusiasm about the efficacy of a pricing system in producing more economical use of frequencies.<sup>258</sup> This is not to suggest that the military agencies and the Department of Defense are wholly indifferent to matters of economy and budgetary considerations. But in this realm “economy and efficiency” are relative to the size and nature of the activity. For example, for fiscal year 1968, estimated total expenditures for the Defense Department exceeded \$75 billion.<sup>259</sup> Given a budget of such magnitude, “economy” and “efficiency” is more frequently a matter of whether to have a “light” or “heavy” anti-missile system than it is whether to use or sell a particular radio frequency or band of frequencies. Considering the realities of defense spending, any significant “economizing” of use will likely be confined to the private sector. Even here, however, it seems improbable that users will respond with perfect economic “rationality” to the price system. This is particularly true if existing users could not practically be forced to bid competitively for and purchase their presently assigned frequencies. Without such forced “justification” of present use, existing users would be somewhat slow to respond with the degree of rationality expected of them—particularly where, as in the case of the military, matters of “economy” become blurred by other important, and less measurable, social purposes.

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258. On “economy” in the Defense Department, *see, e.g.*, 115 CONG. REC. S2549-52 (1969) (comments of former official in DOD comptroller’s office).

259. BUREAU OF THE BUDGET, BUDGET FOR THE UNITED STATES GOVERNMENT 282, 291 (1968).

### 3. *Technically Efficient Utilization of the Spectrum*

The tendency of proponents of the pricing system to assume that radio frequencies are as susceptible to allocation by free market pricing<sup>260</sup> as any other resource reflects an indulgence in abstract generalization which obscured analysis. The problem of achieving an efficient allocation and use of the radio spectrum cannot be defined in terms of economic or social efficiency without consideration of the problem of technical utilization. While technical utilization is not an important factor with respect to most goods, the situation is not so simple in the case of radio frequencies. First, we are concerned with full utilization of an invaluable resource. Failure to get full technical use from the resource would be socially wasteful. Second, in terms of full and efficient use, it makes a substantial difference who "buys" a given radio frequency band in a particular location and how he uses it. Other present and prospective users of the same or other frequencies will be affected in varying degree by such use; and this in turn will affect the degree to which the spectrum can be fully and efficiently used.

But the entire approach of the free transferability aspect of the open market system is incompatible with efficient technical use and optimum technical utilization. Consider, for example, the use of channel nine in Los Angeles. It is possible to calculate interferences which its use for television broadcasting would cause to other users, and interferences from other users to it, and to engineer a system of standards for operation which will allow effective service within a certain definite service area while minimizing interference to other co-channel and adjacent channel television stations in other cities. By advanced planning for this and other television stations, which includes restricting these frequencies for exclusive television use, an allocations system for an area—or the entire nation—can be engineered to result in optimum utilization of these frequencies with reasonably satisfactory, interference-free service. Such standards have, of course, been engineered.<sup>261</sup> While they are not perfect,<sup>262</sup> they at least reflect rational planning and permit a far more efficient utilization than would be permitted by free transferability of frequency rights among different users and classes of users.

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260. *E.g.*, Meckling at 26.

261. *E.g.*, 47 C.F.R. §§ 73.603-.614 (1967).

262. See Courtney, *The Double Standard*, 20 FED. COM. B.J. 152, 158 (1966).

Assume that a group of industrial land mobile users in the Los Angeles area purchases the frequency rights from the channel nine station. Their use presents an entirely different problem of effective utilization from that which is presented by television use. First, the interference which they cause may be more serious than that of a television station because of the difficulty of ascertaining and correcting the mobile source of interference.<sup>263</sup> Second, this new use may cause a serious problem of "intermodulation"—the interference caused by interaction of several signals.<sup>264</sup> Third, since interference with users in other cities may be greater or less than that of channel nine, it will have to be closely evaluated and the use restricted as necessary. This would present increasingly complex problems each time a new transfer was made.

The very nature of the free transferability concept, with its almost random approach to allocations, would ultimately defeat any aim of optimum utilization of the spectrum. Assume, for example, that after the channel nine transfer, channel eight in San Diego is sold to aviation users for contemplated use over southern parts of the state, and the former San Diego licensee then proposes to purchase channel eight in Los Angeles. At the same time the particular group of land mobile users who purchased channel nine (186-192 mc) in Los Angeles decide they do not need so much frequency space, and they sell part of it (186 mc) to a land transportation user group consisting chiefly of the major bus lines operating throughout southern California. They also do not need 192 mc, so that band is divided among marine users operating along the coast, some local aviation users and amateur radio operators. In such an unchartered, uncontrolled chain of transfers, altered uses and changing technical circumstances, it would be an administrative nightmare even to make ad hoc adjustments in use to prevent interference; an attempt to ensure optimum utilization through such a process would be impossible. Would the land mobile, marine, aviation and amateur radio uses on 186-192 mc in the Los Angeles area as fully utilized these frequencies as a television station? Does the use of channel eight for television in Los Angeles "fit" with fullest utilization of that channel throughout the state? Does the use of channel eight in San Diego for aviation comport with full and effective use of these frequencies?

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263. Jones Report at 86.

264. *Id.* at 87-88.

Complicating the situation is the problem of equipment adjustment. Although it might be feasible to transform broadcast into nonbroadcast frequencies, it does not seem practicable to do the reverse because present sets could not receive the new frequencies and manufacturers could not be expected to produce special receivers for each location. Thus, loss of a television broadcast frequency in a given area as a result of transfer to nonbroadcast uses could be recouped only within the bands now available for television use. The transfer of channel nine to the land mobile users in the above example could not be offset by purchasing, say, the 48-54 mc band (television channel one) from the federal government.

Ad hoc allocations could also ultimately lead to reduced standards and degraded technical service. As individual transfers were made, there would be persistent pressures to fill in "gaps" in frequency usage left by ad hoc allocations. There would also be strong pressures to recoup broadcast services lost as a result of transfers. To fill in gaps or to recoup lost services, compromises in engineering standards would often have to be made. For example, it would be expected that VHF "drop-ins"—assignments made at less than the required co-channel and mileage separation requirements<sup>265</sup>—would no longer be the rare exception but would be prevalent. Some such drop-ins could doubtless be effected through the use of directionalization and suppression of radiated signals and other measures to lessen deterioration of service,<sup>266</sup> but repeated adjustments in engineering standards could ultimately result in degraded service. All of this would seem obvious for a moment's reflection on the experience with AM radio, an experience which demonstrated the chaotic conditions which can result from an ad hoc approach to allocations.<sup>267</sup> But the results of the free transferability proposal would be infinitely more troublesome. Instead of dealing with just one particular class of use in AM radio, the Commission would be forced to deal with virtually all uses intermingled.

#### 4. *Social Versus Private Utility*

The case for adoption of a market system to allocate radio

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265. See, e.g., *Report and Order, Interim Policy on VHF TV Channel Assignments*, 21 P & F RADIO REG. 1695 (1961).

266. See *id.* at 1699, 1701.

267. See *Report and Order, Freeze on AM Applications*, 13 F.C.C. 2d 866-67, 13 P & F RADIO REG. 2d 1667, 1668 (1968); *Report and Order, AM Station Assignment Standards*, 29 Fed. Reg. 9492, 2 P & F RADIO REG. 2d 1658, 1666 (1964).

frequencies rests on the premise that the pricing mechanism is the most efficient means of resource allocation and the one which will normally achieve optimal results. Obviously this is a normative judgment not an empirical fact; indeed from the evident tendency of some economists to define optimal allocation as that which market forces produce, the efficiency of the pricing mechanism becomes tautological.

As a general norm of a capitalist economy (though not necessarily of a democratic society) one must accept, I think, the pricing system and the principle of "consumer sovereignty" as the central mechanism of resource allocation. But it is not necessary to translate "consumer sovereignty" as "the divine right of kings." We accept the pricing mechanism of the free market on the trust that it will achieve, if not optimal results, at least better results than government mechanisms. And it does—most of the time. But not always: in the idiom of the economist, there are circumstances where marginal private utility diverges from marginal social utility in such a way that market forces cannot be fully relied on and government intervention, through subsidy, tax or direct controls, must be considered.<sup>268</sup> The use of radio frequencies, I believe, presents such a circumstance. This is obviously not an occasion in which to attempt to elaborate the principles of welfare economics to be consulted on this problem. But one or two of the pertinent concepts can be very roughly sketched.<sup>269</sup>

The situations in which we can look for a divergence between private utility value—as expressed in a market price—and social utility value are many and complex. One such situation may arise where the market itself does not operate "efficiently" because of imperfect competition. We cannot pause to analyse this problem here, but it is doubtless one to be considered in assessing the efficiency of a market system. More troublesome, however, is the problem of "external economies and diseconomies" (to borrow again the jargon of the economist) which may arise from particular uses: situations where a bad use affects the welfare of others but where that effect, good or bad, is not re-

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268. See, e.g., T. SCITOVSKY, *WELFARE AND COMPETITION* 181-88 (1951). The classic treatment of the distinction between marginal social and private utility is found in A. PIGOU, *THE ECONOMICS OF WELFARE*, ch. IX (4th ed. 1932).

269. For a fuller discussion of the matters sketched here see W. BAUMOL, *WELFARE ECONOMICS AND THE THEORY OF THE STATE* 64-99, 123-34 (2d ed. 1965); R. MUSGRAVE, *THE THEORY OF PUBLIC FINANCE* 6-14 (1959); T. SCITOVSKY, *supra* note 268.

flected in price.<sup>270</sup> The classic example, that of the air polluting effects of a factory, finds a striking parallel here in the effect of electrical interference. Not only does one radio use interfere with other uses of co-channel and adjacent channel frequencies, it may also affect the welfare of the public at large which must suffer the ill effects of lost or degraded service.

In some cases, of course, the effect of a particular use on others may be made the subject of bargain and the full costs benefits of the use thus brought into the price. But certainly this would be uncommon in the case of radio. Even assuming the possibility of completely identifying all who are directly affected, there may be no mechanism for reflecting their interests in the market. Take the case of broadcasting. The main social objective of and justification for the service is benefit to the public—entertainment, information, education. But in the process of bidding for television frequency rights, the public is not really represented. As pointed out by one economist, the value of the frequency right has no direct correlation to the value of the broadcast service to the public:

[T]he value [of television time], to the advertisers, is reflected in what he is willing to pay for the time, and the value to the broadcaster of having that time to sell to the advertiser is reflected in what he is willing to pay for the spectrum if it were put up for bid. But it is not true . . . that the value of the viewing opportunities thereby afforded the viewer is reflected in those prices. Very indirectly this may be true in the sense that what the viewer is going to pay for advertised products may depend on how much he likes the program, but I . . . wouldn't want to push that argument very far. In this circumstance [it cannot be presumed that willingness to pay more for spectrum use reflects a higher social use].<sup>271</sup>

The above example is not intended to sound the trumpets of alarm for the future of television service, however. In fact, ensuring the continuation of socially valued broadcast service would not be a major problem since broadcasting is generally such a profitable use that only in a few instances would other users find it profitable to purchase broadcast frequencies for less remunerative nonbroadcast use, although, there may be many cases where broadcast use of a *particular frequency* would be less profitable than alternative nonbroadcast uses.

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270. For more extended analyses see W. BAUMOL, *supra* note 269, at 130-33; R. MUSGRAVE, *supra* note 269, at 8-14. On the inadequacies of traditional market forces generally in serving social needs see J. GALBRAITH, *THE NEW INDUSTRIAL STATE* (1967).

271. Quoted in Jones Report at 91.



But the broadcast service illustration suggests the far more pervasive problem of meeting social needs and wants which radio, in a variety of forms, can and should serve. Of central importance here is not merely the fact that some persons affected by radio have no "economic vote" but the fact that, for a large array of social wants no means exist to secure the requisite contributions from individuals except by government action. The problem of radio spectrum allocation is in this respect not unique. Despite assertions by Professor Coase and others that the use of a market pricing mechanism is the "normal" means of distribution of limited resources in this country,<sup>272</sup> even a cursory examination of the way in which socially important goods and services are allocated in our society demonstrates that reliance on a *pure* market pricing system is far from universal. Indeed throughout a large (and seemingly growing) segment of over economy, goods and services are not allocated entirely—in some cases not primarily—by a free market pricing system. Consider a service closely analogous to communications, that of transportation. In almost every aspect of transportation service there is an element of Government control—rate regulation, service regulation, subsidization of non-economical service—which has as its direct purpose the allocation of services in ways which would not be obtained if a *pure* pricing system were in effect.<sup>273</sup>

This has been recognized by some market system advocates, who nevertheless argue that a direct money subsidy to "worthy" frequency users would be preferable to "giving" them frequencies. For example:

[W]hile the police themselves and public safety . . . are a public good, spectrum is in essence no different . . . than any other factor of input. . . . It is not at all clear that giving away frequencies . . . is the sensible way to subsidize police. [It may be desirable] to give the policy money instead of frequencies, since it is quite possible that there is a misallocation of resources as a consequence of the fact [that] we do this,

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272. Coase at 40; Meckling at 26.

273. For example, subsidies are given to certain airlines to provide service to local communities which would not receive such service under a pure market system. 49 U.S.C. § 1376 (1964); see *Local Service Class Subsidy Rate*, 34 C.A.B. 428 (1961); CAB BUREAU OF ECONOMICS, SUBSIDY FOR UNITED STATES CERTIFICATED AIR CARRIERS (1968). Apart from specific "mail" subsidies received by local service carriers, helicopter carriers, Alaskan and Hawaiian carriers and one trunkline (Northeast), all air carriers receive a form of subsidy through the provision of certain services—navigation aids, weather information, airport facilities—at charges not covering cost. R. CAVES, AIR TRANSPORT AND ITS REGULATION 253 (1962).

because if they had the money they would buy other things than frequencies.<sup>274</sup>

As a matter of economic principle, money subsidies are, I would concede, preferable to commodity or service subsidies, although certainly less often practical. However, even assuming that the Government could practicably finance such a program of money subsidies, it is not clear how this would provide any standard for, or how it would bring about any significant improvement in the allocation of resources. Since money, like radio frequencies, is a scarce commodity, a judgment would still have to be made as to how best to apportion the limited subsidies among competing users and competing social needs: to whom shall subsidies be given, for what purposes and in what amounts. Obviously this "allocation" decision cannot rely on the market place since its very purpose is to modify the results of the market. Reliance must be placed on administrative judgment in the formulation of which economic value is not decisive. In short, deciding how to allocate money subsidies turns out to be little different from deciding how to allocate frequencies.

#### B. ALLOCATION AMONG USERS WITHIN THE SAME SERVICE THROUGH COMPETITIVE BIDDING

The principal thrust of recent pricing system proposals has been the use of pricing as a means of allocating frequencies among different services with particular emphasis on allocation among the major service groups such as broadcasting, private land mobile, military, and others. A more modest proposal is to employ pricing as a means of allocating frequencies among users within the various services. Allocations among the major service categories, and among services, would continue to be made by administrative decision, but once made, the assignment of frequencies to users *within* each service would be by a process of competitive bidding. This, it is argued, would:

get rid of the party-line congestion in land mobile and . . . the comparative proceeding in broadcasting. . . . [I]t permits you to move services as a group and eliminate some of the television problems that exist [in the case of isolated transmitters] . . . . [I]t permits you to introduce into the process . . . non-economic considerations. . . .<sup>275</sup>

Thus, this proposal is primarily aimed at eliminating the comparative hearing process in broadcast licensing and relieving con-

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274. Quoted in Jones Report at 91. Compare the criticism of service subsidies effected by internal subsidization policies, commonly pursued by regulatory agencies, in Posner, *Natural Monopoly and Its Regulation*, 21 STAN. L. REV. 548, 608 (1968).

275. Quoted in Jones Report at 103-04.

gestion in the land mobile area.<sup>276</sup> Without attempting an extended analysis of this proposal, some comment seems appropriate insofar as it bears directly on the use of a pricing system as a means of spectrum allocation and management.

A primary achievement of this proposal would be the elimination of the comparative hearing process, a result which would be considered by many as a highly laudable achievement.<sup>277</sup> The comparative hearing process has been justly maligned. In practice it tends to be an endless, ill-defined contest—a kind of modern day analogue to the ancient forms of trial by ordeal. While past experience indicates that reform is necessary, the competitive bidding procedure would not improve the system. Instead of establishing standards by which to make a reasoned, meaningful choice between applicants in terms of their qualifications and ability to serve the public interest, the competitive bidding proposal would abandon all attempts to make any judgment on qualifications or public interest. It cannot be pretended that the ability to pay has any necessary correlation to qualifications or ability to render service to the public. Therefore the bidding proposal must rest on either of two premises: (a) that society has no preferences between given applicants, or (b) the present system does not make a meaningful choice anyway; a bidding system will at least introduce administrative efficiency.

The first premise cuts against the grain of communications regulation since 1927 and rejects the concept of public service which underlies all communication regulation, a concept no informed person, whatever his opinion as to the results of present-day enforcement, expects to see abandoned. Although the choice between competing applicants is not easy to make in terms of meaningful and acceptable criteria, the mere difficulty of making a choice scarcely justifies not making it when choice is important.

As to the second premise, it may be quite true that the present process has not served to make meaningful choices. Also it is true that if the criteria for making a choice between competing applicants are sound one would expect them to be applied to *all* applicants—those who are not involved in comparative hearings as well as those who are. But these shortcomings are not in-

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276. This proposal is an expanded application of the early suggestion by Professor Coase that a competitive bidding system be substituted for the comparative hearing process. See note 246 *supra*, and accompanying text.

277. See, e.g., Jones Report at 105.

herent in the system of licensing and they could be remedied within the system by establishing meaningful criteria for licensing applicants.

The merits of a competitive bidding system as proposed to be applied to land mobile users are more difficult to analyze since it is not precisely clear what the proposal entails. It has been suggested generally that an administrative decision determine how many land mobiles will be allowed in "any given service" and that the available frequencies then be "auctioned off."<sup>278</sup> The primary aim of this plan is to eliminate "party line" sharing of frequencies and substitute a system of exclusive use as in the broadcast services. But it is not clear what is meant by the terms "any given service." It might mean that within each of the broad categories of land mobile services—public safety, industrial, land transportation—there would be competitive bidding among each user without regard to whether the user was, for example, in the business radio service or the petroleum radio service.<sup>279</sup> Alternatively it might mean that only within a particular service, such as the business radio service, would there be competitive bidding among individual users.

If the former is being proposed, the basic objection previously raised—that it does not permit a policy judgment to be made as to the relative social priorities of the different uses—seems applicable. It might be argued that the basic problem of public policy is resolved once the allocations are made as *among* the major service categories, and that *within* those service categories it is largely a matter of indifference how the frequencies are divided: but this seems unacceptable. While it may be that neither service is entitled to priority over the other since each is equally important, an even apportionment is not the same thing as a random apportionment.

However, if the proposal is to introduce a competitive bidding system as among *individual users within the same service*, it may be more worthy of consideration. Under present regulatory philosophy it does not appear to be a matter of large concern

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278. Quoted in Jones Report at 103.

279. Some participants in the Airlie House Conference on the Use and Regulation of the Radio Spectrum, at which the quoted proposal was made, appear to have understood this proposal as involving competitive bidding among the major service categories of land mobile users since they expressed concern about the possible inability of police or other public safety users to outbid the others. See Jones Report at 104-05. Though this does not seem to be what is contemplated, the quoted proposal is sufficiently vague to include almost anything.

which of two business radio users obtains the use of a business radio frequency. This conclusion is supported by the fact that individual license qualifications other than citizenship are virtually nonexistent. Unlike the broadcaster, the *individual* land mobile user does not have any special public service obligation; it is enough that a general business purpose is served. If so, there is perhaps no objection *in principle* to the proposal to establish competitive bidding among users. As a practical matter, however, such a system would not be easily accepted. If individual land mobile uses are to be made exclusive, or the amount of sharing is to be limited, it will be difficult to justify a different process than that which is followed in the case of broadcasters. The mere *appearance* of discrimination in the treatment of broadcast and private land mobile users in this regard would probably force similar treatment of the two, resulting in a comparative evaluation process for land mobile users similar to that used for broadcasters. Given the present size of the Commission and the number of applicants, this would be impossible.

C. ADMINISTRATIVE ALLOCATION ON THE BASIS OF "SIMULATED" PRICING

Recognizing the impracticability of a pure market pricing system, a variant on this has been proposed in which allocations decisions would continue to be made by administrative decision, but the decisions would be made to conform to economic criteria by the use of "simulated" or "shadow" pricing.<sup>280</sup>

The exact operation of this system of simulated prices is unclear. One possibility which has been suggested is to compare the contribution made by the various radio services directly or indirectly to the gross national product. The reasoning is as follows: use of radio frequencies is essential to air travel; the airlines contribute X dollars to the GNP; therefore aviation frequencies used by them contribute, indirectly, X dollars to the GNP. A moment's reflection reveals the crudeness of such a formula as a means of valuing a particular frequency or frequency band. The problem is not whether airlines are going to have frequencies, but rather involves the amount, type and conditions of use of their frequencies.

A more discriminating approach would be for the allocating agency to establish the value of frequencies to a particular group

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280. See the proposals by Professor Levin, *quoted and discussed in* Jones Report at 97-102.

of users by a form of "costing" its use. For example, the value of the spectrum to land mobile users would be estimated by calculating capital and labor costs incurred in doing the same job with and without mobile radio. The value of the spectrum to broadcasters could be estimated by comparing the cost of delivering programs to homes via cable, as compared to conventional over-the-air transmission.<sup>281</sup>

While the simulated pricing approach does avoid the practical problem of creating a market structure in which a free market pricing system could operate, it does not meet the more fundamental problem, noted earlier, that there is no necessary correlation between the value fixed by a pricing system and social value or social utility. Consider the above example of "costing" the use of frequencies for broadcast stations. The implicit assumption is that, apart from cost aspects, the cable transmission and broadcast distribution systems are substitutes. But that assumption would clearly be disputed by many who would argue that broadcast service offers social advantages which cannot be meaningfully "costed" in an accounting or economic sense. The simulated price cannot therefore be used as the sole or even the primary criterion of administrative judgment.

This is apparently accepted by proponents of the simulated price approach who nevertheless argue that this approach does provide a significant criterion for the administrative decision-maker.<sup>282</sup> And it does. But, in a general fashion "cost" considerations are already taken into account where possible.<sup>283</sup> The question is simply how much more refined and elaborate should we make the "cost" finding process. Those proposing a system of "shadow prices" apparently envision a more structured, formal process for determining cost/price—a process more or less like a formal valuation or rate-making proceeding. If this is what is contemplated, the desirability of such a process must be questioned.

First, it must be recognized that the development of simu-

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281. *Id.* at 99. Apart from the "cost" comparison between CATV and broadcasting as a means of setting the "cost" of broadcast use, it has been argued that a nationwide system of wired television in lieu of the present broadcast system would enable a large amount of the spectrum to be reallocated from broadcast to nonbroadcast use. Barnett & Greenberg, *A Proposal for Wired City Television*, 1968 WASH. U.L.Q. 1, 22. Such a substitution of wired television for broadcasting raises many difficult questions of public policy; however, an exploration of these policy questions would require a study in itself.

282. *See* Jones Report at 99-100.

283. *Id.* at 100.

lated market data on which to base cost/price findings would not be an easy task. It has been suggested that without forcing claimants to undergo actual costs in bidding for frequencies, exaggeration by rival claimants as to the "costs" of their respective uses would occur, such that the data produced will give only a very crude indication of actual value.<sup>284</sup> But a more basic objection is that economic analysis is not an exact science capable of commanding general agreement on principles even among objective analysts. Compounding the normal difficulties of cost analysis is that here the analysis must include a comparative study of diverse services.

Analogy might be made to the problem which has plagued the ICC in setting the rates for rail, motor and water carriers so as to "recognize and preserve the inherent advantages" of each mode<sup>285</sup>—the problem of determining in any given case which type of carrier is the "low cost mode." After years of intermodal rate-making, fixed standards still have not been established for determining how the low cost mode is to be determined.<sup>286</sup>

It might be observed that, while cost analysis would be complex and time consuming, it might be no more so than existing processes.<sup>287</sup> In any event, if such a complex analysis is undertaken for purposes of intermodal transport rate-making, is it not equally appropriate to undertake them for the analogous purpose of interservice allocation of radio frequencies? If the arduous and complex process of cost analysis produced a criterion which would be decisive, or even dominant, it might be worthwhile. However, for reasons already discussed, it seems probable that once a "cost" or "price" has been set for the various uses of frequencies, so little of the decision-making problem will have been solved as to make the game not worth the candle. The immeasurable social utility considerations will continue to loom so large that in most cases the area for adminis-

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284. Meckling at 29. See also Jones Report at 101.

285. See National Transportation Policy, 49 U.S.C. § 1 (1964) (preceding note).

286. See *American Commercial Lines, Inc. v. Louisville & Nashville R.R.*, 88 Sup. Ct. 2105 (1968). See also *ICC v. New York, New Haven & Hartford R.R.*, 372 U.S. 744 (1963). In making its cost determinations the Commission has held "public costs" cannot be considered, largely because of the "insurmountable problems" of determining and allocating such costs. *Grain In Multiple Car Shipments—River Crossings to the South*, 321 I.C.C. 582 (1963), *rev'd on other grounds*, 229 F. Supp. 572 (S.D. Ohio 1964), *modified*, 379 U.S. 642 (1965).

287. See Meckling at 29.

trative discretion would have to be as broad as it is under the present system.

## V. CONCLUSION

No one today can reasonably deny that the problems of frequency allocation and spectrum management are becoming ever more difficult. Demands for frequencies are increasing at an accelerating pace and the supply of available frequencies is fast being depleted. The result plainly is that the conflict between rival frequency claimants is becoming more acute, as is the need for a closer look at priorities among services and tighter management control to assure maximum utilization of and optimal social benefit from the radio spectrum. But, as with all things, to identify the problem is one thing, to solve it quite another.

The complexity of the problems confronted here—in which economic, social, technical, legal and, by no means least, political considerations intrude—would seem to counsel caution in drawing conclusions too quickly or recommending major institutional change too readily. Unfortunately, such caution has not been evident in much of the critical commentary on the subject, nor in a large and seemingly growing number of reform proposals.

Some reform proponents, seizing on the present dual jurisdiction of the FCC and the executive branch as a prime source of inefficiency and an impediment to sound policy development, have jumped quickly to the conclusion that unified allocations authority in a single agency is the salvation. But this conclusion provides little real analysis of such questions as whether and to what extent the dual jurisdiction has really hindered sound policy development, the probabilities of improving the situation simply by unifying authority, and the practical implications of such a change.

The case for unified control is not a compelling one, but it is not disputed that, *other things being equal*, it might be somewhat more efficient and more conducive to effective overall allocations policy planning to have complete authority vested in a single agency. But other things are not equal. Essentially, unification of management control comes down to two alternatives: placing control in the hands of the executive or placing control in the hands of the FCC. The first alternative is fundamentally at odds with the fact that the executive is the largest single user of frequencies. Very plainly it is a matter of putting the wolf in charge of the flock. The second alternative avoids some of the pitfalls of the first. In general principle, a



case can be made for FCC control. But giving the FCC unified authority seems politically unfeasible. First, the FCC is a much maligned agency and expansion of its authority would be made more difficult for that reason alone. More important, however, any attempt to divest the executive of its present authority would be most forcefully opposed by the military establishment, which would argue, as it has in the past, that executive control is essential to national security. In the face of such opposition there is no chance that Congress would thus delimit "executive prerogative."

These objections are not dispelled by the proposal to give the FCC authority subject to appeal and final decision by the President. Although in appearance a judicious compromise, experience suggests that in ultimate effect this would prove to be no different from giving complete authority to the executive.

Not all of the advocates for radical administrative reorganization support unified control of frequency allocations and spectrum management. The Bartley proposal would retain dual jurisdiction over allocations but would completely transform the structure of spectrum management within the private sector. However, this "balkanization" of regulatory authority is not only out of step with the trend toward administrative consolidation, it is totally misdirected as an effort to meet the current needs of telecommunications regulation.

Far more drastic than any of the proposals for administrative reform are a number of proposals for eliminating or at least minimizing the administrative process itself, substituting an "economic process" in which allocations are made through some form of open market or administratively determined pricing of frequencies. This economic approach has attracted great interest and considerable support in many circles. The attraction is not difficult to appreciate. In contrast to a system in which allocations are the result of a complex and uncertain mix of subjective judgment, dimly outlined priorities and policies, "irrational" politics and "semirational" legal standards, a pricing system promises simplicity, "rationality," objectivity and all the other ideals of economic science. The rather basic practical impediments to the implementation of a system in which price is made to control frequency allocations do not seem to have significantly dampened the enthusiasm of those who are content to leave such "detail" to the lawyers and other "technicians" in attendance. Nor does there appear to be any marked concern among those who vigorously press for such a system that

it is ill-designed to evaluate and measure the social interests and needs served by the variable uses of radio, except by forcing them onto the procrustean bed of economic efficiency. Perhaps this is symptomatic of a larger bias. As Professor Galbraith has observed (with exaggeration permitted of artistic license): "This is the modern morality. St. Peter is assumed to ask applicants only what they have done to increase the GNP."<sup>288</sup> But it is not the intention of this article to disparage the importance of economic considerations, and their relevance to the process of making radio frequency allocations is not disputed. The proposals to implement a pricing system are objectionable, not because they introduce irrelevant considerations, but because they explicitly or implicitly make economic achievement the primary, or even the exclusive, test of social needs and interests.

Proposals for sweeping institutional overhaul of the system offer no panacea to the problems of radio frequency allocation and spectrum management. This is not to intimate that some administrative reorganization is not clearly needed. On the contrary, there is a vital need for a stronger, more independent executive authority to manage the Government's use of frequencies more effectively. However, the institutional changes required to accomplish this do not entail any great organizational or administrative upheaval. Apart from the task of reconstituting the present authority and responsibility in an independent office, the problem of strengthening executive management essentially becomes the familiar problem of adequate budget, staff and effective leadership.

Similar conclusions may be drawn with respect to the FCC. It has been organized and reorganized. There may be some further administrative changes which could be made, but the present basic organization, which essentially meets the recommendations of the Hoover Commission, the Landis Report and the most recent (1961-62) management study, seems well conceived. And, incredible as it may seem to some critics, the FCC has been in the vanguard of the major federal agencies in some major procedural respects.<sup>289</sup> Yet it cannot be pretended that such reorganizations and the adoption of such "modern" techniques have insured a more adequate performance by the FCC in

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288. J. GALBRAITH, *supra* note 270, at 408.

289. For example, in its use of rule-making procedures in formulating substantive policy, the FCC has long been in advance of other agencies who have been urged to follow the FCC's example in this aspect. *E.g.*, E. REDFORD, NATIONAL REGULATORY COMMISSIONS, NEED FOR A NEW LOOK 17 (1959).

discharging many of its regulatory responsibilities. To all but the theologians of administrative reform this should be cause for some skepticism about the efficacy of continued institutional reorganization and administrative process reform. Something else is evidently needed. No amount of reorganization and reform, however artful, can satisfy or supplant the FCC's critical need for a more adequate capability for research and planning, for monitoring and inspecting the use of assigned frequencies, and for more effective processing of the hundreds of thousands of license applications. And, of course, there is the ever present need for strong leadership—a commonplace observation which is all too often spurned by the architects of administrative reform.

Ultimately it must be recognized that institutional reorganization and administrative process reform has limits beyond which it can no longer be relied upon to resolve the problems of regulation. Thereafter, persistent attachment to continued reorganization and reform becomes simply evasive insofar as it ignores the inevitable necessity to confront and resolve difficult policy issues and make hard decisional choices. Today in the field of spectrum allocation and management, the necessity to confront the complex issues of public policy, particularly to establish priorities of need among competing uses and to make hard choices among competing demands—or at least make acceptable, workable compromises—cannot be avoided by elaborate reorganization plans or sweeping changes in administrative processes.