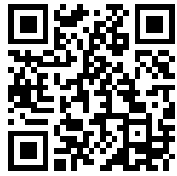

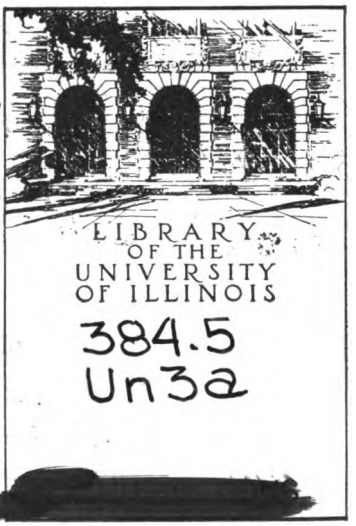

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COMMITTEE PRINT

ALLOCATION OF TV CHANNELS

REPORT

OF THE

AD HOC ADVISORY COMMITTEE ON ALLOCATIONS

TO THE

COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE

UNITED STATES SENATE

MARCH 14, 1958

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[1] Resigned before report was completed.
[2] Replaced Curtis B. Plummer.

ALLOCATION OF TV CHANNELS

AD HOC COMMITTEE REPORT AND RECOMMENDATIONS

HON. WARREN G. MAGNUSON,
Chairman, Interstate and Foreign Commerce Committee,
United States Senate.

On June 21, 1955, you convened an ad hoc Advisory Committee on Allocations [1] comprising the following members: T. A. M. Craven,[2] Allen B. Du Mont, Robert P. Wakeman, alternate, William S. Duttera, Donald G. Fink, Ralph N. Harmon, C. M. Jansky, Jr., Stuart L. Bailey, alternate, William B. Lodge, Frank Marx,[3] Curtis B. Plummer,[4] Haraden Pratt. On that occasion you requested that I act as chairman of this committee you had selected. In March 1956, at my request, you appointed A. Earl Cullum, Jr., to this ad hoc group. Since the assignment clearly could not be limited to technical considerations, I asked for and was granted authority to broaden the scope of the study.

Because of the need for continuity in the study and the nature of the membership of the committee, I have devoted a large part of my own time for more than 2 years to an extensive study of the problem and to the drafting of the report, seeking counsel from the committee members and reviewing observations with them throughout the procedure.

The results of the study are summarized in the supporting brief and abstract submitted herewith, and in the following recommendations:

I. An independent audit of the UHF–VHF allocations problem;

II. An objective review of the Commission's mandate, management, operation, and budget;

III. The establishment of a communications office or authority as part of the executive structure;

IV. An authoritative classified review of the radio spectrum requirements of the Nation as a whole, conducted at Executive level.

The substance of these recommendations is outlined in the following paragraphs.

The Commission has wrestled with the television allocation imbroglio with negligible success. The response of the Commission to the two investigations by your committee demonstrates its incapacity to deal with the problem without assistance. Unsupported investiga-

[1] See appendix for charter suggestions to Engineering Committees on Allocations Problems and for ad hoc committee.
[2] Now Commissioner.
[3] Resigned.
[4] Chief, Broadcast Bureau, replaced by Edward F. Kenehan.

tion alone affords no solution to the current UHF–VHF problem. Committee study can only delineate the problem and point the way toward its solution. Piecemeal solution offers no more than an insidious panacea.

The allocations problem in simplest terms is to determine how well we can do with the UHF and VHF resources we now have. The balance sheet should compare the nationwide service now rendered with the service which could be rendered by exploratory modifications of the existing plan. The extremes are on the one hand an all-VHF system and on the other an all-UHF system. These and intermediary plans should be analyzed and the several results maximized. The measure of any plan must be in terms of immediate cost to the public whose investment in receivers is already large, in listeners immediately gained or lost, in cost to the broadcasters whose equity must be given consideration. All these factors must be evaluated in terms of the long-range public good to the greatest numbers of listeners. Neither Congress nor the Commission now has the answer to these questions—nor the means to obtain them.

In the allocations tangle the Commission is confronted with an extensive array of radically differing remedies proffered by interested parties other than the listening public. With respect to these, the Commission must be more than a referee. The recommendations must be subjected to exhaustive and thorough inquiry, to comprehensive analysis, not merely exposed to collation or measured by quantity instead of quality, simply because of Commission staff limitations. There must be a master plan arrived at by independent analysis against which to evaluate the proposals of the many interested competing parties.

An overall, nationwide allocations plan involves considerations which cover a vast area including economics, social objectives, political aspects and technical factors. On the technical side there are questions to be answered in measured terms of what comprises tolerable interference and thus permissible station spacing, of the needs for higher power UHF transmitter equipment and lower gain antennas, of more adequate input tubes for UHF receivers, and of the way in which to promote greater research and development efforts, particularly on critical handicaps in these fields. There are questions of high tower potentialities and directional antenna arrays. There are novel methods of carrier stabilization and their effects on station density. There is the question of drop-ins generally, their advantages, and disadvantages. There is the quandary of boosters, satellites, and translators to be resolved and their respective applications to large, sparsely settled area service and irregular terrain to be evaluated. No allocations plan can be made without full consideration of the place of networks in the public interest and of their requirements. No plan which envisions the growth of television can ignore the expansion requirements of associated coaxial and microwave link transmission facilities. Inseparably involved in any overall planning, and exceedingly important for reasons of spectrum conservation, is a full consideration of the place of closed circuit television as complementary to broadcasting. The implications of pay television enter into any current allocations proposal.

The suggestions bearing on how to expand the Nation's commercial television facilities are many, some sound, some irresponsible, some the

result of wishful reflections of the real problem. A superficially attractive idea is that by reducing the service areas of stations one can cure the present problems of television broadcasting. In the absence of penetrating analysis, this suggestion may turn out to be a beguiling trap.

There is need for a realistic evaluation of the economic, social, and technical factors affecting the growth of commercial television broadcasting (including comunity television) in order that national projections of growth may be made to guide the Government, industry, and the public. To the extent that monopoly is inimical to the public interest, the Government must insure that by the nature of its action or lack of action it does not engender the underlying causes.

These and many other factors indicate the need for and the great potentialities of an audit conducted by a professional staff of exceptional scope, exceptional qualifications, and national repute.

It is for these reasons that the ad hoc Committee recommends that the Interstate and Foreign Commerce Committee take the formal steps necessary to underwrite and monitor for the Commission an independent audit of the television allocations problem, taking into account any and all relevant factors consistent with the Communications Act of 1934, as amended. The purpose of this audit would be to give the Commission a considered, comprehensive analysis of the national television problem with detailed recommendations with respect to a nationwide allocations plan.

It is recommended that this audit be placed in the hands of a nationally recognized, professional institution, experienced in the administration of projects of this nature—an institution capable of drawing from its own staff and from that of other centers in the execution of its assignment, and equipped with an adequate outlay of facilities, including the latest electronic computers. The period of the audit should be flexible; for example, a minimum of 1 year and a maximum of 3 years. It is recommended that a minimum budget of $500,000 be immediately set aside to insure initiation of the project. A first responsibility of the agency selected would be to lay out a program, including budget, as the basis to conclude specific negotiations. There are several national establishments, any one of which would be qualified to assume this task.

There is precedent for this technique. It has been employed with conspicuous success by the military over many years, even in the most classified areas and sometimes on a scale vastly larger than for the purpose indicated here. Project Lincoln, dedicated to the development of a prototype air-defense system for the Nation, is a current illustration. The Commission, in discharging its responsibility to the public, has, likewise, an obligation to avail itself of highly qualified professional assistance in the solution of its own critical problems.

Such a task-force attack on the allocations problem has neither been explored nor tried by the Commission. Collation of recommendations of interested parties and dependence on industrial and professional-society committees have been its principal recourse thus far. These techniques are totally lacking in the qualifications necessary to the solution of the Commission's problem.

Whereas the Commission, despite its mandate and authority under the Communications Act, has expended negligible funds for professional assistance in the allocations study or in the study of new uses

of radio, in significant contrast, 1 foundation alone has contributed some $19 million for the exploratory support and the study of the educational television field alone.

The floundering search for a solution of the UHF–VHF allocations difficulty immediately facing the Nation must not obscure the fact that there are other important aspects of the larger television problem. The Commission has the responsibility so to conduct its immediate operations that it does not, fortuitously, contribute to the generation of future crises. Its planning must reflect vision and a grasp of the factors affecting the Nation's overall welfare.

Housekeeping burdens obscure the Commission's broader functions. The Communications Act enjoins the Commission to study new uses of radio and, generally, encourage the larger and more effective use of radio in the public interest. This responsibility, as the Supreme Court observed, is not limited to technical and engineering aspects. The Commission has failed to take advantage of the potentialities of this injunction in the act, having given it but passive notice. One example is its reliance on interested industry, to the exclusion of independent study, for technical analysis involved in the allocations problem (and failure to resort to analysis of other aspects of this problem, including economics). It has no control over the scope or quality of this industrial source of information, nor has the industrial source any real responsibility to the Commission for the extent or detailed nature of its contribution. The Commission is bound to accept with grace what it can get out of this charitable contribution, however incomplete or limited in scope. It is as if the industry were a philanthropic foundation and the Government an eleemosynary institution. This situation is not simply unhealthy; it is tantamount to an abdication of responsibility.

In the radio field of television, for example, only by an active program of its own in which it is constantly examining new developments, their effects on television economics and public interest generally, can the Commission minimize dislocations of the kind characterized by the current allocations crisis. Only by an active, well-conceived technical program, including the subsidization of research where it is in the public interest to expedite a specific development in the absence of adequate interested party incentive, will the Commission, as custodian, assume the qualities of leadership and expertise imputed to it by the Communications Act and by the courts, and render to the public the full advantages of technological progress.

Today, the Commission is preoccupied, if not overburdened, with the mass of everyday problems of licensing and policing, together with the procedural matters, including hearings, to which virtually its entire budget is applied. It is an agency with anomalous independence, which is assigned a mixture of contrasting functions varying from those which are quasi-judicial to policing, engineering, and research. The individual qualifications of the Commissioners demanded by this assortment of responsibilities are, indeed, complex. Here is a vital matter needing examination.

It is, therefore, recommended, in the light of the record, that a group be selected under the leadership of a distinguished, public-spirited, highly qualified citizen to examine the Commission's mandate under the Communications Act, its organization, budget, and management,

to determine what steps are necessary in order that it can discharge its varied responsibilities with the utmost efficiency and greatest benefit to the public. This task should include scrutiny of the Communications Act, as amended, its adequacies and inadequacies, in the light of the vast technological progress and experience in regulation since its enactment in 1934.

Under existing law, administrative responsibility for communications is divided between the Federal Communications Commission and the President. Responsibility for nongovernmental communications rests with the Commission, and is described in detail in the Communications Act. Responsibility for governmental communications rests with the President, and is merely indicated in the act. The Commission has, at least, the advantage of being an obvious center of regulation of all civil communications, as well as its champion. There is no high-level agency within the Government to resolve conflicts arising among governmental interests, much less those arising between governmental and nongovernmental interests. Government policy and administrative development have not kept pace with technical and industrial development in communication. The modernization of the national air-control facilities presents, in itself, a vital problem. Radar and other communications developments in the military area, under present lack of overall administration, promise to present serious conflicts with civil communications, including interference with television broadcasting, if allocations plans are not scrupulously coordinated. In ordinary circumstances, a lack of overall unity may be simply inconvenient; in times of emergency, it can prove disastrous.

The radio spectrum in the range from 10 kilocycles to 30,000 megacycles was examined by the Commission through the medium of hearings in 1944–45. The Commission is now, for the first time since, initiating a study of the spectrum, this time of the regions above 890 megacycles.[5] In the meantime, techniques have advanced at a prodigious rate, and two existing new modes of radio communication have been discovered, ionospheric and tropospheric scattering. The military have particular reason to be interested in the potentialities of these new techniques. Ionospheric scattering points to new applications in the lower VHF band, tropospheric scattering, the UHF band.

In 1959, there is to be an international radio conference. Our needs must be clearly understood if we are to plead them successfully and secure them by international agreement. There is, thus, an imperative need for a critical study of the radio spectrum in terms of governmental and nongovernmental needs. Clearly, such a study should be made under classified authoritative aegis at Presidential level.

The formation of communications policy for both short- and long-range planning for both domestic well-being and military security can only be accomplished by an agency at such high level that it has access to classified information and with such authority that it is enabled to determine the best course, to prevent conflicts which might otherwise arise through ignorance on the part of one agency of what is being done by another, or the picture as a whole.

[5] Docket No. 11866.

Summarizing, in the absence of a fresh approach by the Interstate and Foreign Commerce Committee, the public has no reason to believe that the current hearings on the UHF–VHF problem will result in any less confused or more effective administration of commercial television broadcasting in the future than in the past. To argue that it is too late to take any corrective steps is but to condone the lack of decisive action by the Commission over the past 5 years and to endorse this pattern as a tradition.

The UHF–VHF problem is but symptomatic of a condition that reaches deeper into the functioning of the Commission as an administrative and quasi-judicial body. Congress, not being fettered by existing conditions, should thoughtfully plumb the underlying causes, assisting the Commission directly and indirectly in its inordinately difficult task by supplemental funds for an audit and by legislation where necessary.

In your letter of transmittal of the Plotkin memorandum on television network regulation and the UHF problem, February 1, 1955, you stated:

> No comprehensive study or analysis—no survey broad enough to appraise the developments in this field during the past 20 years—has, to my knowledge, taken place during that time.

This indictment applies identically today.

In this undertaking I am indebted to Mr. Kenehan, formerly Chief of the Broadcast Bureau of the Federal Communications Commission, for his steady and understanding assistance. He has given generously of his time in locating material I have requested and in giving me the benefit of his wisdom and experience in the discussion of the many questions I have raised with him. I am grateful for his objective and judicious counsel. We agreed in the beginning that in view of his position on the Commission it would not be appropriate for him to do more than this, nor for him to pass on the substance of the report or to participate in drawing conclusions.

Mr. Ralph Harmon has given generously of his time and understanding counsel during the course of this study. However, he has advised me he prefers to make no comments on the substance of the report, including the recommendations.

The other members of the ad hoc Committee have acted on these recommendations, the supporting brief and the abstract as follows:

Allen B. Du Mont and his alternate Robert P. Wakeman, Donald G. Fink, Haraden Pratt, and A. Earl Cullum, Jr., endorse.

C. M. Jansky, Jr., and his alternate Stuart L. Bailey approve the covering letter of recommendations in general, with the following reservations:

(1) With respect to item III which bears on earlier recommendations contained in the Stewart Report on Telecommunications, they feel the concept of a communications office or authority as a part of the executive structure of the Government should be reevaluated in the light of our present knowledge.

(2) They wish further to be understood as preferring that the supporting brief and the assoicated abstract be recognized as the product of the Chairman's efforts and that the opinions therein

be considered as those of the Chairman, arrived at after discussions with members of the Committee as well as with others.

William S. Duttera does not concur in the supporting brief and abstract which, he believes, represents such an intermingling of fact and opinion that as a practical matter, the various elements cannot be separated for individual comment and analysis:

As to the recommendations, Mr. Duttera's views are as follows:

(1) As to recommendation I, he agrees that an independent audit would be appropriate, provided that the auditing group functions only in an advisory capacity to the FCC and confines its audit primarily to technical considerations; he does not concur in the recommendation to the extent that it might involve substantial occupation by the auditing group of the field of allocations policy development, in effect replacing the FCC which is the Government agency established by law to exercise such responsibility.

(2) As to recommendation II, he points out that the Congress, through its appropriate committees, periodically reviews the FCC's mandate, management, operation and budget; and does not concur in any recommendation which implies that the Congress has not been alert in this respect.

(3) As to recommendations III and IV, he agrees that a need exists for a President's Communication Policy Board which would deal with policies for the most effective use of radio frequencies including the relationship between Government and non-Government use of frequencies; policies with respect to international radio and wire communications including the United States position in connection with international communication treaties and agreements; and related policy matters. He believes, however, that the subject is outside the scope of the ad hoc committee's directives and does not associate himself with the observations on this subject in the supporting brief.

William B. Lodge's comments are as follows:

(1) If the recommendations and the supporting brief are to be attributed to the ad hoc committee, rather than to you as author, it is my suggestion that a committee meeeting be held prior to submission of the final report.

(2) There are two major points on which I differ with your latest draft of the brief and recommendations.

(a) With regard to the brief, I feel that much of the criticism leveled at the FCC is directed at decisions which, with the benefit of hindsight, seem glaringly wrong, but which were based on reasonable assumptions at the time.

(b) With respect to the recommendations, unless committee discussions convince me otherwise, I am not in agreement with recommendations I (an independent audit) or II (a review of the methods of administering the Communications Act).

In disagreeing with your evaluation of past FCC actions, I realize that I risk the accusation of "apple polishing." In all sincerity, however, I feel that some of the after-the-fact documentation of mistakes is as unfair as blaming the Weather Bureau for making incorrect forecasts.

In essence, the original charge to our committee, contained in Senator Magnuson's letter of June 15, 1955, was to make a survey and reappraisal of the television allocations plan contained in the FCC sixth report and order. As things turned out, our committee has been unable to make specific engineering recommendations which would correct the now-evident, but frozen-by-use, shortcomings of the FCC's plan. After expenditure of, say $1 or $2 million of Federal funds,

the "independent audit" might not have the answer either. On the other hand, I must confess to some uneasiness that a too-theoretical approach by such a study could jeopardize public service, public investment in receivers, program quality, and private investments. Further, a review of the FCC machinery would not appear to guarantee against future errors in judgment, which we must accept on occasion in both Government and business.

I am sending this long letter explaining my stand with respect to the final documents of the ad hoc Allocations Committee because I believe that it is more forthright of me to state my position and to suggest that a committee meeting be held, than merely to dissociate myself from the committee's final action.

EDWARD L. BOWLES, *Chairman.*

ADDITIONAL VIEWS OF EDWARD L. BOWLES

DEAR SENATOR MAGNUSON: I volunteered to give you some private comments which I felt were pertinent but not appropriate for ad hoc committee consideration. These are given in the spirit of a conversation, not of a minority report.

It would be a confusing picture were one to attempt to reconstruct Commission motivating policy by a review of its manifold actions in the VHF–UHF arena. Its effects are most vividly illustrated by the attached simple graph. The obvious generality would be that there has not been the will to make UHF work, and that its destiny has been left to chance. Taking the Albany-Troy-Schenectady fracas as an example, one concludes that rulemaking is a nonaffirmative formality after which the Commission makes a decision based on expedience rather than judicial conclusions.

This is but one area where indecision, lack of affirmative policy and inconsistency in the bases for decisions are manifest. The Commission's pattern of behavior in comparative hearings, where so much is at stake for the competing applicants, makes the going really rugged. After the hearing examiner's initial decision, after the usual appeal to the Commission, the final decision may bear little resemblance to the examiner's conclusion.

Comparative cases are resolved through an arbitrary set of criteria whose application, if one judges from history, is shaped to suit the cases of the moment. The customary criteria are (*a*) local ownership, (*b*) integration of ownership with management, (*c*) past performance, (*d*) broadcast experience, (*e*) proposed programing policies, plans and proposals, (*f*) diversity of control of mass communications mediums.

A national authority on administrative law had this to say:

> Standards are announced (by the Commission) only to be ignored, ingeniously explained away, or so occasionally applied that their very application seems a mockery of justice.

This pronouncement appeared in the Scandal in TV Licensing by Louis L. Jaffe, Byrne professor of administrative law, Harvard Law School, Harpers, September 1957. Here is an authoritative commentary on the inconsistency and lack of judicial character of the Commission's actions and their effect on the public's interest.

Undue control of mediums of mass communication is ground for turning down an applicant for a television facility. The Commission must evaluate a given case and determine when a degree of control is so harmful as to warrant refusal. If such control is judged to be harmful, the applicant should stand or fall on this issue alone, since high standing in the other criteria could in no way mitigate the harmful effects of undue control of mediums of mass communication. Since it is now only one of several criteria which are weighted at the whim of the Commission, it may be subordinated to any or all of them.

The article Diversification and the Public Interest: Administrative Responsibility of the FCC, Yale Law Journal, January 1957, gives an excellent treatment of this controversial subject. This paper discusses the many devices by which the avowed policies of the Commission are circumvented through procedures incidental to renewal, modification and transfer applications and through the trick of sole applicant payoff technique.

The article laments the Commission's failure to focus its scrutinizing beam of attention on long-range goals, and its proclivity toward rapid authorization.

In considering these matters, the paper observes:

Nor has the Commission's policy shown sensitivity to the fact that an initial grant ensures virtually perpetual enfranchisement—

and that—

When faced with the choice between (broadcasting) experience and diversification, the Commission should note that while lack of experience is cured with time, lack of diversification is not.

The subject of economic injury has been the object of extensive controversy. The Commission's policies in this area have been variable. In a recent decision, leaning heavily on its preferred interpretation of the Sanders case, it dramatically observed:

We take this opportunity now to disclaim any power to consider the effects of legal competition upon the public service in the field of broadcasting.

A paper on Economic Injury in FCC Licensing: The Public Interest Ignored, Yale Law Journal, November 1957, written around the Commission decision which supplied the above quotation, questions the legality of the Commission's arbitrary position in this, the Southeastern Enterprises case.

Here is a question which must be resolved, and presumably resolved by Congress. Surely the public does not exist in an idyllic plenum free of conflicting economic forces affecting its interest. The extreme position taken by the Commission on this subject, if supportable, could afford a versatile means of evading responsibility where such escape would not be in the public interest. Witness the caveat emptor attitude in the UHF history. There is a question whether the Commission by its lack of perceptive consideration of the precise nature of this competition and lack of affirmative action has not contributed toward monopoly.

Can it be that the 78 UHF station fatalities in almost 5 years (compared with 4 VHF failures) at let us say a cost of $300,000 each, aggregating over $20 million, in a frequency band the Commission decreed as essential to television and in the public interest, demanded no affirmative action.

In the television inquiry much has been said on the subject of monopoly, particularly in connection with the networks and with allocations. It would seem reasonable to adopt the principle that as long as there is one more opportunity for a station in a given area, on a facility comparable to those already on the air, there can be no worry of local station monopoly. The same may be said of networks. In a given community, as long as there is one more opportunity for a network outlet on a facility comparable to those network outlets existing in the area, and as long as there is a distribution of those outlets

over the country comparable to that preempted by existing networks, there can be no worry of network monopoly.

The Commission applied no such principles, or if it presumed to in the sixth report and order, compromised them.

There is a practical answer to the problem of funds for direct and subsidized research discussed in the brief. There are two potential sources of revenue. First the Commission's budget could be relieved by the charge of a nominal license fee. For this there is ample precedent. It seems strange that a tax has not yet been levied on the use of the radio highways. In other words, why should not television stations pay for the privilege of using this public medium on the same basis as the highway-user concept in which revenues from the gasoline tax is applicable directly to the Nation's highway program. A lesson if not a precedent can be got from the Aviation Facilities Planning Report abstracted in the brief.

Although the record in the television inquiry in decisions of the Commission contains much on the subject of encouraging competition, it would appear that the subscription television form of competition may be outlawed even before the public, on whose interest its success or failure should depend, is afforded a sufficient opportunity to decide the value of the new medium. Such a denial of opportunity would indeed give a new format to the term competition and monopoly. One may argue that there is nothing in the Communications Act literally sanctioning subscription television, but for that matter, the same argument could be applied to television as practiced today. The word television does not appear in the act.

Organized opposition to subscription television by present broadcasters is based more on the desire to avoid new competition than on the merits of subscription television. The incentive in each instance is business profit.

It would appear that the time may not be far away where economic saturation will be reached in the number of paying commercial television stations. Suppose the figure is the order of 600 stations. With present policies, these would be mostly VHF stations. At all events, this would leave over 1,000 unused commercial opportunities. Assuming an increase of noncommercial educational stations from 27 today to 50 in the same period, this would leave around 200 noncommercial educational channels unused.

Can it be that there should be a dog-in-the-manger attitude when it comes to exploring subscription television on a scale large enough to be decisive. This innovation could supply the incentive by which to give UHF a full opportunity to prove its worth, later redounding to the advantage of "free" television. (Further views in par. 76 of abstract.)

The Commission has long been concerned with electrical interference. The Communications Act prohibits under penalty the interference of one radio communication facility with another, strictly where interstate transmission is involved. The Commission has no statutory authority to deal with interference with a radio communications facility where the interference is caused by noncommunications apparatus. It has managed to resolve this type of problem through the informal medium of cooperation.

The application of radio frequency energy to industrial and domestic uses is now growing apace. Ranges for home and institu-

tional cooking are being marketed. Another application is where the heat produced by these waves within a substance is applied to many industrial processes. Here is a new industry.

In the past, the Commission has cooperated with this new industry, authorizing frequency bands in which these enterprises might operate and excluding communications therefrom. Here there is need for study, then legislation. There is the question whether it would be wise for the Commission to have authority to regulate in this new area, and exactly what this authority should be. If the Commission should not have this responsibility, what agency should. Although there are many other aspects of the problem, all that seems necessary here is to raise the question for official consideration. A decision and legislative action are important to communications and to noncommunications industries alike.

The existing split in responsibility whereby the regulation of private communications resides in the Commission and Government communications (titularly) in the President fosters a deplorable lack of accountability aggravated by recourse to the cloak of security. The dichotomy precludes effective overall telecommunications planning. At present there is solely the avenue of coordination and compromise, a hopeless device when authoritative leadership is lacking. The military should not be able to develop equipment which may ultimately seriously interfere with private communications or even threaten it without accountability first to higher authority responsible for an integrated national telecommunications plan. Military and nonmilitary communications, and other spectrum uses, must complement not conflict with each other if each is to play its necessary part in times of national emergency.

The Telecommunications Report of 1951 called attention to the problem and suggested a remedy. This excellent report left but a weak impress on the executive branch at the time. It established the Office of Telecommunications Adviser. The incoming administration removed that impress by relieving the incumbent of the new Office, as well as the Office itself. Moreover, Congress evinced no reaction whatsoever to this valuable document. A review of the pertinent features of this report and a corresponding critique from the Aviation Facilities Planning Report are given in the supporting brief.

The Commission, in one of its embodiments, is a tribunal or quasi-judicial body which makes administrative judgments in terms of statutes and derived rules prescribing administrative standards, much as a court makes judgments in matters involving the law. The Commission has the authority to institute inquiry on its own motion, unlike the courts who are bound by the record made or placed before them. In the sense that it makes rules which in effect are law, it is a legislative body.

The Commission, in another embodiment, manages a business which expended some $8 million in fiscal 1958 to serve the public. This budget compares strikingly with the first year's budget (fiscal 1935) of a little over $1 million. The job involves a prodigious segment of activity occupied with the processing of some million and a half license applications and a morass of related detail. There is the task of policing the radio space, also the type approval of radio apparatus and noncommunications apparatus radiating in the radio

spectrum. The study of new uses of radio, a statutory requirement, has received negligible attention.

The Commission is, in summary, an executive, legislative, judicial, and operating organization all in one.

Fancy the Federal bench operating as a judicial body in such a bifurcated environment. No wonder, according to report, the Commission almost never examines the record. In appeals from the hearing examiner's initial decision, it relies for the most part on staff summaries. It is as if in a trial one judge heard the testimony and studied the witness, whereas another judge wrote the decision. Because of their manifold burdens, no wonder, according to report, the Commissioners do not write their own opinions, but simply vote, depending on a followup by a group of opinion writers who, it would appear, now rationalize the majority-vote decision. The procedure appears to relieve the judge (Commissioner) from responsibility of justifying his decision and signing it in token. The opportunity for arbitrariness and capriciousness is relatively great.

There is no appeal from an administrative decision of the Commission where the decision has been adjudged by the Federal courts to meet the legal tenets of the statutes and the Constitution.

Courts, in reviewing appeals from Commission action, can only pass on points of law. They are by statute powerless to pass on the wisdom of the Commission's administrative decisions. They must credit the Commission with the expertise imputed to it by law. They have no power to pass on the existence or nonexistence of this quality in that official body. They have a long, consistent record of supporting scrupulously the Commisison's right to make administrative judgments however good or bad these judgments may appear. The court of appeals has been quick to add that whatever the ultimate results from the Commission's policies and actions, good or bad, the responsibility must lie with the Commission.

The vast power of the Commission as an administrative tribunal, a power greater in many respects than that of the courts, places a heavy responsibility on the President and the Senate Interstate and Foreign Commerce Committee to see that the Commisisoners are professionally qualified for their important task. There is an equally heavy responsibility on the part of Congress to see that the powers and duties and organization of the Commission are so constituted as to make possible for qualified Commissioners to apply their abilities to their tasks.

The value in dollars of the commodity purveyed by acts of the Commission, particularly in television, may be extraordinarily high. The all-time high is $20 million for purchase of a television facility ($3.4 million for a radio station.) Channels, then, may be much sought after for their potential value as direct income sources and as trading assets. The cost of admission is high, the stakes are higher, the pressures are correspondingly heavy and the use of influence tempting and the manner of exercising these leverages manifold. It is against this background the Commission is obliged to act. It is expected to be immune, though exposed. Legislative safeguards are not comparable with those of the courts. There is a premium on the men who are to be entrusted with decisions of such great moment in such an environment.

Morality, ethical behavior, comportment, intellectual capacity, professional talent and experience are not legislated. Inadequate legislation can admit the weak and encourage the corrupt. Easy access to an office where the temptations are great is the fault of executive and legislative function. Legislation can give the Commission protection from pressures whether from within the government or from without. Likewise, legislation supported by rigid executive and legislative scrutiny can maximize the effectiveness of an administrative tribunal.

The high responsibility on the Commission as a judicial body and the heavy burden the discharge of this trust implies make it doubtful that the superposition of a vast housekeeping management burden is compatible with an efficient operation adequately safeguarding and advancing the public interest.

There must be a more adequate basis for selecting Commission members. It would appear from recent appointments that there are no qualifications other than American citizenship and political acceptability. The insidious practice of meting out appointments as political favors is sure to redound geometrically against the public interest, for the end result is so to reduce the level of the post as to take away the honor and prestige so essential to the attraction of high-caliber candidates.

The public confidence in the Commission must be restored. Separation of the judicial and housekeeping functions should be carefully considered as a move toward attainment of a just judicial milieu. Life tenure, adequate compensation, and rigid selection of appointees to this tribunal akin to the processes of selection in the Federal judiciary is a compelling concept for consideration as a remedy.

It is to be noted that in the selection of a candidate for the Federal bench, the recommendation is made to the President by the Attorney General after careful scrutiny. The candidate must be a lawyer. The American Bar Association is afforded an opportunity to express its views. It appears that there is no qualifying procedure even remotely approximating this minimal procedure in the selection of Commission appointment candidates.

Justice Hughes, in a lecture on the Supreme Court, set forth this condition for Court membership:

> Courage of conviction, sound learning, familiarity with precedent, exact knowledge due to painstaking study [are required] to command that profound respect which is given only to intellectual power conscientiously applied.

It is fair to contrast this pronouncement with the virtual absence of rigid criteria, qualifications, or tests appertaining to the selection and approval of a candidate for the office of Commissioner.

A Commissioner may serve because he is a dedicated man. He may see the Commission as a training ground for a political career. He may seek office because of the security the position affords directly by salary, indirectly by pension. He may perceive the opportunity as a credential opening up the possibility of an important assignment later in the business field, and finally, if he is so oriented, he may see an opportunity for self-service. Unfortunately the legislative mesh applied in the filtering process does not appear to be adequately gaged.

There may well be opposition in some quarters to measures proposed to strengthen the Commission. This opposition is from interest doing well under the status quo. They would naturally view with alarm a strong Commission which might bring changes.

Predicated upon the principle that—

legislatures are the ultimate guardians of the liberties and welfare of the people in quite as great a degree as the courts [6]—

it remains for the Senate to scrutinize the record to satisfy itself as to the precise nature of the problem before it. It then remains to define corrective legislative steps.

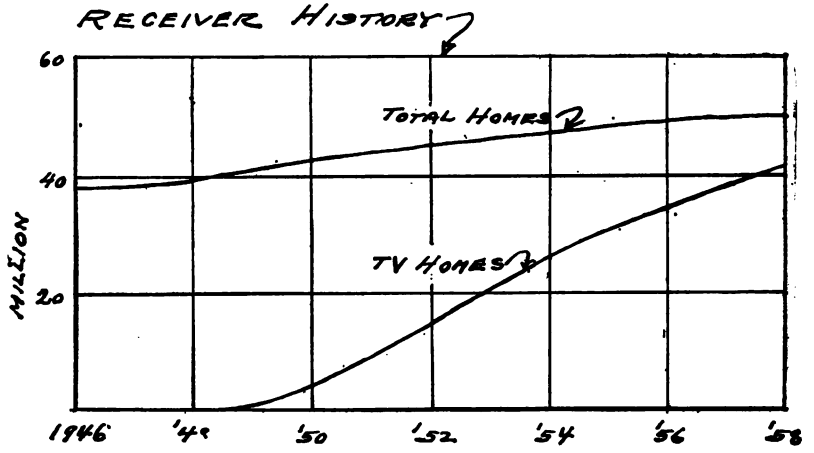
The supporting brief, by its review and analysis and conclusions is intended to afford the Senate committee detailed insight and suggestion. Here in one source is a distillate of the history of commercial television regulation over the last 16 years. The brief has been oriented to point out the confusions, the conflicts, and the weaknesses of the regulatory process in this particular field. In doing this it draws from the Commission's body of rulemaking proceedings, Commission regulations, rules, and standards, Commission and court decisions, congressional hearings, reports, and professional articles.

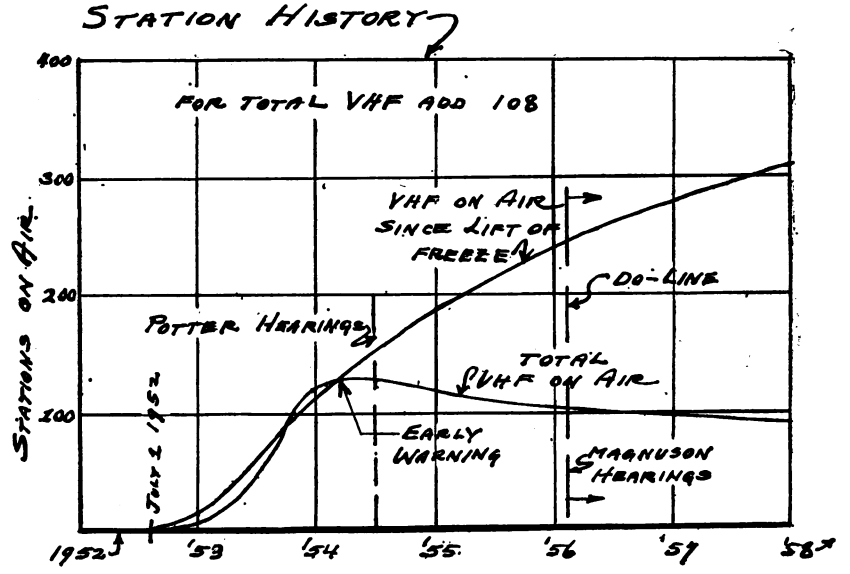
Sincerely,

EDWARD L. BOWLES.

MARCH 14, 1958.

[6] *M. K. & T. Ry.* v. *May*, 194 U. S. 267.





SELECTIVE ABSTRACT OF SUPPORTING BRIEF

1. The television broadcasting system of this Nation is not merely an important source of entertainment and palatable enlightment. As an integrating medium it is a social force of great importance and as an educational and cultural vehicle it has great potentiality. Beyond these qualities, as a medium of mass communication it is an invaluable instrument of national defense.

2. The interim report of the recent television inquiry on the allocations problem states that Congress properly insists that television broadcasting be nationwide, competitive, and responsive to local needs. It concludes that service should be provided to as high a percentage of the population as possible, to many more communities than at present, and that multiple services should be provided wherever they can be supported. These principles may be taken as the interpretation of the Senate Committee on Interstate and Foreign Commerce, speaking for Congress, of what, broadly, is the public interest. They call for regulations which will foster the growth of the television broadcasting industry.

3. The Communications Act gives this succinct observation on the subject of broadcasting in terms of license, section 307:

> (a) The Commission, if public convenience, interest, or necessity will be served thereby, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by this Act.
>
> (b) In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

The sole control by the Government of broadcasting is through the granting a renewal or denial of license.

4. Commercial broadcasting of today, like radio broadcasting, is free to the public and is supported by revenues obtained from advertisers. Its success depends on program acceptance by the public. There is a limited number of channels available to television broadcasting. It is, therefore, decidedly not a field of free competition or entry, but one which when all channels are preempted is governed by rivalry among the licensees. The growth of commercial television broadcasting requires capital. Since there are many other fields of attraction, the spread of television is contingent on the relative return this field has to offer. Since the Government exercises regulatory control over the use of this resource, the wisdom with which it administers its charge is bound to affect the opportunities for growth.

5. The Commission tried to secure the foundation for this growth when it promulgated its latest nationwide channel allocations plan in 1952, the sixth report and order. Unfortunately, the plan did not achieve the expected results. There are several major weaknesses which will best be understood by an examination of the record. It should be salutory to the future of television broadcasting to study the

record critically. Hindsight has its drawbacks as we apply it to evaluate our efforts, but blindness to our mistakes can be fatal.

6. As a consequence of these weaknesses, since the issue of the report there have been two Senate hearings on the disturbing issue, UHF–VHF allocation. Despite these hearings, negligible progress has been made in resolving the issues. The Commission has appeared powerless to anticipate, evaluate, or deal decisively with them.

7. In the absence of definitive measures to assist the Commission directly in its inordinately difficult task, the problems will not only remain unresolved, but will continue to mount geometrically. They have been aggravated by piecemeal methods of amelioration, by the contradictory policies of a strongly divided regulatory body. No amount of wishful thinking, of witch hunting, investigation, colloquy, incrimination or recrimination will advance the public interest. The power of comprehendng professional analysis must not be overlooked.

8. The record is voluminous, discursive, and involved. For the convenience of your committee it has been analyzed and the substance germane to the UHF–VHF allocations problem documented in the accompanying supporting brief. A full appreciation of the problem requires an understanding of the history of regulation in the field of commercial television broadcasting and of the Communications Act of 1934 on which it is founded.

9. The Government, through the medium of the Federal Communications Commission, administers all civil communications channels of interstate and foreign radio (including television) transmission and provides for the use of these channels, for limited periods of time, through licenses. Every action of the Commission must meet the criterion of public convenience, interest or necessity. These criteria are as specific as the nature of the problem is adjudged to permit. All actions of the Commission are governed by the Communications Act of 1934 as amended.

10. The Commission has the power to prescribe the nature of the service to be rendered by each class of station and each individual station. It assigns frequencies and determines power and location. It controls the type of apparatus. It makes regulations establishing the degree of permissible interference between stations.

11. The Commission is enjoined by the act to study new uses for radio, provide for experimentation and "generally encourage the larger and more effective use of radio in the public interest," section 303 (g). The Supreme Court in referring to this section 303 observed that—

> These provisions, individually and in the aggregate, preclude the notion that the Commission is empowered to deal only with the electrical and engineering impediments of the "larger and more effective use of radio in the public interest."

12. The Commission is an administrative agency of the Congress. It is a quasi-judicial body with a scope which exceeds that of the courts. It has broad powers to initiate inquiry on its own motion. It can thus obtain independently supplementary material including technical and economic data to aid it in its proceedings.

13. The courts afford a check on the legality of the Commission's actions. They determine whether the requirements of due process have been met. They are limited to a purely judicial review. They may correct errors of law and remand. They are constrained to

assume expertise on the part of the Commission and not to pass upon the merit or the wisdom of its actions. There is no comparable check for inexpertness of the Commission, unless it be by Congress.

14. Commercial television broadcasting was inaugurated by FCC order in 1941. It was in abeyance during the war. Last year marked its 15th anniversary. In June 1946 only six commercial stations were operating. As of March 1957, 472 commercial stations and 23 noncommercial educational stations were on the air. Compared with radio broadcasting, which began in the early twenties, television broadcasting is a relatively new field. It is a highly technical field and one which has progressed rapidly. It presents serious technical, economic, political, and social problems.

15. In its beginning, television broadcasting was an enterprise governed by the economic principle of free entry. It was natural for applications to be made first for stations in the largest markets. If the Commission adopted a table of assignments suggested by the broadcasters, it was natural for the table to be predicated on market rank. This step was taken officially in 1945, purely as a matter of administrative convenience. The table was based on a resource of 13 VHF channels available at the time. Assignments were made to 140 metropolitan and community centers arranged in order of market rank, aggregating some 405 outlet opportunities. This early plan included provision for seven stations in New York, Chicago, and Los Angeles. At the time, less than a handful of commercial television stations were on the air.

16. There is no evidence that consideration was given to the ultimate effect of the concentration of seven stations in New York City on the distribution of television service to the Northeast as a whole, perhaps because at this time the table was not considered immutable. There is no evidence that this 1945 plan was predicated on or that it presaged any professional economic study.

17. Up to 1948, changes in the 1945 table had sometimes been made by adjudicatory procedure in which applications were acted upon on their individual merits, and again by rulemaking procedure which established doctrine for all subsequent applications falling within the bounds of the determination. In 1951, the Commission decided that no change could be made in the 1945 table except by rulemaking. This was a decision of paramount importance. Its effects have a critical bearing on conditions today.

(Suppose now, for example, 1 of the 7 New York City stations were to decide it could do better in another area. It would first petition for rulemaking on the move of the channel to that area. If the Commission's decision is favorable, the original owner has in effect given up the channel and must now take his chances to regain it. All interested parties can now apply for the channel in its new location. The original owner, therefore, does not dare to take the action in the first place. Here is a loss of flexibility including freedom to exercise economic judgment.)

18. In 1948 the Commission proposed an allocation plan which was an extension of the 1945 plan. In this plan approximately 955 assignments were made in 459 communities based on the 12 VHF channels. No change was proposed in existing VHF stations on the air. The 1948 plan never materialized.

19. By this time an unexpected phenomenon termed tropospheric interference appeared. Cochannel station spacings now had to be reviewed. A freeze order was issued in September of that year suspending all further action by the Commission on applications. Some 37 stations were on the air and some 86 construction permits had been issued. The construction permittees were authorized to complete their installations and go on the air.

20. The tropospheric problem was resolved within a matter of months by engineering study. In the normal course, the Commission could now have issued its plan. Industry, however, pressed for standards for commercial color television with the result that the Commission itself became engrossed in this complex, relatively undeveloped subject. A delay predicted to be of several months stretched to a suspension of 3½ years. It was not until April 1952 that a new official plan emerged.

21. In the summer of 1949 the Commission put forward a rulemaking notice showing that public interest demanded more than the 12 VHF channels. It proposed opening up the UHF band for this purpose. It also raised the question of reserving a number of channels for noncommercial educational use.

22. A radical departure in the principles underlying television channel allocation was here proposed. The Commission introduced for the first time an ideological basis for its new table of channel assignments, forsaking the market rank basis underlying the 1945 plan. The new aim, expressed in priority form, was (1) to provide at least one television service to all parts of the United States, (2) to provide each community with at least one television service, (3) to provide a choice of at least two television services to all parts of the United States, (4) to provide each community with at least two television broadcasting services. Here was a relatively inflexible plan fixing the destiny of television by prejudgment, independent of, if not antithetical to, economic forces.

23. The proposed allocation table of 1949 contemplated no change in existing VHF stations, where distribution had been by market inducements. In the absence of any reevaluation of the existing VHF stations, here was an existing matrix of stations in being by a set of principles in immediate conflict with the new priorities. The new table proposed intermixing UHF and VHF outlets, disregarding their significant disparities.

24. In the spring of 1951 a further notice of rule making issued. Here the Commission explicitly espoused intermixture, declaring nonintermixture "a short-term view" of the problem. Here was a way to avoid a reevaluation of existing VHF stations in their relation to the new ideology. Here was a table of assignments including extensive use of the UHF spectrum and a block of noncommercial educational station reservations.

25. In the 3½-year interval between the issuance of the proposed rulemaking notice of July 12, 1949, in which UHF was first considered and an intermixed table of allocation was set forth and the issuance of the sixth report and order, April 14, 1952, the destructive consequences of an allocation technique were clearly and forcefully set forth by the most experienced representatives of the industry. The warnings, though cogent, went unheeded.

26. As if the explicit pleadings against intermixture were not enough, in 1949 one company turned in a nonintermixed allocation plan which for professional quality has not been surpassed. This was the only commercial organization to come forward with a national VHF–UHF television assignment plan. The study took into consideration technical, economic and social aspects of the problem. It recognized the inseparableness of networks and channel assignments in allocations planning. The plan provided for an appropriate number of outlets in a sufficient number of markets to permit four networks to clear enough stations to exist. The proposal demonstrated that an allocation plan could be developed which could avoid the pitfalls of intermixture in over 300 of the most imposing markets. The study recognized the importance and needs of educational television, and made allowance for them.

27. The Commission was not impressed with this forward-looking, realistic solution. The plan was summarily rejected. The company was criticized for proffering a plan with the ostensible objective of insuring a place for its own, a fourth, network. After the turndown, the company submitted a salvaged plan which, though a compromise, it felt was superior to the Commission's proposal involving rank intermixture. This plan, too, was rejected. The sixth report and order, which issued subsequently, criticized the salvage plan with ascerbity—it neglected to point out, however, that it was the salvage plan and not the original 1949 plan to which its criticisms referred.

28. The sixth report and order issued in April 1952. The table of assignments therein was the ultima thule of the Commission's thinking. It held to the identical ideological priorities enunciated by the Commission in 1949. The report contained a table of assignments yielding 1,769 commercial station outlets in some 1,200 communities and some 233 reserved outlets for noncommercial educational television, within the United States. The new table admixed time-tried VHF channels and the untried 70 UHF channels. Of the 1,769 commercial assignments, 1,271 were UHF. Of the 233 educational reservations, 162 were UHF. The report ordained that no petition for alteration of the table, which could only be amended by rulemaking procedure, would be considered for a period of 1 year. Whatever recognition the Commission gave to the importance of networks as an essential element in allocations planning, and this appears to have been minimal, was vitiated by the determination to intermix VHF and UHF outlets.

29. In the period between the freeze order of September 1948 and the issuance of the sixth report in April 1952, 71 VHF stations went on the air, materializing from the construction permits allowed up to the freeze. Thus when the sixth report issued, there was a total of 108 VHF stations on the air. No construction permits for new stations had been issued in this 3½-year interval.

30. Although the allocation table of the sixth report was said to be based on the new ideological priorities, these had been compromised ab initio—since the Commission did not face up to one of the most critical issues involved. Not one of the 108 stations was moved or changed to UHF despite their permits having been granted on an entirely different principle. The new plan should properly have taken into consideration the possible redisposition of these 108 pre-

freeze stations to integrate them into the new plan. It is hard to believe that a group of stations in the leading communities, there on a market-rank basis, could fortuitously have dovetailed into allotted openings in a new table constructed on radically different grounds. To ignore the origin of the prefreeze stations was to build around them, weaving other VHF channels into an established fabric and patching out with UHF. Thus the very basis of the table of the sixth report was from the start mongrel. The new plan was in many respects, therefore, the extension of an old one.

31. The seven VHF assignments to the New York City area, made at a time when there was no foretaste of the allocation problem for the Nation as a whole under the priority system of the sixth report, were left untouched. This, in itself, seriously affected the allocations pattern for the entire northeastern area.

32. There had been legal precedent (1933) for taking a station off the air where "it appeared that a fair and equitable distribution made a change necessary." However, either it was the Commission's arbitrary decision not to delete a VHF station, or the need for consonance with the new table was not given consideration. Transfer from VHF to UHF, or geographical move of the existing station, was ruled out. The decision to maintain the status quo of these 108 prefreeze stations made intermixture inevitable. For the moment, this was the easiest course for the Commission to pursue.

33. With these disparate VHF and UHF channels it was unrealistic if not fallacious to assume that the UHF channel could survive in an established predominantly VHF market or that a UHF station could survive when overshadowed by VHF stations already served by the networks. Immediate integration could not be achieved either by force or fiat. It could only come expeditiously if UHF could first survive in its own right. This has since been demonstrated, if in fact a demonstration was needed. Rational analysis would have shown that integration should be the ultimate not the immediate goal.

34. The effect of intermixture was to jeopardize the progress of and to cripple UHF. An insidious concomitant was to reduce the number of clearances available for multinetwork operation and thus to facilitate monopoly. By its effects, the 4 existing networks which had pioneered were reduced to 3. One of the three was and is hard put for lack of competitive clearances in the leading markets.

35. The time lost by the diversionary action on color, namely, the larger part of the freeze period of 3½ years, fortuitously gave the existing VHF stations a head start, a period in which to establish a VHF-equipped listening public and otherwise consolidate their interests.

36. Although the opening up of the UHF band to television broadcasting had been deemed by the Commission to be essential to a nationwide system, there was an absence of adequate vigilance and implementation in the years immediately following the issuance of the sixth report. If not immediately, it must soon have been apparent to the Commission that in reality initial intermixture was not working out, that intermixture must be an ultimate goal, attained by accelerated UHF development to the point of parity.

37. In July of 1952, granting of construction permits, now for both VHF and UHF stations, was resumed. In that year, 11 VHF and 6 UHF stations went on the air. In 1953, 110 VHF and 117 UHF stations went on the air. In 1954, 69 VHF and 25 UHF stations went on the air. In 1955, 49 VHF and 9 UHF stations went on the air. In 1956, 37 VHF and 6 UHF stations went on the air. At the end of 1956, 395 VHF and 96 UHF stations were on the air. In the period from the issuance of the sixth report to the end of 1956, 291 VHF stations had gone on the air supplementing the 108 prefreeze stations. In the same period, 161 UHF stations had gone on the air. The net number of UHF stations which had left the air in this period was 65, the number of VHF stations was but 4. As of January 4, 1958, there were some 494 commercial stations on the air, 410 VHF and 84 UHF, and some 27 noncommercial educational stations, 22 VHF and 5 UHF. UHF casualties had risen to 78.

38. Because of the disparity of relative VHF and UHF stages of development, these two services could coexist in the same area only at the peril of UHF. Despite rapidly mounting early evidence, no steps were taken to arrest the epidemic of UHF station failures. In fact, the condition was aggravated by grants of new VHF stations in developing UHF areas, thus contributing momentum to the availanche of failures.

39. The granting of VHF station permits in areas where stations were struggling to make UHF succeed was protested. The Commission majority, on the other hand, fell back on the technicality that these outlets were established in the table of the sixth report. The procedure was rationalized by section 307 (b) of the Communications Act, in which the Commission is required "to provide a fair, efficient, and equitable distribution among the several States and communities."

40. At the television inquiry this majority stated if it were necessary at a later date, these VHF stations could be deleted. Here was a point of view in striking contrast with the past record wherein the prefreeze stations were left untouched. So cavalier a treatment of the UHF stations which were deemed imperative to the public interest and thus to the goal of the sixth report, instead of some prompt corrective step, is hard to understand.

41. There appears to have been no rational correspondence between the attitude toward equities of the UHF entrepreneurs, whose demise was accepted as a casualty incidental to business, and toward the equity of the prefreeze VHF stations which was so well insured by Commission action. Here were comparable investments and equities.

42. The plight of UHF has been variously attributed by the Commission to reluctance on the part of the advertiser to use this facility, the failure of the networks to supply programs over these facilities, and the failure of the manufacturer to produce UHF sets. The Commission seems to have been unwilling to recognize its own responsibility for the crisis.

43. An area served by UHF must at the beginning be large enough not to suffer from overshadowing VHF stations—they must have a place in the sun. Areas must be large enough to oblige the advertiser and the network to utilize this resourse rather than VHF to reach its viewing public. It must be large enough in circulation to

form a natural economic incentive to industry to develop and continue to develop good transmitting and receiving equipment.

44. The epidemic of UHF failures aroused the concern of the Senate Interstate and Foreign Commerce Committee. Hearings were held before the Subcommittee on Communications in May and June of 1954 on the status of UHF television stations and on a bill to regulate multiple ownership of television stations. By this time a total of 140 UHF stations had gone on the air. Sixteen of these UHF pioneers had already failed. Others were in a state of collapse and some were floundering. The prognosis was grim.

45. These hearings were followed by two Senate committee reports, one a progress report by Robert F. Jones, the other a memorandum report by Harry M. Plotkin. It was concluded that there was no quick answer to the problems confronting the Senate committee and that more data and more study were needed.

46. The UHF–VHF problem continued to deteriorate. No resolution was forthcoming. The Senate Interstate and Foreign Commerce Committee therefore was moved to undertake a second investigation known as the Television Inquiry. Examination of witnesses began late in January 1956. By this time, of some 157 UHF stations which had gone on the air, some 58 had gone off. Testimony on allocations traversed much the same ground as in the Potter hearings. The testimony of the Commission indicated that the results originally sought in docket 11532, namely, a realistic allocation plan, would be completed by June of 1956. There had been some 200 replies and some 350 reply comments to this docket notice. Here was a prodigious task of collation, aside from analysis.

47. Up to June 1956, no affirmative step was taken to restrict the issue of VHF grants affecting the security of UHF stations. Pending the result of the study of deintermixture, the fate of UHF was to continue to hang in the balance. The sixth report, its shortcomings long since obvious, was left in force, continuing to control the destiny of UHF.

48. Following the Potter hearings of May and June 1954, the Commission selected certain petitions for deintermixture as a "pilot" group for formal consideration and argument. In the fall of 1955, these petitions were summarily denied by the majority of the Commission. These included Peoria, Ill.; Evansville, Ind.; Madison, Wis.; Hartford, Conn.; and the Albany-Troy-Schenectady area.

49. The summary denial of the deintermixture petitions was explained by the Commission majority on the basis that it would be wrong to deintermix local areas since this might conflict with a nationwide reallocation plan which should be made. In November 1955, therefore, the Commission issued a notice of proposed rulemaking, docket 11532, for the purpose of reviewing current allocation and, ostensibly, arriving at a new nationwide plan.

50. At the same time the deintermixture petitions were denied, the Commission granted a petition for a VHF drop-in at Vail Mills, N. Y. The Commission, exercising expertise, declared in effect that public interest required this additional VHF channel, since failure to use it would waste valuable spectrum space. A UHF station affected by the threat appealed to the courts. In a decision of July 1956, the Commission's right to grant the drop-in was upheld, purely on the

grounds that it was legally consonant with the rules which formed the basis of the Sixth Report.

51. Following the Magnuson hearings in the winter and spring of 1956, the Commission came out in June with a series of proposals for rulemaking raising the question of deintermixing certain areas. These areas included the very ones whose petitions had been denied in November 1955. Here was a piecemeal attack, for no nationwide reallocation plan had as yet emerged as contemplated under docket 11532. Conditions had in nowise changed. Yet the lack of such an overall plan had been given as the reason for the 1955 denials. To add to the contradiction and confusion, it was now proposed to delete the controversial Vail Mills drop-in, previously declared by the Commission majority to be necessary to the public interest.

52. In the meantime, the court of appeals, District of Columbia, had been busy supporting the Commission's right to do as it had done. There was no court of appeal for that vast body of aggrieved who would question the Commission's wisdom, its inconsistency, or the pernicious effects of a schism of fixed pattern and lack of unity, unless it be Congress.

53. As of March 1957, the Commission proposed to deintermix the Peoria, Evansville, and the Albany-Troy-Schenectady areas. Channel 3 of Madison was not to be touched, nor was controversial channel 3 of Hartford. The ill-fated Vail Mills drop-in was to be dropped out.

53a. As of June 1957, once again the Commission had altered course. It now instituted yet another rulemaking proceeding proposing VHF status for the Albany-Troy-Schenectady area. This time channel 10 was not to be deleted from Vail Mills. By September 1957, this imbroglio ended in a decision by the Commission confirming the new proposal. Channel 10 was back on location at Vail Mills. Channel 6 remained in Schenectady.

54. In the meantime, the Notice of Proposed Rulemaking, docket 11532, November 10, 1955, to consider possible overall solutions to the VHF–UHF channel allocations problem on a nationwide basis, is said by the Commission to have served the purpose for which it was instituted, an assertion not too clear.

55. A new paper, a report and order in docket 11532, appeared simultaneously with the notices on deintermixture and other changes in the table of assignments of the sixth report, June 25, 1956. Here the inadequacy of the 12 VHF channels alone is reiterated, deintermixture in a sufficient number of communities "at this stage" is deemed impractical and, because deintermixture alone cannot solve the problem (assertion), it is proposed "to shift all television in the United States or a substantial portion of the country, to the ultrahigh frequency band." There would seem to be a rashness in the idea that, in the immediate future at least, one could go to an all-UHF system of television with no more dislocation than to a fully operative composite system based on careful study and forceful determination.

56. VHF grants of channel assignments appearing in the allocations plan continued to be approved by Commission majority in areas where existing UHF stations were threatened thereby. Commission explanations vary: "* * * it is obviously in the public interest to get television grants out under the sixth report and order just as fast

as you can. That is what Congress has been interested in all the time," and since the sixth report was adopted by majority policy one had better stick very close to it.

57. Appeal to the courts by UHF operators to stay these actions has been unsuccessful, not on their merits but on a point of law, namely, the right of the Commission to follow the table of the sixth report, which had been established by rulemaking procedure (and which could be undone by the same procedure). The expertise of the Commission had to be taken for granted by the courts, despite the worsening of the chances of survival of UHF facilities.

58. The subject of UHF–VHF reallocation continued sensitive. Its outcome was of vital interest to those who were profitably invested, particularly in VHF, and to whom a true reallocations plan might be a threat, and of vital importance to UHF operators who were left uncertain of the future of their stations. A portentous problem of significant long-range interest to the general public remained. The television inheritance of a public not yet in being to express or defend its interest remains undecided. Here impartial, objective study by the most competent of the country is none too much to ask, as aid in the difficult problem of resolution.

59. In 1957, it was estimated almost 95 percent of the families in this country lived within range of a usable television signal. Almost 95 percent of the families with television have a choice of 3 or more signals. The broadcast audience is served by some 491 stations in 310 cities.

60. As of early March 1957, the country was served by 472 commercial stations and 23 noncommercial educational stations. The table of assignments now contains over 1,840 commercial outlet opportunities and around 250 educational outlets—almost 1,250 communities. There is thus considerable disparity between the number of stations in operation and the number of potential outlets. If reservation of channels for the long-range protection is needed, this is one thing; if immediate coverage is an element irrespective of long-range protection, this is another. The two conditions are not mutually consistent. The Commission has been torn between the two, particularly in the handling of VHF grants. Despite the Commission's aversion to one, there has been a virtual freeze of UHF stations since August 1956. The total number of commercial UHF stations on the air, which rose to a peak of around 130 in the spring of 1954, has dropped to 89 as of January 1958. In the same interval, the total number of VHF stations has gone from 380 to 410. Whatever the facts relating to the VHF–UHF allocations problem may be, the rate of growth of commercial outlets is noticeably diminishing.

61. An economic study of 1955 concluded that the maximum number of program originating television broadcasting stations the national economy can support is around 600. This study has corroborative support in an earlier analysis based on a different approach. The analysis concludes there are (*a*) seventy-eight 4-or-more station markets, thirty 3-station markets, fifty-seven 2-station markets, and fifty-seven 1-station markets; (*b*) that 86 percent of the families live in markets able to support 3 or more stations and that 95 percent of the families live in areas economically servable without aid of satellites. In this analysis it is assumed that all channels are of VHF character and that they have equally good programing. The

conclusions, made by a professional economist for an interested party, are so important it is mandatory that they be checked by a disinterested source of national repute.

62. Another observation is to the effect that the 100 leading television markets have been assigned 263 competitive television channels where they could in fact support 400 stations. The markets actually have enough channels for the 400 stations but they are unused because they are not competitive, that is, they are UHF and VHF intermixed.

63. Removal of the excise tax from all channel sets has been advanced as a solution or amelioration of the UHF–VHF problem. This is a controversial subject. One view is that this would induce the manufacturer to make all channel sets, whatever the nature of the demand. The other view is that this tantalizing expedient would not get at the meat of the problem which is caused principally by the inadequacy of today's allocation plan. It is not costly for the Commission to espouse this beguiling proposal. The wide enthusiasm for it should not disarm one of continuous unemotional, objective reasons, lest this expedient prove to be a specious, seductive lure. To some what have pondered the UHF–VHF problem in its bare essentials, it would seem far more realistic to seek from an appropriate excise tax the means by which to accelerate the scientific and technological development essential to advance UHF to a more nearly competitive operational status with respect to VHF.

64. There is ample precedent for Commission use of special funds for special studies. The Commission, in 1935, initiated an investigation of the integrity of the telephone business in this country—in effect, of the Bell System. Special funds aggregating $1,500,000 were appropriated for the purpose. The search was for practices inimical to the public interest. An investigation of the vehicle of chain broadcasting was launched in 1938, to search out abuses and to issue orders to prevent their continuation. A quest predicated on suspicion appears to enjoy a popular attraction.

65. The Commission initiated a network study in the fall of 1955, under a special appropriation. A total of some $230,000 was ultimately granted by Congress for this task. Curiously, no comparable study was proposed for the purpose of arriving at a solution of the VHF–UHF problem despite the testimony by the Commission Chairman at the television inquiry that the allocation problem had "top top" priority. The network study would appear to be concerned with network practices and their bearing on public interest, and not on the acute problem of UHF–VHF allocation, which is part of the context.

66. There is no controversy as to the importance of the national networks to television. It is important to a reallocation plan to determine by methods other than unsupported estimates how many networks the national economy can support. Aside from questions of monopoly, it is in the public interest to give as many choices of programs as the economy can sustain. The limit should not be determined, as it most likely is today, by failure of the Government to provide an allocations plan adequate to this end. In the interest of competition, any allocation plan, if it is to avoid the pitfalls of real or fancied fostering of monopoly, should permit clearances in the larger markets so as to make opportunity for at least one more network than the

minimum the economy appears to be able to support. This is a problem to which the professional economists can contribute.

67. In April 1956, Commission Chairman McConnaughey called on the television industry to participate in a "crash research" program to give the Commission and the industry "a sound technical basis for making a long-term decision on the merits of UHF." The end result is the Television Allocation Study Organization, TASO. Wisely elected, the self-assigned task of this body is to search out technical facts and keep away from economic controversy. It can serve a very useful purpose. Its accomplishments, and thus what the Commission gleans from its efforts, will depend on good direction, full-time talent, and volunteered funds. However, no amount of information from professional and industrial committees will of itself yield a solution to the Commission's most acute problems in the area of television allocations, nor can it relieve the Commission of its responsibility to carry on under its own aegis work it must do as a trustee of the public interest.

68. The Commission has depended on industry together with industrial and professional committees, to solve many of its technical problems. The technique has been very effective in the field of engineering standards. Where, however, by recourse to this procedure as a general principle the Commission is in effect abdicating its responsibility, or manifesting weakness where it should have strength and imagination, the public interest is jeopardized. Where, in effect, the Commission and interested parties are collaborating on problems involving the public interest, such as allocations, even though the aid is partial or only technical, both the industry and the Commission must give thought to possible antitrust aspects.

69. The Commission's expertise must be implicitly assumed by the public and by the courts. It has the responsibility to be actively aware of the areas where it lacks strength and must take whatever steps are necessary to acquire this strength, directly or indirectly through recourse, on a professional pay-as-you-go basis, to responsible, nonpartisan agencies of national repute. There is a sensitive limit to what it should solicit through goodwill. The Commission is not an object of charity.

70. One may wonder why some 5 years have elapsed during which there has been copious warning, protestations, and confusion, why the Commission has not launched serious full-time study of the UHF–VHF reallocations problem seeking outside temporary help if necessary. There are several competent nonpartisan agencies of national repute who could set themselves to the task. This need not infringe on the prerogatives of the Commission nor undermine its authority any more than the management of a large commercial organization is impugned by placing a critical problem in the hands of a consulting agency. To know when and where to go for special information is often a way of testifying to the sagacity of the management.

71. Noncommercial educational television stations are growing slowly. As of July 1956 a total of 249 channels had been set aside for its use, 77 of which were VHF and 172 UHF. As of today, January 1958, there are 22 VHF and 5 UHF stations of this class on the air. Recent tendency, because of the pressure to make commercial use of fallow VHF outlets in good markets, has been for the

Commission, through rulemaking, to release some of the VHF noncommercial educational channels allocated for this purpose. According to the sixth report, these reservations were to be surveyed from time to time to be sure channels would not lie idle for an excessive period. Thus far these privileged reservations have been left intact despite the slow growth.

72. The theory of reservation of channels for educational television has been predicated on the concept of a limited rather than nationwide coverage. Growth of this service is bound to be around the larger educational centers excepting where there is local or State subsidy. For an educational television system affording equal opportunity to all, there would have to be a vastly different number and distribution of stations and presumably a sound system of program distribution by kinescope, film, and network.

73. The sixth report presumes to prejudge, in that it concludes television broadcasting to be the one satisfactory method of propagating the disciplines, presumably as opposed to closed circuit television for instance. Here enthusiasm can easily overcome the judgment of the unwary. It is fortunate for the overcrowded spectrum that despite the closed door view of the sixth report, closed circuit television is finding its place in the area of visual education, and a large place it appears destined to be.

74. Foundations have contributed more than $25 million to educational television including closed circuit techniques. Ford Foundation alone, directly and through its subsidiaries, had contributed $19 million to this field for exploration of its potentialities (closed circuit and broadcast) and encouragement.

75. There should be opportunity for community television. It seems self-evident that this local service, even if it can be justified on an economic basis, must not come at the expense of programs of national character. The off-the-cuff pronouncement that every community large enough to support a newspaper should have its local television station may be captivating, but is rational only if some interest other than the Government is willing to pay the bills. The greatest contributing factor to the growth of community television is a prosperous national enterprise in the larger markets, which will generate programs otherwise out of reach and incentive to the industry at large to cut costs. No amount of legislation, unless it be Government subsidy, no mere assignment of channels to small communities, will engender local outlets. Economic support is the product of enterprise, including risk, not of regulatory fiat.

76. No reallocation study should ignore the normal forces incidental to man's innate motivation to progress. Innovation is healthy only if it is permitted to stand or fall through public test, to submit itself to the democratic formula of trial and error. Subscription, pay or fee television is such an innovation. Freedom to pioneer must be encouraged if what is vaunted as the American way is to have substance and integrity. The Chain Broadcasting Report has said that under the American system of radio broadcasting the objective has been to render to the public the radio service the public desires rather than to force upon the public the type of service which individuals think the public should have. Should not this new field, whatever its ultimate limitations, be granted the constitutional privilege of due process—not condemned before trial?

77. The sixth report and order has demonstrated its inadequacy. This ambivalent document presents a paradox. On the one hand it abjures all economic considerations in favor of social principles. Its ideological priorities are (1) to provide at least 1 television service to all parts of the United States, (2) to provide each community with at least 1 television broadcast station, (3) and multiply services under (1) and (2). Here was a social argument for more than the original 12 VHF channels. Here is a reason for the addition of 70 UHF channels and a table of assignments to some 1,200 communities. On the other hand, implicitly at least, the document espouses economic compulsions when it determines the limiting numbers of stations, as a maximum to be assignable to over 1,200 individual communities. Here was an economic argument for both VHF and UHF assignments. It professes to make a long-range relatively inflexible estimate of the future needs of the country, or, at first blush, at least, insures the preservation of opportunity for the long-range future. These social ideals are expressed by a fixed table of assignments arrived at by rulemaking. It can only be amended by rulemaking procedure. In ordinary AM radio there is no table of assignments. Construction permits are granted on a case-by-case basis by adjudicatory procedure. Thus far, the table of assignments has shown little sign of being overhauled, despite abnormal UHF attrition. This tendentious report holds that the immediate disadvantages of the economic disparities between VHF and UHF—

Cannot be allowed to obscure the long-range goal of a nationwide competitive television service, in which both the UHF and the VHF bands will constitute integral parts.

This last condition has been honored mostly in the breach.

78. In the absence of any considered action by Congress or the Commission to alter the course of television regulation, the outlook is grim. In the absence of unity of purpose, adequate analysis, prognosis, prescription, there is no reason to expect that television's growth will be controlled by rules and decisions and by determinations of public interest any more effective than in the past. The easiest solution is to do nothing. Unfortunate solutions are those adopted merely for the sake of doing something. It would be deplorable simply to nurture an abiding hope that without any definitive action, somehow, sooner or later, the tougher problems will solve themselves.

EDWARD L. BOWLES.

March 1958.

SUPPORTING BRIEF

PREPARED BY EDWARD L. BOWLES
FOR MEMBERS OF THE AD HOC COMMITTEE

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CONTENTS

SUPPORTING BRIEF

SECTION I

GENERAL CONSIDERATIONS

ECONOMIC INDEXES

The growth of commercial television in this country has been extraordinary. From an enterprise which had scarcely begun to assert itself commercially as a public service before World War II and was in abeyance during that conflict, it has grown to a point where it is estimated that, today, its 15th anniversary, over 38 million homes, 3 out of 4, have television receivers,[1] compared with 7 million sets in 1950. Some 40 million television sets are estimated to be in use, representing a listener investment close to $20 billion.[2] Television has moved from a technological curiosity to a potent addition to the sources of entertainment and learning and a vital part of the complex of internal communications essential to the Nation's security.

It has been estimated that well over 95 percent of the families of this country live within range of a usable television signal. One has only to cross this land to observe the elaborate means to which those in outlying and rural areas will resort in order to have a picture. A survey[3] indicates that 9.4 out of every 10 television homes have a choice of 2 or more signals and that 8.7 out of every 10 have a choice of 3 or more signals.

The broadcast audience is served by some 491 stations in 310 cities, grown from but a single handful of hardy pioneers before the war and from the 108 stations on the air in April of 1952, when the Federal Communications Commission issued its sixth report and order, under which the Commission has since operated. An integrated counterpart of the broadcast-station matrix of the Nation is the group of networks which act to supply the majority of its stations with most of their programs. Although these networks also operate a small number of stations they own, the great majority of stations they serve are independently owned affiliates for the purpose of receiving a highly organized program service. Of the 445 commercial stations on the air as of the spring of 1956, all but 38 had a regular network affiliation by virtue of ownership or contract. The Columbia Broadcasting System had 181 affiliations within the United States and 34 without, including Alaska, Hawaii, Puerto Rico, Cuba, Mexico, and Canada.

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[1] The total number of United States families, 49,250,000. November 1956, 76 percent of which have television sets as of July 1956. TV Digest, November 24, 1956. Estimated population, July 1956, 167,858,000.

[2] Television-radio manufacture, sales, servicing aggregate $3 billion. Television broadcasting brings the figure nearer $4 billion. Some 142 million radio sets are estimated to be in use in this country, including 35 million in automobiles, some 97 percent of the Nation's 49 million households to have at least 1 radio. By mid-1956 there were some 58 million telephones in the United States, i. e., 1 instrument for every 3 people.

[3] Based on a special Nielsen Index study as of January 1, 1956.

Today, the American Broadcasting Co., the Columbia Broadcasting System, and the National Broadcasting Co., provide this network service.[4] The American Broadcasting Co. owns and operates 5 VHF stations. The Columbia Broadcasting System owns 3 VHF and 2 UHF stations. The National Broadcasting Co. owns 5 VHF and 2 UHF stations. A vital facility in this interconnection is the long-lines grid system of the American Telephone & Telegraph Co.[5]

The networks are the principal producers of live programs. Some 2,500 hours of network program service was rendered in 1956 by CBS, compared with 427 hours of playing time for all United States feature films produced by the motion-picture industry for the year.[6] These programs, particularly on account of time difference, are sometimes supplied by kinescope or reproduction on film. Recent developments in the recording of programs on tape promise greater flexibility for program service. Just as tape techniques will aid the network interest, so they will help independent program producers and, eventually, smaller local stations not able to afford network service. Film program material, irrespective of source, a year ago was estimated to account for a third of television broadcasting time.

The film industry, acutely aware of the competitive character of television, is rapidly shifting its orientation in the direction of motion-picture programing explicitly for television service. It is also releasing more freely its erstwhile secreted theater films for television. Thus, the networks must be ever on the alert in this rapidly expanding, vigorously promoted field of television programing.

Full appreciation of the economic significance of the television broadcasting business requires contemplation of the relative magnitudes involved. Financial data available from the Federal Communications Commission [7] indicate that the total revenue in the business of television broadcasting station operation alone for 1955 was $744.7 million, nearly $152 million ahead of 1954 and almost 7 times the intake of 1950.[8] For 1956, the corresponding figures published by the Commission were $896.9 million. Total earnings for the broadcasters for 1955 reached $150.2 million before taxes. In 1955, TV networks' total revenue was over $282 million.[9] Total earnings for the networks operations alone for 1955 aggregated almost $34 million before taxes. Overall earnings for the 4 networks and their 16 owned stations was $68 million, compared to $36.5 million in 1954. For 1956, the total earnings aggregated $85.4 million.

The road has, however, not been an easy one. In the years 1949, 1950, and 1951, the television broadcasters as a whole suffered losses

[4] A fourth network, Du Mont, suspended operations September 15, 1955. In radio broadcasting, some 20 years of practice has led to but 4 national networks.

[5] The yearly cost to CBS of this distribution service is $13.5 million (Television Inquiry, transcript, p. 3211). The total income to the Bell System from interchange video service for 1956 was $31.5 million.

[6] Television Inquiry, transcript, p. 3229.

[7] Final TV Broadcast Financial Data for 1955, Public Notice 35050, July 27, 1956; also, TV Factbook No. 22, 1956.

[8] In the best year of radio broadcasting in terms of revenue, 1956, the total intake for networks and broadcasting stations was $486.9 million.

[9] This figure is for ABC, CBS, NBC, and Du Mont. Du Mont ceased operation September 15, 1955.

before taxes of $14.9 million, $25.3 million, and $9.2 million, respectively. For 1955, 12 of the 108 prefreeze stations [10] reported losses. Four prefreeze outlets reported individual revenues of over $8 million. Of the 187 postfreeze stations operating a full year, 104 reported profits, and 80 losses. Of the 377 stations that operated a full year in 1955 and which reported, 228 made a profit, 149 a loss; 2 out of 5 were in the red.[11]

The RCA recently announced that in 1956 the net overall loss after Federal taxes in its color-television receiver and equipment sales came to approximately $6.9 million.[12]

The combined national networks in 1953, instead of earnings, showed a deficit of almost $3 million. The Columbia Broadcasting System has stated in the immediate Television Inquiry that between the inception of the television networking idea in 1934 through 1952 the organization invested $53.1 million in this endeavor without realizing a profit in any year.[13]

There were 108 stations on the air when the freeze was lifted in 1952. Since then, construction permits for some 671 stations have been issued, over 164 of which were canceled. Of the permits issued, 149 are outstanding.[14] Since the freeze, some 8 VHF and 60 UHF stations have gone off the air.

The average cost of a postfreeze VHF station, averaging the first 109, has been given as $376,000, and of a UHF station, averaging the first 100, $300,000.[15] Largest price said to have been paid for a television station was $10 million by Westinghouse for WDTV–TV, Pittsburgh, now KDKA–TV, in 1955. Highest price placed on a station in a choice market by its corporate owner is said to be $23 million.[16]

Television broadcasting is a competitive business, but free entry into the market exists only while there are still unclaimed channel assignments available. The primary resource is limited, since the number of channels available to television in the radio spectrum is limited.

This resource in the public domain is shared by commercial, private, and Government interests. Since uncontrolled use of the spectrum would result in destructive interference, and since radio waves know no state or national boundaries, this resource must be controlled. For nongovernmental purposes, administration of this resource is entrusted to a commission; for governmental purposes, to the President. The scope of these private and governmental responsibilities is prescribed by the Communications Act of 1934.[17]

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[10] No construction permits were granted between September 30, 1948, and July 6, 1952. This period was known as the "freeze." Some prefreeze stations were on the air before the freeze was instituted, others went on the air later as a result of the construction permits granted before this time.

[11] For convenient summary, see Broadcasting Telecasting, July 30, 1956, p. 50; TV Digest, July 14, 1956; also, FCC Final TV Broadcasting Data, Public Notice 35050, July 27, 1956.

[12] Broadcasting Telecasting, December 31, 1956, p. 74.

[13] Network Practices, memorandum prepared for the Senate Committee on Interstate and Foreign Commerce by Columbia Broadcasting System, June 1956; also, Television Inquiry transcript, p. 3174.

[14] As of August 25, 1956.

[15] Testimony Commissioner Hennock, Potter record, p. 194.

[16] Broadcasting Telecasting, December 24, 1956.

[17] The substance, interpretation, and operation of the act is outlined in sec. II of this brief.

The television broadcasting business is supported by the revenues it receives from advertising. The value of a given television station as an advertising outlet depends on its circulation; that is, the numerical size and the buying potential of the audience it commands. This circulation depends upon its coverage; that is, the population density of its service area, the buying power of this population, and the attractiveness of the station's programing. There is no compulsion to view a program—here is real public freedom creating the real challenge to the station. Because of a high degree of audience sampling by experienced professional agencies, the advertiser, the network, and the broadcaster have a good measure of the value of a given television outlet.

The advertising resource on which television broadcasting depends, and of course radio broadcasting with which there has been a very much longer experience, is a vast one. In 1955, over $9 billion was expended for advertising in this country, of which $1 billion went to the television medium. In a single year there had been an increase of 25 percent in the television advertising revenues. Radio broadcast advertising revenue for 1955 was slightly over one-half that of television. Television advertising, in its astounding growth of over $800 million since 1950 when its revenue was but $170.8 million, now ranks third among the various media. The newspapers in 1955 took $3 billion and direct mail $1.27 billion of the gross advertising expenditures of the Nation.

These figures in the aggregate are an appreciable element in the gross national product of $414.7 billion for 1956 ($391 billion for 1955).

World radio circulation now exceeds that of the daily newspaper. It is estimated that the world receives its news over 257 million radio receivers and 44 million television sets, compared with 255 million newspapers. In the last 5 years, it is estimated, world press circulation has increased by 14 percent and radio receiver circulation [18] by 40 percent.

The October 1956 issue of Electronics Industry Fact Book published by the Radio-Electronics-Television Manufacturers Association gives the United States radio-television circulation as 142 million radio sets and 37 million television sets. Supplementing the 37 million television sets in use are 3.75 million sets sold in 1956 up to August 1, less the sets which have currently gone out of use. The estimated revenue from radio-television replacement parts for 1956 is $850 million.

The electronics industry is rated as a $9.7 billion enterprise. The military portion for 1956 is estimated to be 10 percent above the value for 1955.

These observations set the level of this business of television broadcasting and its opportunities as a commercial enterprise. Up to this point the audience is well satisfied. Because this is a young art, the general public has not yet awakened to the critical problems with which it is beset. It is for the purpose of delineating these problems in context that the following sections are set down. The historical approach is taken to give a time scale. Some feeling for the nature of the growth of this great enterprise and the activities and interplay of the Commission, the Congress, and the broadcasting and manu-

[18] TV set circulation alone in the United States in the last 5 years has increased by approximately 350 percent.

facturing industries is prerequisite to a full appreciation of the bare issues, the obstacles and the suggested means for their resolution. For this reason, official actions of the Commission and public pronouncements of the Commissioners are cited. Court decisions are abstracted to give contour to the Communications Act of 1934 under which commercial television is regulated by the Commission. The congressional hearings are freely resorted to as a source of opinion and of data, as well as of legislative tenor.

BACKGROUND OF REGULATION

Commercial television of today is controlled by two countervailing forces, one the result of a regulating plan predicated on ideological principles and the other the product of evolution controlled by the practical economic climate of open competition—profit and loss, capital opportunity. Technological status and technological potentiality are of course implicit in this projection.

Confusion and loose thinking abound in many discussions on the subject because of a failure to recognize the influences the interplay of these factors has had in the past and is certain to have in the future on the growth of this art. They are forces which unfortunately are too often treated as independent variables.

For its pre-World War II endeavors toward commercialization, television was given a segment of that part of the available radio spectrum best suited to its technical character. This was at the upper end of the region with which there was some working experience. For black and white pictures a band width measured in frequency of the order of 6 megacycles [19] was decided upon.

There was really no other place in the spectrum to put television broadcasting than in what is termed the very high frequency, VHF, region.[20] Television channels in this region of the spectrum are described as VHF, or simply V.

In 1941, although 19 channels were made available, only with the 7 at the lower segment of the assigned spectrum [21] had there been any appreciable practical experience. By November 1939, only three television stations were broadcasting a program service. By June 1942, 5 commercial stations were on the air, 21 had been authorized.

After the war, during which great progress was made in radio, the upper region of the VHF spectrum had been exploited and was now better understood. By the middle of 1945 some 118 applications for commercial television stations were on file. During 1945, omitting some detail steps, 13 VHF channels were made available for commercial broadcasting.[22] By June 1946, 6 stations were operating and 31 construction permits had been granted.

Because of interference caused by propagation phenomena heretofore not apparent owing to the meager experience in this frequency

[19] AM radio broadcasting in this country utilizes a band width of but 10,000 cycles. Thus 600 AM broadcast channels could be put on the air in the space preempted by one 6 megacycle television channel.

[20] The VHF region, an arbitrary designation for conveniences in discussion, includes frequencies ranging from 30 to 300 megacycles per second. One megacycle is a million cycles.

[21] 44 to 108 megacycles.

[22] The entire VHF segment of the spectrum would yield 45 channels 6 megacycles wide. Other services, including the military, civil-air transport, amateur, and FM broadcasting were also invested here.

band, in the spring of 1948 mobile and safety service which had shared frequencies with television were assigned channel 1. This left the 12 channels 2 to 13 which have since comprised the VHF resource.

Up to the time the Commission published its report [23] of November 1945, television channel assignments were made on a case-by-case basis, just as they had been and are in AM radio broadcasting. The entrepreneur stations naturally went into the markets where there was the highest probability of commercial success.

The November 1945 report was a departure from past practice. As an administrative convenience it now established a table allocating channels to the first 140 metropolitan and community areas in order of market rank. It specified the highest number of stations and the particular channels each of these areas was permitted to have, irrespective of the number of applicants. This was a new point of view and was proposed by industry itself.[24]

In formalizing this plan the Commission concluded that—

> where it is desired to use a different channel in such area or to use another channel in an area conflicting therewith, it must be shown that public interest, convenience, and necessity will be better served thereby than by the allocation set forth in the table.[25]

Channel sharing was abolished by the Commission.

Channel 1 was set aside for community stations.

Remaining channels 2 to 13 were for either metropolitan or rural stations. Channel 1 was deleted by report and order in docket No. 8487, May 5, 1948.

This type of predigested plan caused no inconvenience or pain in its assimilation by the commercial interests concerned, for the reason that the business of television broadcasting was just beginning. Applications for stations would almost certainly be made for the most promising markets. These market opportunities were on the list and available virtually for the asking. At this point it was as if no allocation table existed, since it did not have to be called into use.

In taking this step of building a table of assignments, thus earmarking stations and the ceiling on stations for a given market, even though the Communications Act was not explicitly cited as the authority, the Commission must have assumed that implicitly the act supported the particular procedure although it neither suggested it nor made it mandatory.[26]

Radio AM broadcasting assignments have always been made on a case-by-case basis. Radio FM broadcasting assignments are predicated on an adumbrated plan which unlike television is not a part of its rules. It is similar to television in the sense that a rulemaking

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[23] Report by the Commission, docket No. 6780, November 21, 1945.

[24] The Commission stated in its final report in docket 6651, May 25, 1945: "Television Broadcasters Association further proposed that a definitive nationwide television allocation plan be set out by the Commission. * * * The Commission expects to issue a nationwide television plan for assignment of television channels as soon as posible."

[25] Report by the Commission, p. 3, docket 6780, Nov. 21, 1945.

[26] The right of the Commission to make television channel reservations was challenged by the Federal Communications Bar Association in a petition argued before the Commission. The Commission held that it had authority to act "to (1) prescribe as part of its rules and subject to change through rulemaking a table specifying the channels upon which television station assignments may be made in specified communities and areas; and (2) designate and reserve certain of the assignments provided in such table for use by noncommercial educational television stations." FCC Public Notice 66157, July 13, 1951, Commissioners Coy, Walker, Hyde, Webster, and Hennock concurring; Jones dissenting. This was a first adjudication. Others were to follow in respect to the sixth report and order in which the Commission's right to promulgate a table of assignments by rulemaking was supported by the Court of Appeals of the District of Columbia.

procedure is required to modify the plan, known formally as the revised tentative allocation plan for class B FM broadcast stations. This plan is not published as a part of rules and standards but is available.[27]

The Commission has also established rules for three categories of AM stations, namely, clear channel, regional, and local, and it had set up and later abandoned a system of zones and States to assist in the procedure of granting AM station permits and licenses.

This Report and this table of allocations prevailed until the issuance of the Sixth Report and Order by the Commission, April 14, 1952. In the meantime, the television business was growing apace and construction permits for new stations were being issued until the fall of 1948 when an order [28] was issued suspending all further action by the Commission on applications. This order stated that—

> During the hearing held by the Commission in the above-entitled proceeding to consider proposed revisions of the Commission's table of television channel allocations, evidence was presented concerning (1) tropospheric interference to existing and proposed television stations, (2) the use of directional antennas, (3) the use of increased power, and (4) conflicting proposals for closer spacing and wider spacing between television stations than is presently provided for by the Commission.

Later the Commission commented that—

> The most important single factor which induced the issuance of the "freeze" order of September 30, 1948. (by the Commission) was the desire to ascertain whether sufficient mileage spacing had been provided between assignments set forth in its table of allocations.[29]

At this time, 37 stations were on the air. Some 86 construction permits had been issued in addition. This freeze order endured not for 6 months as forecast but for practically 4 years. The initial reason for issuing this order was unexpected interstation interference, already mentioned, which threw question on the interstation spacing then in effect and also on the feasibility of granting the increased power being sought by operating stations.

The subsequent proceedings became inordinately complex and protracted as the question of color television came into consideration and also the opening up of the ultrahigh frequency, UHF [30] band for additional television channels beyond the 12 in the VHF band.

Construction permits issued prior to the freeze were permitted to mature into stations. By the time the freeze order was rescinded and, simultaneously, the sixth report and order issued in April 1952, there were 108 stations on the air including the indomitable five commercial outlets which had survived the war.[31] These 108 outlets are spoken of as the prefreeze stations.[32] They served 63 cities, 58 of which were among the first hundred in market rank.[33] They are estimated to

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[27] *Easton Pub. Co.* v. *FCC*, 175 F. 2d 344, 350 (1949). "The Commission has prepared and published an allocation plan (12 Fed. Reg. 4031, 1947) in which it has made a tentative distribution of the channels to the various cities and communities throughout the United States."

[28] FCC Report and Order, docket Nos. 8975 and 8736, the so-called freeze order, released September 30, 1948.

[29] Par. 10. Third notice of further proposed rulemaking, March 21, 1951.

[30] The ultra-high-frequency region of the radio spectrum is that region lying between 300 and 3,000 megacycles per second.

[31] NBC stations WNBT and W3XPP of New York and Philadelphia, respectively, CBS stations W2XAB and W9XAB of New York and Chicago, respectively, and Don Lee W6XAO of Los Angeles.

[32] For a list of these stations, see exhibit 7, p. 545, status of UHF and multiple ownership of TV stations. (Potter hearings.) U. S. Government Printing Office, 1954.

[33] Ibid. For rank listings, see exhibit 12, p. 526.

have reached over 60 percent of the United States families through some 21 million receivers.

From the inception of commercial television, practically, the potentialities of color television were a conscious added incentive in the art. As early as 1941 a laboratory system was demonstrated to the Commission. In all television allocations proceedings the needs of color appeared for consideration. This was particularly confusing since there was no certainty what band or channel width it would require. Channel width speculations ranged from 30 megacycles down to 12. It was for these reasons in large measure that very early, eyes were turned to the possibilities of the UHF region of the spectrum. It seemed clear on the basis of channel width that the VHF region was not the place for color television. Aside from color, there were also many years of debate among the engineers as to whether a wider band width than 6 megacycles for black-and-white television should be standardized so as to yield a picture of greater detail.[34] This uncertainty made for corresponding uncertainty in the field of allocations.[35]

By the latter part of 1948 it appeared that color television might after all be accomplished at a band width of 6 megacycles, the same as for monochrome. Recourse to UHF solely for purposes of greater band width for color became thereafter an issue of less and less importance. The color problem in general, nonetheless, left the industry and the Commission uneasy and uncertain if not somewhat confused. As a technical problem alone, it was enormously difficult. As a commercial activity, color television did not get fully under way until the Commission had issued three reports, and bitter if not incriminatory litigation had been engendered. This upturn was not until December 1953.[36] The wrangle over color at a time when other aspects of the allocations problem were acute introduced unfortunate delay, harmful in many respects.

In its notice of proposed rulemaking [37] in the spring of 1948, the Commission sought to expand the table of allocations set forth as a precedent in its report of November 21, 1945, already referred to. Actually this was a table of additions, since practically no existing VHF assignments were disturbed, although in the first color report, in referring to this 1948 notice, the Commission avers that—

> **This notice related to the 12 VHF channels and proposed an amendment of the television allocation table to provide a *redistribution* of the 12 VHF television television channels to the various cities and communities throughout the United States.[38] [Emphasis supplied.]**

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[34] The British go for less resolution with a 5 megacycle band width. Most European countries use 7, the Russians 8, and the French 14 mc band widths for monochrome.

[35] In its report of March 18, 1947, in commenting on the UHF band between 480 and 920 megacycles, the Commission deplores the fact that only twenty-seven 17-megacycle channels could be got since "27 channels may not ultimately be enough to provide a truly nationwide competitive television system." Again at an FCC industrial conference on color, Commander Craven, now Commissioner, testified that he felt a minimum number of channels for a nationwide television system should be of the order of 50, including both VHF and UHF facilities. FCC industry conference, testimony on color, transcript, p. 1807, September 13, 1948.

[36] First came the Commission's First Report on Color, September 1, 1950. Next came a second report on color, including rules and standards for commercial color, based on the field sequential system, October 10, 1950. Then came litigation, discussed in the section of this brief on color and on December 17, 1953, the Commission's final report and order resolving the controversy. The Commission first issued rules and standards for commercial color television based on the field sequential system, October 10, 1950.

[37] Docket Nos. 8975 and 8736, adopted May 5, 1948.

[38] First Report, Color, September 1, 1950.

This new effort meant to squeeze every drop out of the 12 channel VHF sponge which had thus far yielded so effectively. This new table contemplated some 955 assignments in 459 communities. The ideal was to provide the opportunity for local outlets in towns having populations of 10,000 or over. There was at this time a sensible and reassuring caveat attached to the proposal:

> The allocation of channels to such cities is not to be construed as a determination by the Commission that eventually such cities will, or will not, have that number of television stations.[39]

The use of the UHF band for commercial television had not yet been proposed by the Commission. A Commission report in 1948 reduced the number of television channels from 13 to 12. This reduction resulted from the abolishment of channel sharing with the safety and mobile services.[40] This report incidentally observed that television must find lodging higher in the spectrum.

This proposed 1948 extension of the official table promulgated in 1945 was vacated before definitive action. It is, however, a paper of historical significance. It marks the first departure from an allocation plan based on market considerations which furnish incentive to venture capital, and is directed instead toward an ideological objective so far from economic feasibility that to make it a reality in the foreseeable future would call for Government subsidy or monopoly.

There were two ways of making changes in the allocation table of 1945. One was to do so by acting on individual applications, that is, by adjudicatory proceedings resolving the individual issue, and the other by rulemaking proceedings where a general rule is made through the process of formal hearings, the rule thenceforth applying to all future issues of the character considered. A cardinal test on this point was raised when the Yankee Network sought to have a VHF channel moved from Hartford and assigned to Bridgeport, Conn.[41] None existed for this community in the 1945 table. The application was heard in March 1948. The Commission observed that in the past it had not followed a uniform policy with respect to changes in the table. Some changes had been made by acting on individual applications and others by formal rulemaking. The Commission majority now contended that the only appropriate method for making changes in the allocation table was by rulemaking proceedings.

The Commission made another significant decision which was that the proceedings associated with the application for a new channel could not be consolidated with the proceedings associated with an applicant's request for the license of a station to make use of the new channel sought. Thus, in the Yankee Network instance, channel 10 would have to be assigned to Bridgeport and entered in the table of assignments by rulemaking proceedings. Then all persons desiring to build a station in Bridgeport would have an opportunity as a separate proceeding to apply for the channel. This precedent made of a table of assignments a formidable document instead of a guide or administrative expedient.

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[39] Notice of proposed rulemaking, docket No. 8975, 8736, adopted May 5, 1948.

[40] Report May 5, 1948, docket 8487, channel 1, 44–50 megacycles now assigned to industrial public safety, and transportation.

[41] Memorandum opinion and order, Yankee Network application for construction permit. Case decided March 22, 1948. 12 F. C. C. 751. Commissioners Hyde and Jones dissented, each holding that the allocation plan was intended to be sufficiently flexible for the consideration of applications proposing channel assignments not specified in the original assignment table necessity of additional rulemaking proceedings by which to add the new channel assignment to the table.

The next step in the evolution of a new allocations policy came in 1949. It is described in a notice of proposed rulemaking.[42] Here for the first time was a formal move to introduce UHF channels to build out the opportunity for more stations. In the assignment plan, VHF and UHF stations were intermixed as if this procedure presented no problem. It was expected that stations would ultimately at least broadcast at the maximum power allowed for their class of service. A slight advantage in power was given UHF over VHF stations to give some semblance of equalization of coverage:

> Since television is a new service and the number of receivers in the hands of the public is relatively small, it is recognized that it may require several years for some stations to reach their maximum power. In order to make sure that the public will receive the maximum television service possible, the allocation table has been constructed on the basis of maximum power for each station.[42]

The new philosophy of allocation is set forth. It is expressed in a series of 5 priorities, the first of which is to provide at least 1 television service to all parts of the United States and the second to provide each community with at least 1 television station; the third to provide a choice of at least 2 television services to all parts of the United States, and the fourth to provide each community with at least 2 television broadcast stations.[43]

A most important feature of this proposed reallocation plan, in addition to intermixture, was that it did not contemplate altering existing television authorizations, that is, VHF stations already on the air and those having construction permits, in any material way.[42]

> In preparing the table of television channel allocations set forth in appendix C attached hereto, the Commission has not altered existing television authorizations except in three instances. These exceptions resulted from the Commission's efforts to arrive at an equitable allocation of channels between the United States and the Dominion of Canada.

The proposal included another innovation, that of creating, in addition to the allocation table of reservations for commercial television, an educational enclave or special set of immune reservations for noncommercial educational purposes. The expectation was that this proposal, if followed—

> will result in the maximum utilization of television channels in the United States and Canada, and will promote the public interest, convenience and necessity, and the provisions of the Communications Act of 1934 as amended.[44]

One is led to surmise that in addition to the altruism evinced by this social as opposed to economic determination there was an attractiveness to the proposition that here was a device, the table of assignments, which would simplify the administrative mechanics of handling applications.

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[42] Third notice of further proposed rulemaking, docket Nos. 8736, 8975, 8976, and 9175, July 12, 1949.

[43] Priority No. 5: Any channels which remain unassigned under the foregoing priorities will be assigned to the various communities depending on the size of the population of each community, the geographical location of such community, and the number of television services available to such community from television stations located in other communities.

[44] Third notice of further proposed rulemaking, docket Nos. 8736, 8975, 8976, and 9175, July 12, 1949.

SIXTH REPORT AND ORDER

Hurdling intervening detail, the results of a mass of actions on hearings subsequent to the issuance of the report of November 1945 by the Commission led to the notable document the sixth report and order which was adopted April 11, 1952.[45] A condition set forth by the Commission in the hope of stabilizing a confused industry was that no petitions for any amendment of the table of assignments in the report would be honored for 1 year from its issue date.[46]

The Commission gave as one of the reasons for this year of immunity to amendment, paragraph 210—

> The provisions that the table of assignments shall not be subject to amendment on petition for a period of one year from the effective date of the final order serves a twofold purpose. First, it will permit the utilization of the Commission's limited personnel for the consideration and processing of the hundreds of applications for television stations which will be on file when processing of such applications commences. Prompt action upon these applications is clearly necessary and desirable in view of the duration of this proceeding since 1948 and the consequent freeze on the establishment of new stations. The second end to be served by this provision is that the experience gained in the ensuing year in the consideration and processing of applications for new stations will be extremely valuable in the reevaluation and reconsideration of the table of assignments adopted herein and in the disposition of such petitions requesting an amendment to the table as will be considered after this period.

which in theory was fine but which in practice seems to have been woefully lacking in action to resolve the UHF dilemma.

As a further condition, it ordained that—

> * * * the public interest requires the establishment of a rule providing that the Commission will not accept applications for television stations if the channel requested is not specifically provided for in the table assignments.

It is under these principles and dictates of this report that the television business operates today.

Here was a relatively inflexible plan fixing the destiny of television broadcasting by prejudgment, independent of if not antithetical to economic forces. The table of assignments of this report was the ultima thule of Commission thinking. In the opinion of many, this plan was not consistent with section 307 (b) of the Communications Act which requires a fair and equitable distribution of services on the basis of demand. (See p. 156.)

The sixth report established 1,769 commercial assignments within the United States, distributed to approximately 1,200 communities.[47]

Of these, 498 were VHF channels and 1,271 UHF. There were 233 additional assignments, 71 VHF and 162 UHF, set aside for noncommercial educational use.[48]

This was an ideological plan which it was thought would avoid some of the difficulties the case-by-case procedure in AM radio had

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[45] Commissioners Walker, Hyde, Jones, Sterling, Webster, Hennock, Bartley; Jones and Hennock dissented strongly on intermixture; Bartley did not participate because he had just replaced Coy who left the Commission February 21, 1952.

[46] See pars. 209, 210 of the report.

[47] Goldfield, Nev., the smallest town included, has a population of 267.

[48] Since that time by formal rulemaking procedure there have been incremental increases in the number of assignments as follows: Commercial 73 (20 V, 33 U); noncommercial educational, total 16 (6 V, 10 U). Total communities now, 1,241.

precipiated. It could hardly have been based on any careful economic insight or investigation. The Commission has, in fact, repeatedly shied away from economic considerations. In a recent intra-Commission brief dealing with the subject of economic injury, it was held that—

> Without meaningful criteria or authority established in law it is impossible for the Commission to determine objectively whether a given community could support one or a dozen broadcast stations [49]

The outstanding features of the sixth report are that its table of assignments—

(1) is predicated on the principle that above all it shall provide a service to all parts of the United States; second in order of importance, it shall provide each community with at least one television station; third and fourth in importance and corollary, it shall provide multiple services to the country as a whole and to communities respectively;

(2) that it shall provide exclusively the reservation of a fixed number of stations for noncommercial educational purposes;

(3) that the UHF spectrum be utilized to furnish the additional number of channels required to carry out the objective of a nationwide system;

(4) that the VHF and UHF channels be treated as identical in constructing the table of assignments.

Actually different cochannel and adjacent channel mileage separations as well as channel criteria (assignment limitations) for VHF and UHF were followed.

It is stated in this report and order [50] that—

> One of the principal reasons for an *engineered table of assignments* incorporating our rules is that it permits a substantially more efficient use of the available spectrum. [Emphasis supplied.]

Just what determines that the table is an engineered matrix is not apparent from the context of the monstrous document of which it is a part.

There is no mention of any assignment plan related explicitly to market ranks nor are the stated priorities and the market rank concept mutually compatible. Generalizing the philosophy in other terms, this procedure established the dichotomy between a national television service and that of a community outlet for local expression type of operation. Implicit in the new policy is the question: How efficiently can the spectrum be utilized under this mandate as an ideal? Is there, for instance, reasonable chance that the 2,000 assignments frozen in place for ultimate use will be thawed out by the warmth of incentive to capital in the foreseeable future? This question warrants penetrating, sympathetic study.

In carrying out the ideals expressed by the two salient priorities of the sixth report and order, ideals identified with those generated several years earlier,[51] one would ordinarily undertake to execute an ideal plan with an idealism which insisted upon the employment

[49] Supplement brief by Commission staff, docket No. 11411 (1956).
[50] Par. 14, p. 2, sixth report and order.
[51] The 5-priority formulation as an ideal was first formally expressed in the notice of proposed rulemaking, dockets Nos. 8736, 8975, 8976, 9175, July 12, 1949.

of realistic means. The VHF techniques were already well tested, the UHF techniques were relatively far behind but considered essential to the plan. Liberalizing the mandate of the Communications Act "to provide a fair, efficient, and equitable distribution of radio service to each of same," i. e., the several States and communities, and the conclusions that neither VHF alone or UHF alone would do the job, it would have seemed reasonable to begin by considering what distribution of VHF and UHF facilities, taken as a whole, would best lead to a practical integration of the two.

What combination of VHF and UHF held the highest probability of affording the essential technological development of UHF? In other words, what combination would maximize the commercial necessity of patronizing UHF stations and how large should this patronage be to insure a demand for UHF sets or all-channel sets sufficient to warrant industry's rising to the challenge? What of the various trial combinations studied would be the most likely to achieve the priority ideals on which the new allocation plan was predicated?

It is hardly conceivable that any such study would have yielded a unique overall plan into which the 108 existing stations would by chance have fitted without some redisposition. These existing stations, after all, evolved on the basis of an entirely different and irreconcilable set of principles. Did a VHF grant carry with it an irretrievable, inalienable right? If it did not, was the ideal of a national television structure as expressed in the sixth report and its table of assignments so sound in principle that it could be sustained as a principle in a court test? The Commission seems to have meant to avoid this issue, vital to UHF. How much simpler it would have been to test the issue immediately, while VHF station investment was at a minimum.

Since irrespective of the ideology underlying the solution the Commission sought, concrete economic forces had to be recognized and weighed carefully if UHF was to grow, it was imperative to base any table of allocations, whatever the long-range objective, on immediate economic and technical considerations—incentive to venture capital on which extensions of the system, however ideal in principle, was bound to depend.

The very ideals of the sixth report and order betokened an ultimate goal, not an immediate one. Once the report was law, this ultimate goal should have been the touchstone of Commission action. Considering the immediate and obvious differences between VHF and UHF, it would seem unrealistic if not fantastic to confuse immediate integration with ultimate integration of these two means. The action of the majority of the Commission makes it appear that one group had its sights set on the ultimate goal and ideal and the other on immediate expediency—a pitiful pathological parallax.

Whatever novelty or idealism there might have been in the plan was compromised by having had to build a new scheme of things around a consolidated station matrix of the 108 prefreeze (VHF) stations already serving a large part of the Nation, though locally because of the concentration almost entirely in the first 58 markets.

Two years later some qualifying light was thrown on the nature of the compromise by the Commission in carrying out the avowed ideals.

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In *Logansport Broadcasting Co.* v. *U. S.*:[52]

The Commission says that it sought to distribute the available channels so as to achieve maximum television coverage with a minimum of interference between stations, and to that end assigned television channels to each of over 1,000 cities and towns throughout the Nation. Thus, frequencies were allocated among communities on the basis of one master plan arrived at through one master hearing. * * * The Commission stated that it had decided to assign, insofar as practicable, VHF channels to the larger cities.

It was clear that the ideal set forth in the priorities made it essential to go beyond the 12 channels available through VHF. This difficulty was overcome, on paper, by the addition of the 70 channels in the UHF band.[53]

The reluctance to touch the existing VHF installations eliminated a difficult procedural problem which no doubt would have led to the courts, but this reluctance also created a nearly disastrous problem for UHF on which the expansion of television as a national democratic asset was predicated. Intermixture of VHF and UHF was the inevitable alternative chosen by the Commission. This decision not to meet the issue squarely made life at the time more endurable than it otherwise would have been for the Commission. This decision having established a precedent, it has compounded the problem of reallocation adjustments which today lie ahead.

In the long-range sense, there was no reason to assume that there could not be an integrated allocation plan involving both VHF and UHF channels—one in which, once UHF was established, the two types of channels could coexist in the same community. True, there may always remain differences in relative performance which technical development connot overcome. As yet we are far from this state of affairs. There is, in fact, a substantial difference in behavior between the low and the high ends of the VHF band. Witness the furor when channel 13 was first used. Time permitted technological developments and human conditioning which greatly reduced the real and apparent disparity between channel 2 and channel 13. Even so, there remains here an unconquerable difference.

This problem of equalization was by no means new in the broadcasting art. In the Plotkin memorandum it is pointed out that—

Equalization of facilities in the AM field so as to limit competition between stations to their programs has never been achieved.

Testimony[54] of the president of WSM, Inc., an engineer of broad training and experience, gives a lucid discussion of the point:

* * * Some seem to think of UHF as an entirely separate part of the television spectrum. Actually, it is simply an extension of a band which is now called VHF and which ultimately could be integrated so that when one thinks of television, one thinks of channels 2 through 83, inclusive, rather than UHF and VHF.

UHF has been pictured here as an inferior method of bringing television service to the people, but instead, it is merely not yet a fully developed means of extending the spectrum. So what we are talking about is a matter of degree rather than saying that one part of the spectrum is bad and the other good. As one goes up the spectrum, propagation effects develop gradually. As a matter of fact, there is a large jump in frequency between channels 6 and 7 in the VHF region, and between channels 13 and 14, even though many people who do not

[52] 210 F. 2d 24 (1954).
[53] 470 to 890 megacycles.
[54] Television Inquiry, transcript, pp. 1347–1349, March 14, 1956.

know the allocation structure think of these channels as being adjacent. There is little difference in the ratio between channels 6 and 7 in the VHF band, and channels 13 and 14, which is the jump between VHF and UHF. Channel 6 is 82–88 megacycles and channel 7 is 174–180 megacycles. Channel 13 is 210–216 megacycles and channel 14 is 470–476 megacycles, a ratio of approximately 2 to 1 as compared with a ratio of 2.2 to 1.

It is a fact that in hilly terrain the higher the frequency the poorer the coverage. On the other hand, there are some advantages of UHF over VHF which are not generally realized. There is less manmade and cosmic noise in the UHF band, so that a UHF picture is likely to be a cleaner picture than a VHF picture. Since it is much easier to construct a highly directional receiving antenna for UHF frequencies, it is much easier to eliminate ghosts in this band. It turns out also that with the development of high power klystron tubes, it is easy to generate high transmitter power for transmission in the UHF band, and I believe it costs no more than equal power in the upper part of the VHF band.

There is a very close parallel to the VHF–UHF situation in the lower and upper parts of the standard broadcast band. Here, frequency, power, and soil conductivity determine coverage. There are 5-kilowatt stations in North Dakota operating on low frequencies which have far greater coverage than 50-kilowatt stations operating on higher frequencies in other parts of the country. Generally, 1500 kilocycles is far inferior to 600 kilocycles in point of coverage, and yet the economics have turned out such that some stations operating on higher frequencies are in better financial condition than ones operating on lower frequencies.

It was a mistake to fancy that integration of VHF and UHF could be effected at the outset, when there was so great a disparity between their degrees of technical development and commercial readiness. The failure to consider a new allocation plan for VHF and the failure to face up to the technical disparities presented, made it impossible to guarantee areas large enough and numerous enough to permit UHF to live unchallenged and come to full stature as a commercial asset, thus by natural evolution to make integration a fact rather than a fiction.

Once it was decided to treat the existing VHF stations as a quasi-vested interest and to compromise the long-range ideal, the allocation problem was reduced to simple proportions. There was a further temptation, because of the immediate value of VHF, to piece out a VHF plan around the 108 stations and then to use UHF to fill in the voids. This was of tantalizing immediate consequences, for together with the consolidation during the freeze it gave VHF its full stature but at the same time stunted the growth of UHF and thereby dealt a serious blow to the long-range ideal of a national television system subscribed to by the Commission.

Earlier tables of assignment as pointed out were proposed as devices for administrative convenience. The sixth report, by evidence in its application, disclaims any such flexibility. No application for a television station could henceforth be considered by the Commission unless it is listed in the table of assignments. By fiat no change could be made except through the process of rulemaking.

The authority of the Commission to adopt a nationwide television allocation plan was twice challenged through the courts. In each instance, on the basis of the evidence presented, the Commission's action was sustained. In *Peoples Broadcasting Co.* v. *United States*, the court of appeals said:

The Commission had authority to adopt a nationwide television allocation plan. The purposes of the creation of the Commission, as expressed by Congress,

and the mandates pursuant to the purposes enumerated at great length in the statute, furnish ample support for this action.[55]

In *Logansport Broadcasting Company* v. *United States*, the verdict was:

> After its experience in distributing FM radio frequencies pursuant to an allocation plan, and distributing AM frequencies in response to specific applications, the Commission has decided that by means of an allocation plan a more equitable distribution of television channels can be effected. We do not think this was an abuse of discretion. We again sustain the Commission's present plan of allocation.[56]

THE WAKE OF THE SIXTH REPORT

The issuance of the sixth report and order opened the way for grants of new stations beginning July 1, 1952, after a prohibition of almost 4 years. At this time there were 108 stations (VHF) on the air. They became known as the prefreeze stations.

By May 1954, a little over 2 years after the issue of the sixth report and the lifting of the freeze, 306 construction permits had been granted for UHF stations. Of a total of 132 UHF stations that had gone on the air, 5 had ceased operation. Fifty-four construction permits had been canceled. The 120 permittees left, who were not on the air, faced an inordinately difficult if not impossible future.

The VHF side of the balance sheet stood in striking contrast. Construction permits had been granted for 226 stations. Postfreeze stations on the air numbered 142, supplementing the 108 prefreeze stations. Of the 226 postfreeze construction permits granted, 73 were for stations not yet on the air and 11 had been canceled before going on the air. Two stations had gone off the air without canceling their construction permits, leaving a net of 250 VHF stations in operation.[57]

Of something over 31 million receivers in the hands of the public, 85 percent were not capable of receiving a UHF signal. The UHF prospect was well expressed by one operator, a witness in the Potter hearings:[58]

> * * * where there has already been established a multiple VHF service in a community—at least 2 and certainly 3 or more VHF stations—the success of a new UHF station is exceedingly doubtful. On the other hand, where UHF comes in first with no existing VHF station in the community, in normal circumstances this station does well. The Portland, Oreg., and Peoria, Ill., UHF stations are examples of this. Further, where there is only one VHF service, even though it has been in the community for a considerable length of time, a vigorously and aggressively managed new UHF station in that community can do well. Station WCAN-TV, a UHF station in Milwaukee, is an example of this.

The disproportionate casualty rate between VHF and UHF construction permits and stations was not without desperate reactions. Something had gone awry and those who suffered were vocal, but without sound effect.

There was no sign that the Commission was unified within itself as to the diagnosis of what was developing or what to do to arrest the development. The long-range social ideals of the sixth report had become moot. The industry was blamed for the lack of all-channel

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[55] 200 F. 2d 286 (1953).
[56] 210 F. 2d 24 (1954).
[57] Potter hearings, p. 165.
[58] Testimony of Frank Stanton, president CBS, Inc., Potter hearings, pp. 974–975.

sets. Some would have it that the networks were the cause. There was an emotional rashness of judgment aggravated by the insidious effects of a relative lack of clear-cut dispassionate analysis. The easiest course was to react to pressures and to proceed with the issuance of all the VHF grants the table of the sixth report would allow, and invoke this very table as a defense justifying this arbitrary if not capricious procedure. The fire of indignation had been kindled and the Commission was neither resourceful enough nor sufficiently unified to put it out. There simply was no clear policy to give structure and authority to the ideals of the sixth report.

At the height of the confusion and discomfiture of the UHF ventures, one of the Commissioners, a party to the generation of the sixth report, sounded a further confusing note of a caveat emptor character, anything but reassuring—

I do not believe the Commission can be blamed for those who display bad business judgment in trying to move in on the (UHF) channels without making a thorough assessment of the availability of equipment both for receiving and transmitting as well as the economic factors with which they might be confronted in the communities in which they proposed to establish service.

I am firm in my belief, as I was on the day I voted for the sixth report and order, that the Commission made a sound engineering allocation plan designed to meet the twofold objective set forth in the Communications Act of 1934, to provide television service, as far as possible, to all people of the United States and to provide a fair, efficient, and equitable distribution of television broadcast stations in the several States and communities.

The economic problem, as it pertains to sponsorship of programs by the time buyers and advertisers, is beyond the purview of the authority vested in the Commission by the organic act from which it derives its power. There are those who would have us move in this area, but this is a business arrangement that must be settled without interference from the Commission.[59]

Here is an interesting view of the same Commissioner, who finds it easier to blame the television broadcasting industry than to probe deeply into the Commission's actions to see if therein might lie the basis of the difficulty.

I am sure that we at the Commission, as well as others concerned, desire to consider all 82 channels now allocated for TV broadcasting without either VHF or UHF labels. Unfortunately, this cannot be done until certain problems, both engineering and economic, now confronting UHF are overcome. From the equipment standpoint industry is accelerating its pace in an effort to provide higher power as well as improvements in tubes for UHF tuners. The economic problem involves several factors including the failure of the networks to provide affiliation to UHF stations in mixed VHF–UHF markets, failure of the national advertisers to buy time on UHF stations, the slowness of the public in many areas having various degrees of VHF service to purchase strips, converters or combination UHF–VHF receivers where UHF stations provide attractive and popular programing.[60]

The Commissioner rationalized the plight of UHF in what has the appearance of cold indifference difficult to reconcile with the responsibility normally associated with the custodianship of a public trust:

It was the Commission's judgment that intermixture was necessary to provide an adequate number of signals to people in the various communities. To have

[59] Address by Commissioner George E. Sterling, formerly Chief Engineer of the FCC, UHF Symposium, Washington Section IRE, May 10, 1954. These three paragraphs as quoted here follow the order given in the Du Mont testimony (p. 231) of the Potter hearings of 1954. In the original Sterling paper the first paragraph as quoted here followed the other two.

[60] Address by Commissioner Sterling, UHF Symposium, Washington Section IRE, May 10, 1954.

done otherwise would have unnecessarily limited the number of assignments in many communities to one or two VHF stations even though UHF assignments could have been made and supported financially. Further, if only UHF assignments were made to some communities and only VHF to others, many persons residing within the combined service areas would quite naturally expect combination VHF–UHF sets to be available so that they could receive both signals. Intermixture of both channels in the same community provided the best assurance that combination receivers would be built, and today we know they are being built. A TV receiver with only VHF channels is rapidly becoming an obsolete one.

In many communities where both VHF and UHF assignments were available, applicants for UHF facilities received their grants in the belief that VHF stations would not be authorized in their community for some time in view of the fact that hearings would be required because the number of applicants exceeded the number of VHF channels available. However, as a result of additional appropriations provided by Congress, the streamlining of our procedures and agreements reached between competitive VHF applicants for shared-time operation and mergers, VHF stations went on the air in these cities much sooner than had been anticipated. One illustration of this development took place in Kansas City near the end of 1953.

Kansas City stands ninth in the market areas having populations of between 450,000 and 2 million. It had one prefreeze VHF station and hearings were required for the other VHF channels. Because of agreements reached for share-time operation and mergers, the UHF broadcaster was faced with competition from three VHF stations in a city heavily saturated with VHF sets, and the VHF stations obtained CBS, NBC, and ABC network programs. This presented a critical situation for the UHF licensee.

It went on the air last June after an expenditure of approximately $750,000. More money was expended in an attempt to gain a foothold, but the public was not willing to convert when it could obtain most of the top-rated programs from the three networks on the VHF channels. The station was eventually offered for sale for $750,000, then $400,000, finally $300,000, but there were no takers.[61]

Can it be that the Commission, even though it comprehended the danger, was powerless to prevent UHF applicants from heading into catastrophe, or worse still, that it felt it had no obligation so to do?

SENATE COMMITTEE HEARINGS—POTTER

The Senate Committee on Interstate and Foreign Commerce, perceiving a real difficulty, soon came to grips with the problem presented by the admixture of UHF to VHF assignments. It instituted hearings on the status of UHF and multiple ownership of TV stations before its Subcommittee No. 2 on Communications in the later spring of 1954, 2 years after the issuance of the sixth report and order. Chairman Potter, in opening the investigation, stated that—

> During the past months, the committee has received many complaints and numerous requests to do something with regard to the development of UHF television channels.

The testimony traversed the problems facing television broadcasting and yielded a wealth of serviceable information. It reaffirmed admonitions given to the Commission directly during its own hearings [62] which had led to the sixth report and order.[63]

Many were the protests to the Commission prior to the issuance of the sixth report on impracticalities of intermixture. In addition

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[61] Address by Commissioner George E. Sterling, IRE Broadcast Chapter, Boston Section, January 28, 1954.

[62] Docket Nos. 8736, 8975, 9175, 8976.

[63] At the time of the Potter hearings, Rosel H. Hyde was Commission Chairman, serving in this capacity April 18, 1953–October 4, 1954. He was succeeded by George C. McConnaughey.

to the pleadings by Du Mont, the Radio Corporation of America had emphasized the evils in a letter to the Commission.[64] Testimony of CBS in the television inquiry called attention to at least five instances when in formal proceedings the impracticability of intermixture is strongly pointed out.

After 2 years of experience under the sixth report at these very Potter hearings, President Stanton of CBS recommended deintermixture in this board context:[65]

> In brief, deintermixture involves a reallocation of channel assignments so that any one community will be either all VHF of all UHF; no single community would have both UHF and VHF stations. It may well be possible, at least in virtually all of the top 150 markets, to reallocate on a deintermixed basis in order to provide in each of these markets either at least 4 VHF services or at least 4 UHF services.
>
> It seems to me inescapable that as a theoretical matter, such a program of deintermixture may well be the only workable solution to the present UHF difficulties. Deintermixture has some very important advantages. It also has some very serious disadvantages.
>
> Its primary advantages are two: First, it would assure a far more stable future to UHF, and on a broader basis, since it would substantially eliminate the great competitive disadvantages which a UHF station now faces as against VHF stations in the same market.
>
> Second, deintermixture would increase the opportunities for competitive television services—both among stations and among networks. As far as station facilities are concerned—that is, whether they are VHF or UHF—each of the present networks would be on an equality in each of the important markets; full opportunity for network competition among at least four networks would thus be afforded.
>
> Deintermixture would be far less drastic and upsetting than shifting all stations to the UHF. It would protect the vast majority of present set owners, who would continue to receive service from their present sources. Possibly not more than 10 or 15 percent of present set owners would have to convert. Further, far fewer set owners—possibly less than a million—would lose service altogether, while somewhere between 3 million and 5 million would lose such service if there were a complete shift to UHF. And of course far fewer stations, perhaps less than 100, would have to shift from the portion of the spectrum which they currently occupy than would be the case if all had to shift to UHF.

The Commission defended its assignment plan of intermixture. It felt a move to all UHF to be unwise. UHF operators sought a "hiatus" in VHF grants and other relief including deintermixture. One Commissioner called for a VHF freeze preceding a solution of the VHF/UHF problem.

Out of the hearings came the decision of the full committee to institute a study of the entire broadcasting field. Robert F. Jones and Harry M. Plotkin were retained for the job as majority and minority counsel, respectively. Two interim summary reports to the Committee on Interstate and Foreign Commerce resulted.[66]

> Progress report by Robert F. Jones, majority counsel, Investigation of Television Networks and the UHF/VHF Problem.
>
> Memorandum report, by Harry M. Plotkin, minority counsel, Television Network Regulation and the UHF Problem.

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[64] March 23, 1950, docket No. 8736.
[65] Printed record, p. 978, May 1954.
[66] Jones was a member of the Commission, September 5, 1947–September 19, 1952. With respect to the sixth report and order, generated in that period, his action was to dissent. Plotkin, while on the staff of the Commission, was closely identified with the generation of the sixth report and order. In neither of these reports is the sixth report and order mentioned explicitly.

Jones commented on the inadequacy of information that was available even after the extensive record:

> It is a little short of tragic that the body to whom Congress has delegated quasi-legislative, qausi-judicial, and quasi-executive functions have less information in their files than have the people it purports to regulate.

and continued:

> There is no quick answer to these problems. The preliminary study by your staff makes it apparent a thorough analysis of the economics and coverage of each station and each network is required as a basis for any sound judgment.
> While all available data have been analyzed thoroughly, your staff feels that this is a good time to observe the admonition, "A little knowledge is a dangerous thing." For this reason the recommendations contained in this report are very limited.

Plotkin, searching out highlights of the testimony along a somewhat different vein, neatly observed that—

> Experience to date shows that even VHF assignments go begging when the towns to which they are assigned have a small population. And the 23 VHF stations which have surrendered their permits or which have suspended operations are testimony to the fact that more than a VHF permit is necessary to insure success.

He then goes on to say:

> We are forced to conclude that no solution is in sight whereby all television stations can be assigned to one portion of the band. It appears that we are destined to have a television system that is composed of both VHF and UHF stations.

Senator Magnuson in the letter of transmittal of the Plotkin report, saw clearly the importance of a real analysis of the television problem before the Nation. He said:

> It is now more than two decades since the Communications Act of 1934 was enacted. No comprehensive study or analysis—no survey broad enough to appraise the developments in this field during the past 20 years—has, to my knowledge, taken place during that time.
> It seems to me obvious and compelling, therefore, that a decent and vigorous regard for the best interest of those who have most at stake, namely, the American public, must have the highest priority in our studies and deliberations.

There followed an exchange of communications between the Senate committee and the Commission in the form of interim reports.

In one report,[67] the Commission made this comment on the Jones and Plotkin reports:

> * * * the problems raised by the Plotkin and Jones reports are not whether we can develop an adequate television service—for we already have such a service. The problem with which these reports and your committee's study is concerned is rather how we can best insure the fullest development of the industry's potentialities in line with the needs and desires of the American public and the abilities and ingenuity of the American broadcasters.

In other section of this report, the Commission spoke glowingly of the progress of commercial television but it also prudently observed that—

> We cannot, of course, predict the exact nature of future development of the television industry, nor is it the Government's function to create television service where there is no demand or economic basis for such service.

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[67] Preliminary Report of the FCC to the Senate Interstate and Foreign Commerce Committee With Respect to VHF–UHF and Television Network Problems, FCC 55–314, March 16, 1955, printed record, Television Inquiry, p. 261.

It may be added parenthetically that neither is it the Government's function to create television service where there is a demand or economic basis for such service. This (up to now) is the privilege of private enterprise.

Nor was the Commission at that time at all sanguine with respect to the idea of acquiring more VHF channels or moving entirely to the UHF region of the spectrum, but sought in the report to place any such heavy responsibility directly upon Congress.

The addition of substantial new VHF space or the movement of all television stations to the UHF would involve such tremendous dislocation of existing operations and have such a severe impact on millions of viewers that such action should be considered as a possible alternative only if Congress itself were to determine that the long-run benefits to the public required adoption of such drastic remedies.

A full understanding of the importance of circulation in making UHF television a commercial reality and of the cause of the lack of circulation seems to be missing, for the industry would appear to be largely, if not entirely, to blame.[68] Thusly, has the Commission transferred responsibility for decision, albeit with tongue in cheek.

Of the 35 million receivers in the hands of the public, only 5 million are UHF equipped. We also note with some concern that less than 20 percent of the sets now being produced are all-channel receivers. It may well be that this lack of UHF receiving equipment, as well as the delay in developing high-power transmitting equipment, have been the most important single factors in the relative backwardness of UHF development.

It was suggested that the lack of circulation could be mitigated by the removal of the excise tax on all-channel receivers. The ghost of intermixture had apparently not yet begun to haunt, or perhaps was expected to repose, in the Commission's family closet.

The Commission deserves credit for realizing the need for a study, even though couched too broadly in this interim report to make the idea convincing.

*** * * the Commission believes that a general study by the Commission into the entire economic structure and operations of the television industry is essential. This study would include, but not be limited to, consideration of the respective roles of the networks, advertisers, agencies, talent, independent film producers and distributors, and other program sources as well as other means of distributing programs to the public. The essential objective of such a study would be to obtain for the first time a factual basis for evaluating the necessity and advisability of any action by the Commission, Congress, or the Department of Justice in this area.**

15. In our opinion, the network problems referred to in both the Plotkin and Jones reports cannot be considered by themselves but are inextricably interwoven within the structure of television programing. Only through a study such as we are proposing will we have a proper basis for evaluating the various types of regulatory proposals which have been suggested. While network programing is admittedly of crucial importance to profitable station operation at the present stage of development, the Commission believes that establishing an economic base for the growth of new stations lies not in any artificial restriction or redistribution of network programing but in an overall expansion of all sources of programing.

16. The Commission has long believed that an overall study of the broadcast industry, including a review of the network rules, should be made. The last such comprehensive study was conducted in 1938–41 with respect to AM broadcasting and led to the promulgation of the chain broadcasting and multiple ownership rules. We have informed both the legislative and Appropriations Committees of the Congress on numerous occasions since the end of World War

[68] Ibid., p. 262.

II of the need for a new study. But we have also indicated, and here reiterate, that any such study by the Commission, if it is to be meaningful and productive, requires a high-caliber staff. This staff would have to devote full attention to the study. As a result, we would need to recruit immediately additional personnel in order to avoid disruption in the essential work of the Commission. Neither the Bureau of the Budget nor the Congress has seen fit to make available the funds necessary for conducting such a study: such supplemental sums as have been appropriated have been earmarked for application processing. No funds have been allowed by the Bureau of the Budget in our present budget proposal for fiscal 1956 to establish such a staff—though we had originally asked for funds sufficient to establish at least a skeleton staff to make a start on the problem.[69]

It is a pity the specifications for this proposed study were not developed around the specific area needing urgent attention, i. e., the VHF/UHF allocations turmoil. It is even more regrettable the Senate investigating committee could not have seen the light and helped the Commission define the problem it, itself, had not yet clearly seen, thus giving early substantive assistance.

The next interim report [70] in 1955 to the Senate committee discusses the reallocations problem with respect to deintermixture, but gives little clue as to what the end result will be or to what its own policies are to be in the matter.

The Commission called attention to its having instituted rulemaking proceedings March 31, 1955, to look into deintermixture of television assignments in Peoria, Ill.; Evansville, Ind.; Hartford, Conn.; Madison, Wis.; and in the Albany, N. Y., area. Because of the limited nature, this was referred to as selective deintermixture.

This report also contains the salutory reference to an appropriation of $80,000 by the House "to make a study of radio and TV network broadcasting." There is an expression of regret by the Commission that the study would have to be so limited. This limitation was imposed by Congress. Whatever the fact, the far more critical problem of VHF/UHF was not identified with this project.

The subject of intermixture was by this time growing more controversial by the day. The Commission vacillated. It was not sufficiently unified to face up to this problem which was being aggravated by the delays of allocation circumlocutions and the pressure of economic realities.

In a communication [71] to Senator Magnuson, November 1955, Chairman McConnaughey states that the Commission had just denied requests to achieve selective deintermixture of commercial VHF channels in Peoria, Evansville, Madison, Hartford, and Albany.[72] By 4–3 vote it was now held that—

* * * the problem of deintermixture could not be approached on the piecemeal basis of scattered communities, but along with all other remedies, must be considered in the general proceeding which will explore the matter from a national standpoint.

At the same time, the Commission concluded that the public interest would be served by the assignment of channel 10 to the community of Vail Mills, N. Y. This assignment can be accomplished in complete conformity with the Commission's present rules and engineering standards, and the Commission concluded that it would not be justified in withholding from the public the additional service that can be afforded by this facility pending the general proceeding. The Com-

[69] Printed record, Television Inquiry, p. 263.
[70] Interim Report of the FCC to the Senate Committee on Interstate and Foreign Commerce, FCC 55–590, July 21, 1955.
[71] Letter to Senator Magnuson from Chairman McConnaughey, November 17, 1955.
[72] Dockets Nos. 11238, 11333, 11334, 11335, 11336. Decision November 10, 1955, Commissioners Hyde and Bartley dissenting, Webster concurring in part and dissenting in part.

mission pointed out that this assignment differs from the request for deintermixture, or for the assignment of additional channels at substandard spacings, in that the latter proposals involve basic departures from the present television structure." [73]

With respect to deintermixture cases up for consideration at this time, the Plotkin report (p. 11) had already commented: [74]

Several cases of recommended deintermixture have been formally presented to the Commission. All but one have been summarily denied without a hearing primarily on the ground that the VHF applicants have already expended large sums of money in prosecuting their applications and that they should not lose the benefit of those expenditures.

Commissioner Hyde, at the time the sixth report and order was adopted, was convinced that intermixture was necessary to obtain adequate national coverage. By the time of the Potter hearings, now as chairman of the Commission, he had come to feel strongly that some corrective measures were necessary and that further intermixture of VHF and UHF in the same markets would be unwise. His belief in the evils of intermixture became ever more fervent as time went on.

In an address in 1955, Commissioner Hyde averred [75]—

But let us not be deluded that all is perfection in the TV picture. Many and serious difficulties have arisen. Present trends in the allocation plan, if left unchanged, will impair and perhaps preclude the development of a healthy free competitive nationwide TV service which can provide desirable local outlets for self-expression.

On the basis of such information as was available to the Commission at the time it adopted the allocation plan, we believed that intermixture of VHF and UHF stations would prove not only feasible but would provide the basic vehicle whereby the aims of the allocation plan would be carried out. We felt that we could count upon the good will and best efforts of the manufacturers of receivers and transmitters, the networks, the advertisers, and the station owners. We believed this would lead to the acceptance by the viewing public and would result in a general growth and acceptance of all television, regardless of the spectrum location of the signal source. It now turns out that certain factors did not develop as we envisaged, and that certain unforeseen roadblocks intervened. Let me be explicit. I blame no one segment or entity of the industry or of the Government or of the public for the situation which now exists. But we must face present realities and examine the existing situation, not with a view to allocating blame, but to see what can be done to correct trends which have developed, and to press for the proper development of a nationwide competitive television system in the American tradition.

* * * * * * *

The present state of the UHF is most serious, not only because of the substantial losses caused to station owners and the economic waste involved, but primarily because of the impact a continuation of the present trend may have on the overall situation and on the public interest. Obviously, elimination from active use of 70 channels of the 82 assigned would drastically curtail the present and future scope of the industry. It would result in TV becoming a limited, protected, and necessarily regulated service rather than the dynamic service contemplated by congressional policy.

My suggestion, which I have previously advanced, is that a reexamination be made of the TV allocation in the light of experience since 1952. The objective of such a reexamination would be the establishment of conditions conducive to the growth and development of UHF in as many areas as possible and at the same time providing opportunity for network competition on as nearly equal transmission facilities as possible in as many markets as practicable.

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[73] Record, Television Inquiry, p. 266.
[74] February 1, 1955.
[75] Eighty-two TV Channels versus Twelve, Lions Club, Washington, D. C., August 31, 1955.

Commissioner Hyde's extreme concern and his understanding are clearly indicated by the decisions on deintermixture [76] which aroused him to dissent in forthright, pungent fashion:

> * * * I consider the actions of the majority of the Commission to be premature, ill-advised and wholly inconsistent with the Commission's other actions in this area.
>
> The Commission is under a statutory mandate to provide a nationwide competitive television service. Until it has been shown that this can be achieved with the 12 present VHF channels (or that additional VHF channels are available with which to achieve such result), I deem it imperative to preserve the UHF service. What the Commission has done today may deal a death blow to UHF television service.
>
> The orders which have been entered in these cases would dispose of a large number of individual petitions addressed to specific situations, by blanket declarations to the effect that action on individual petitions would not resolve the overall problem. This offers strange reasoning and an abrupt change in procedure much belated in its application.
>
> Until this moment, it has been the practice of the Commission to consider petitions for changes in rules establishing the TV allocation upon an individual basis. * * * The summary disposition of these cases today on what is essentially a new procedural device seems certain to raise grave questions as to the meaning of the earlier proceedings.
>
> While the orders are virtually bereft of specific findings to support the conclusions, it is manifest that material, both in an en de hors the record, has been considered in reaching such conclusions. The unfortunate result of this method of disposing of the various proposals is that no real consideration is given to the merits of any of them. Moreover, to the extent that information outside of the record played a part in the majority decisions, the participants in the formal proceedings have not had a fair opportunity to be apprised of the existence of such material, let alone meet or test the validity thereof. To give the semblance of due process, the majority proposes a general rulemaking proceeding in which all of the various problems can be lumped together and considered, and in which proceeding all pertinent information can be spread upon a public record before a final determination is reached. * * *
>
> But the obvious reason for the sudden haste of the majority in taking the present action is to clear the decks for the immediate grant of VHF applications in a number of communities involved in the deintermixture cases, and in other communities in which deintermixture has been suggested and peremptorily turned down. The deintermixture petitions which have been turned down request stays in the pending VHF proceedings. Therefore, these requests for stays are here being denied without proper findings or without proper consideration of the material submitted in their support. But if the evidence which has been adduced by the petitioners (and not considered by the majority) has merit, the grant of these VHF applications may well have the effect of denying the very relief sought by the proponents of deintermixture prior to the determination of the general rulemaking proceedings. Without passing upon the contentions made by the various petitioners, and without evaluating the evidence that has been adduced upon the record, the Commission may, in granting the VHF applications, effectively eliminate many UHF stations which are presently in operation and in many instances render the cases moot. * * * The actions of the Commission in making further VHF grants in these areas can but have the effect of seriously hampering and perhaps of unalterably precluding the Commission from giving proper and adequate considerations to the overall study of the allocation plan." [77]

On the subject of these deintermixture denials, Commissioner Bartley had this to say when questioned on the subject in the Television Inquiry,[78] addressing Chairman Magnuson:

> Mr. Chairman, what I would like to say is that I think that the principal difference of opinion in the disposition of the proposed rulemaking cases which we had before the Commission is that in those cases which were—in which we

[76] November 10, 1955.
[77] Record, Television Inquiry, p. 273.
[78] Television Inquiry, transcript, p. 42.

had the benefit of the views of the people in those areas, it is my own view that failure to deintermix those particular areas will foreclose deintermixture in other areas.

I think we had all the facts necessary to make a decision. The reason I wanted to make—the prime reason I wanted a decision out of the Commission was to afford some stability to the industry so it would know which way we were going.

Now, we could have done that back in November. We had, I think, all the facts that we will get in connection with those cases at that time, and the reason I point it up is that I think that the word "freeze" which has been thrown around more or less implies that those who wanted to go ahead and adopt final decisions in those cases are being accused of being the ones who are now in favor of a freeze.

Evidently there had been much use of the word "freeze" in its worst context, perhaps as a hangover from the pre-sixth report days and their ramifications with regard to the granting of VHF permits and in respect to intermixture. Chairman McConnaughey, unmindful of the Commission's earlier demonstration of its lack of power to delete, convert or transfer any of the 108 prefreeze stations in developing the "engineered" table of allocations of the sixth report, testified [79]—

The allocation plan under the sixth report already provided for V channels to go in these five places. We felt that the public deserved to have the service. It can be taken back after our study is completed.

Under the law, we can take out any other V's which we may have to do when we complete this whole study. We may have to make islands of V's; we may have to make whole sections of the United States V's.

Adding the cold touch—

That may be, but we felt that we had to get service on the air. If there is anything in the world I dislike, it is a freeze. It scares me to death when I hear the word.

In the section of this report on the Communications Act of 1934, some idea of the view of the courts on the rights of the broadcaster are cited. They would seem to demonstrate that the chairman in his testimony was oversimplifying the problem, perhaps not being familiar with precedent.

If one looks at the history of stations on and off the air and in the doldrums at the moment, the feared freeze was fought by fatal refrigerants.

THE SENATE COMMITTEE HEARINGS—MAGNUSON

The Commission in being at the time [80] of the issuance of the sixth report was by no means in agreement on the principles of assignment underlying this document. Neither has the Commission since, with its changing membership, been able to work as a team on the VHF–UHF problems. The Potter hearings, despite their substance, did not alter the Commission's overall attitude or the deteriorating plight of UHF.

With the lack of progress, decision, leadership and unity within the Commission and broadcasting industry, it was natural that the hearings of 1954 be followed by continuing scrutiny on the part of the Senate Committee on Interstate and Foreign Commerce. In Jan-

[79] Television Inquiry, transcript, pp. 21–22.
[80] See footnote p. 18 in this report.

uary 1956, additional hearings were initiated, currently known as the Television Inquiry and conducted by the full Senate committee.[81]

At the opening of this second set of hearings, Chairman Magnuson stated that—

> The committee is interested in all problems of radio and television broadcasting which properly fall within its jurisdiction. It is concerned with problems arising out of the operation of networks and has before it Senate bill 825, introduced by the distinguished senior Senator from Ohio, Senator Bricker, and designated to authorize the FCC to regulate networks.
>
> The committee is also deeply concerned, as has been indicated on many occasions, about the problem of the UHF band and deintermixture, set conversions, and other questions relating to a truly national competitive television system.

Testimony ranged widely from proposals strongly for to those strongly against deintermixture; from temporary restraints on additional VHF grants to their accelerated dispensing irrespective of danger to UHF, the vestiges of the businessman's Elysian hope of an all-VHF system. Again UHF was presented as an inferior service, bound to continue so. There was an urge to put more VHF stations in the larger markets. Fear was expressed of another suspension of grants to permit a breathing spell and to allow time for considered analysis. There were arguments for the expansion of VHF by appropriating educational reservations for this purpose, taking channels from the FM band and from other nontelevision areas of the VHF band. The artifice of adding VHF stations by the drop-in technique, compressing the existing distribution by reduction of current spacing, was suggested. The idea was advanced that the removal of excise tax on all-channel sets would in itself lead to a resurgence of UHF. A plea was made for "community television," often without a clear understanding of just what this phrase might connote. Finally there was the extreme view that an all-UHF nationwide system was the answer.

It will be useful for perspective to quote the following testimony [82] at the Television Inquiry:

> Although I am here as a representative of a VHF station, I wish to make it clear at the outset that I consider the development of the UHF frequencies as being essential to full development of our television potential.
>
> * * * * * * *
>
> I have reviewed most, if not all, of the statements that have been submitted to you and I find that no one has said there will be a scarcity of channels if the UHF portion of the spectrum develops. There will be plenty of channels available for hometown television. I find, also, that no manufacturer who has had experience in the development of UHF equipment has said from a technical standpoint it cannot be developed into a perfectly usable service. There seems to be no engineering disagreement on this point.

The National Broadcasting Co.'s testimony at the Television Inquiry was clear and affirmative in the view that UHF was necessary and therefore that its survival should be assured by the Commission, which should—

> declare as a national policy the goal of maintaining and strengthening the UHF service, in order to encourage the continued development of television on a nationwide competitive basis.

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[81] Not by the Subcommittee No. 2 on Communications as were the Potter hearings.

[82] John DeWitt, Jr., president, WSM, Inc., Nashville. Television Inquiry, transcript, pp. 1347, 1349.

Its position on the subject of deintermixture is well described in this exchange: [83]

Mr. Cox. So that you would be in favor of deintermixture to the fullest extent possible without actually depriving someone now receiving a signal of that type.

Mr. HEFFERNAN. That is substantially right. We favor it on a broad basis. There might be some local consideration that the Commission knows about we don't know about, where in some situations they might not do it. We will leave that to the Commission because they are acquainted with local conditions. We do favor it on a broad basis. I think we are speaking of the same thing.

Without deintermixture on a sufficiently broad basis to create a number of predominantly UHF markets, the public may not purchase all channel black and white receivers in sufficient number to provide a market for the continuance of manufacture of such receivers, but with deintermixture on the basis we suggest, UHF will grow in a nucleus of areas from which it can spread to others.

Deintermixture in the context used in this testimony implies that no existing service is to be eliminated and also that VHF channels displaced as a result could wherever practicable be used to increase competition and service to the public in major VHF markets.

Specific suggestions on deintermixture included the following steps: [84]

Deintermix on a sufficiently broad basis to create a nucleus of predominantly UHF service areas from which UHF may grow and expand * * *.

Permit UHF stations to use directional antennas.

Permit UHF stations to use on-channel boosters and translators to more nearly equalize coverage with their VHF competitors.

Permit UHF stations to use 5 megawatts of power as an additional means to improve their competitive position with VHF.

Again: [85]

In any market which becomes a predominantly UHF market as a result of deintermixture or which now has considerable UHF circulation, no new commercial VHF allocations would be made.

In connection with deintermixture on this basis, situations will arise where a UHF channel will be substituted for a VHF channel which has been granted to a construction permit holder who is not yet in operation or who commenced operation since the institution of the Commission's current allocation proceeding.

In these circumstances it would be desirable if the holder of such a construction permit could be granted a construction permit for the substituted UHF channel without further proceedings. This would enable the additional service to the area to be instituted without delay. If the Commission believes that it needs additional auhority to follow such a course, we recommend that the Congress enact legislation specifically providing for such authority under these circumstances.

Finally: [86]

In our view, those who have experience, resources, and basic interests in television and electronics should be encouraged to help the cause of UHF by undertaking the operation of at least one UHF station.

This testimony also strongly urged repeal of the excise tax, particularly on all-channel color receivers.

In the testimony of the Columbia Broadcasting System, a chronological summary was given of its many comments on and protests against intermixture beginning with the year 1948 [87] and including

[83] Mr. Heffernan, Television Inquiry, transcript, p. 1932.
[84] Television Inquiry, transcript, p. 1912.
[85] Ibid., pp. 1938–39.
[86] Television Inquiry, transcript, p. 1912.
[87] Television Inquiry, transcript, p. 1783–84.

President Stanton's comment in May 1954 at the Potter hearings of 1954 to the effect that—

We are persuaded that the events since the lifting of the freeze confirm the correctness of our view, expressed in 1950–52, that the UHF portion of the spectrum should not be used in such a way as to require it to compete with the VHF portion of the spectrum in the same markets.

In its comments in response to the requirements of FCC docket 11532 on reallocations considerations, CBS stated in December 1955 that—

There is now, however, ample evidence that, normally, UHF stations are not competitively equal to VHF stations.

At the television inquiry the position of Columbia was that—

Thus it seems clear that any systematic large-scale deintermixture would involve such a tremendous cost to the public in dollars and in loss of service that its adoption cannot be seriously considered.[88]

An operating engineer and president of a successful VHF station commented on this superficially attractive problem in unequivocal terms,[89]

If additional VHF channels were to be added from the military or that portion of the band now allocated to FM, as has been suggested, those stations would be faced with the same conversion problem with which UHF stations have been faced. Nor would the number of VHF channels possibly available from these sources meet the requirements for additional television channels. UHF channels would still be required to meet the needs of the country. * * * And if you throw in a few channels (VHF), you will stop the cries momentarily but you will slow down UHF development.

The American Broadcasting Co. made this observation on the idle VHF assignments to noncommercial purposes,[90]

For example, in New York City, education is assigned a UHF channel. If we can't make UHF work, the largest market in the country will never have educational television. I submit this: That in a great many areas, for understandable reasons, the educational groups are not yet ready to utilize the reservations that have been made for them.

Why not, therefore, permit those VHF channels, which are gathering dust, permit them to be used for commercial purposes which will further the general overall status of television, which will make an important contribution to the survival and growth of UHF, so that at some future date, when we have a single TV service, and there won't be any difference between UHF and VHF, educational TV will be the gainer, if you will lend-lease these VHF channels at this time to commercial TV where they are so urgently and immediately needed as distinct from the future use of TV.

We don't deny the proper requirement of educational TV, but it is in the future; our urgent need is right now.

The subject of "drop-ins" is a relatively controversial one.[91] It may have constructive aspects in some instances but in others be a shoehorn device by which to get a VHF foot into inviting markets at the expense of UHF. The Vail Mills case, which is described under "Recent Commission Actions," is perhaps a classical example.

[88] Ibid., p. 1825.
[89] John H. DeWitt, Jr., president, WSM, Inc., Television Inquiry, transcript, pp. 1352, 1359.
[90] Television Inquiry, transcript, p. 1741.
[91] A drop-in is a channel assignment not in the original table of assignments of the 6th report. It may compromise the spacing (interference) criteria on which the original table is based.

In referring to VHF drop-ins, the National Broadcasting Co. contended [92] that this—

> * * * will result in a degradation of service or a deprivation of service, particularly to millions of rural and smalltown viewers in populated areas between metropolitan centers.
>
> Some who advocate drop-ins frankly concede this, but seek to minimize it by reference to service to the farm and smalltown populace as—and I am quoting their comments—"fringe" service. In our view, this is one of the major policy questions for resolution by the Commission and cannot be dismissed, as do these advocates of drop-ins, by characterization of rural service as fringe.
>
> A principal defect of the several drop-in proposals is common to all of them. They would so prejudice the development of UHF, by transferring the industry drive to the discovery of how to squeeze new stations into the 12 VHF channels, that the 70 UHF channels could be lost to television broadcasting. Thus, the drop-in approach could have the effect of eliminating UHF without providing a satisfactory substitute, since the VHF-only system which would be left after the loss of UHF would be both inadequate in number of channels and degraded as to quality of service to rural and small community viewers.

This complex subject is viewed by one highly competent, experienced television engineer in these terms: [93]

> Drop-ins, directional antennas, reductions in mileage separations, reductions in power, reductions in antenna heights, etc., are no solution. All of these suggestions, while offering possibilities of some additional stations, are purely devices which would result in inefficient use of spectrum space and, in most instances, will probably deprive many more people of service than would be provided a service with the full development of the present allocation plan.

In the portion of the brief which follows, liberal application is made of this extensive, valuable record to give substance to the many issues which are considered and which bring us to our conclusions and recommendations.

The bulk of the testimony, up to the adjournment of the hearings last summer, bears on the VHF–UHF reallocations problem. Whatever the position taken on the VHF–UHF impasse, it was always the public interest which was avowed. Granting that it was the ultimate public good which was in issue at the hearings, the public, itself, was conspicuous by its absence. Some 145 witnesses were heard. The transcript, thus far, aggregates almost 5,000 pages. The allocations aspects of these proceedings are discussed in a preliminary way in an interim report.[94]

COMMISSION VIEWS

The Chairman of the Commission, in his statement of January 26, 1956, prepared for the Television Inquiry, noted that there were 440 television stations in operation, serving 278 communities, 113 of these with 2 or more outlets. His estimate was that 90 percent of the people were within range of at least 1 television signal. Of 152 UHF stations which had gone on the air, but 99 were left [95]—a staggering reality.

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[92] Television Inquiry, transcript, pp. 1948–1949.
[93] Ibid., p. 1352.
[94] Interim report of the Committee on Interstate and Foreign Commerce, pursuant to S. Res. 13 and S. Res. 163, authorizing investigations of certain problems relating to interstate and foreign commerce. U. S. Government Printing Office, 1956.
[95] As of September 20, 1956, the figure was 90.

The relatively high casualty rate in the UHF area would point to something deeper than commercial competition. The explanation given in the Plotkin report hardly absolves the Commission:

> When the Commission allocated UHF channels, it proceeded on assurances received from the industry that high-power transmitting equipment and satisfactory receiving sets would be forthcoming at a reasonable date.

There continued to be diverse opinions, often strong differences, within the Commission as to how to meet the problems of UHF. The difficulties presented by the intermixture of VHF and UHF stations in the same market or community had steadily mounted and had grown more and more acute, threatening the very purpose of the new allocation philosophy.

Some 29 markets were cited as having had UHF stations on the air before a competing VHF installation appeared. After appearance of VHF competition, it was testified,[96] 13 of the UHF stations went off the air, 16 survived. (As of today, five more of these UHF stations have gone off the air.)

Senator Pastore queried Chairman McConnaughey:

> Do you know of any market where it (UHF) has survived outside of a network owning it?[97]

The Chairman answered:

> Sacramento, Tampa, West Palm Beach, and Wichita.

In the television inquiry, later on, Mr. Jahncke, of ABC, after referring to the earlier hope that the sixth report would solve their problem of competitive access to what he termed monopoly markets, took issue:[98]

> I, therefore, take exception to that portion of the FCC's testimony before this committee in which UHF stations in West Palm Beach, Tampa-St. Petersburg, Wichita, and Sacramento are cited as exceptions to the maxim that UHF stations are unable to survive against multiple-VHF competition.
>
> In the case of West Palm Beach, less than a month after the FCC testimony was given, WIRK–TV, the UHF station, discontinued operations.
>
> In Wichita, UHF station KEDD commenced operations on August 15, 1953, as the NBC affiliate. At approximately the same time, a VHF station also commenced operation in the market. Within 1 year, there were 124,000 VHF homes as compared to 74,000 UHF homes.
>
> By the end of a 2-year period, this disparity had grown to 222,000 VHF homes as compared to 126,000 UHF homes. Subsequently, two other VHF stations also commenced operation in this market. Recognizing the desperateness of its competitive situation, KEDD petitioned the Commission on February 2, 1955, to deintermix the Wichita market by assigning another VHF channel in place of the UFH channel. The petition was denied. I understood, effective May 1, 1945, KEDD will lose its NBC affiliation to a VHF station. The rest of the story you can guess. (KEDD is now off the air.)
>
> Senator PASTORE. At that point, do you take the position that it was feasible to give KEDD a VHF station?
>
> Mr. JAHNCKE. I do not know, from an engineering point of view, whether a VHF channel was available under any existing set of engineering standards, but I take the position that at this point it is hopeless to expect a UHF station to try to survive against three VHF signals in that market.
>
> Mr. Cox. I would suppose it fair to assume that, if a formal petition for deintermixture was filed, there must have been engineering support for the proposition that at least a reduced coverage V could be dropped into that market which, at least, would get around this conversion problem.

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[96] Television Inquiry, transcript, pp. 507–508, February 21, 1956.
[97] Ibid., p. 427, February 20, 1956. * * * The Senator must have meant without network affiliation.
[98] Testimony of Mr. Ernest L. Jahncke, Jr., assistant to the president, ABC, Television Inquiry, transcript, pp. 1700–1703, March 26, 1956.

Mr. JAHNCKE. I am not familiar with their application. I do not know the engineering aspect.

Mr. COX. Mr. McKenna, do you have some knowledge of that?

Mr. MCKENNA. I am advised, Mr. Cox, that the petition contained with it an engineering statement showing how an additional VHF station could be assigned to the area.

* * * * * * *

Mr. JAHNCKE. In Sacramento, Calif., UHF station KCCC–TV was on the air for almost a year and one-half before the two VHF stations started. Prior to that time, KCCC–TV operated at a profit. It now operates at a loss. It has applied to the FCC for a VHF channel as the only means of survival. This is not intermixed prosperity, as was suggested by the FCC.

The story in Tampa-St. Petersburg is tragically similar. WSUN–TV, the UHF station in this market, was on the air for 2 years before the 2 VHF stations commenced operation. I was advised by the manager of this station last week that its overall time sales now show a 42.5-percent decrease.

I have discussed these specific cases for two reasons. First, I think they prove ABC's contention that UHF cannot prosper against multiple-VHF competition.

Second, the fact that these markets were selected by the FCC to illustrate UHF's ability to compete with multiple-VHF stations, suggests a lack of knowledge of the problem or an unwillingness to face facts.

In view of the desperate urgency of the allocations problem, we do not feel that this committee or the FCC should allow itself to be sidetracked from the central allocation issue by such subsidiary matters as tower heights, boosters, translators, satellites, power increases, etc. While these proposals all have undeniable merit, they are of value only if the UHF station is in a market in which it can survive from an allocation point of view in the first place.

In respect to the VHF–UHF problem, the Commission has appeared as a heterogeneous group, witness the number of dissenting views on decisions involving intermixture and the tenor of the testimony in the Television Inquiry. There seems to have been an atmosphere of frustration tempered by a devout hope that, somehow, time would solve the ambient complex problem.

There has been a tendency on the part of some of the Commission to continue to hold arbitrarily to the literal dictum of the sixth report, perhaps in desperation, perhaps as a refuge, perhaps as a justification for proceeding with VHF grants regardless of the effect on the plight of UHF and the avowed objectives of the sixth report. Chairman McConnaughey testified in the Television Inquiry:

* * * It has been my experience in about 9 years of regulatory-agency work that when you adopt a major policy, such as you adopted in the sixth report, you'd better stick awfully close to it once you start.

We have proceeded on the basis of that order and report, and all seven of the members of this committee voted to have this general rulemaking procedure (docket 11532). It is my opinion we are bound by the sixth report until we change it, and I am not going to hold up any action, as far as I am concerned, unless the court holds me up, on the policy of the sixth report, until this Commission changes it. I think it is our duty to abide by that policy.

Considering the immediate question, the relative advantages of VHF over UHF has prompted some members of the Commission to feel bound to proceed with encouragement of VHF stations despite the aggravation of the UHF situation. It was declared unfair to deprive the rural elements of a service that VHF would give, not recognizing broader aims the sixth report set out to achieve in the long-run public interest.

On March 31, 1955, the Commission finally instituted rulemaking proceedings to look into deintermixture of television assignments in Peoria, Ill., Evansville, Ind., Hartford, Conn., and Madison, Wis.

On April 21, 1955, similar proceedings were instituted with respect to the Albany, N. Y., area. The Albany area involved also the proposal of a VHF drop-in at Vail Mills. These selected areas were to constitute a pilot run.[99] There were pending requests for deintermixture in several other areas.

The Commission majority denied these and all other petitions for deintermixture in November 1955, arguing they were on a local basis, but granted the petition for the drop-in at Vail Mills. In this way, decision on this vital subject was postponed by the device of resorting to a new general rulemaking proceeding on a national basis, thus in effect underwriting further the deterioration of UHF—the underlying hope of the sixth report.

The interchange between Chairman McConnaughey and the Senate committee counsel on this subject at the Television Inquiry is enlightening and points up conflicts in policy and conflicts of view among the Commissioners:[1]

Mr. Cox. Now if you think that you may want to create a certain number of all-UHF markets, which is one phase, at least, of deintermixture as you defined it this morning, don't you think it would be sound policy while you are trying to make up your mind on that ultimate question to preserve any existing all-UHF areas which you have?

Mr. McConnaughey. Any existing all-UHF areas?

Mr. Cox. Yes.

Mr. McConnaughey. What do you mean, are you talking about [communities] like Peoria and Madison?

Mr. Cox. Yes.

Mr. McConnaughey. Heavens, no. That is the reason the majority acted differently. No, no, we told you this morning that we did not feel that we could hold up the public interest, and I think the court of appeals has affirmed the Commission in that regard, you can't hold up the demands of the public on a temporary basis while you are going into rulemaking proceedings, you can't do that. The Commission does not propose to do it, they don't propose to do anything of that kind.

Mr. Cox. What was the nature of this demand of the public?

Mr. McConnaughey. Well, it is in the public interest.

Mr. Cox. Were public bodies appearing before you?

Mr. McConnaughey. *Oh, no, no, but it is obviously in the public interest to get television grants out under the sixth order and report just as fast as you can. That is what the Congress has been interested in all the time.* [Emphasis supplied.]

Mr. Cox. Is it in the public interest to get out grants which may complicate a problem which you are considering at the same time?

Mr. McConnaughey. We do not think it accomplishes it.

Mr. Cox. Let's go into that a little.

Isn't it true that there is a very definitely limited number of areas which are now available for deintermixture on a reasonable simple basis, that is in terms of a minimum disturbance of existing conditions?

Mr. McConnaughey. I do not know how many there are, Mr. Cox; I have never made a study of it; I do not know how many.

The Chairman. There would be very few.

Mr. McConnaughey. As I recall, Mr. Chairman, it was, oh, I think 15 or 20 areas at least where they asked that such an action (deintermixture) be considered.

Mr. Cox. Weren't most of those areas at least in what I refer to as a simple sort of deintermixture available, weren't they involved in these five proceedings and then in the group of other proceedings which you dismissed at the same time that you dismissed Madison, Peoria, and so on?

Mr. McConnaughey. Yes, that is right.

Mr. Cox. And isn't it true, I think as has been established but just to make it clear for the record, isn't it true that since [order of] November 10, [denying]

[99] Dockets Nos. 11238, 11333, 11334, 11335, 11336.
[1] Television Inquiry, transcript, pp. 406–409.

all of these [five] pending petitions for deintermixture the Commission has granted construction permits for a first VHF station in Corpus Christi, Evansville, Fresno, Calif., and Madison?

Mr. McCONNAUGHEY. That is right.

Mr. Cox. Isn't it generally agreed that this intermixture which is basic to the sixth report is at least one of the roots of the UHF problem in that it results in requiring competition between facilities which, it has developed, are not quite equal?

Mr. McCONNAUGHEY. It is one of the problems; that is right.

Mr. Cox. Now this is where I want to get back to the point you suggested a while ago. Having refused to grant deintermixture in 5 specific cases where you considered it in some detail, and on the same basis, then, in some 29 or 30 other petitions involving additional areas, how can the Commission assert that it is not going to be less likely to grant deintermixture ultimately in those areas than if no construction permit for a "V" channel has been ever made?

Mr. McCONNAUGHEY. I think the Commission's feeling is that after a study of this overall reallocation, that then they can come out with some very positive statements with what can be done.

They might come out with shorter separations and be able to get more "V's" in, they might come out with an all-UHF recommendation. I don't know. I mean you can't tell what—

Mr. Cox. In the first instance of course your action in granting the "V" permit raises no problem, but if you are ever going to tend toward all-UHF or toward deintermixture in this particular market, haven't you in some sense prejudged the issue by having denied deintermixture and granted the "V", so that you are bringing into existence a facility that was theretofore only allocated but not realized?

Mr. McCONNAUGHEY. We don't believe so at all.

The Chairman must refer to the first of the Coastal Bend cases, in which the court merely supported the Commission's legal right to act as it did. It was not empowered to pass in any way on the wisdom of the action. The court judiciously observed:[2]

The Commission, however, has decided not to impose such a freeze [granting of either "V" or "U" stations until settling the reallocations problem]. This is the sort of quasi-legislative policy decision which is virtually immune from attack in the courts.

* * * * * * *

If extinction of UHF stations results from the Commission's policy and actions, the responsibility must lie at the Commission's door.

An interesting point came up in this testimony in respect to the deintermixture of Peoria, Ill., and the lack of independent data on the relative coverage of "U" and "V" stations. Chairman McConnaughey reflected:

I have a question in my mind as to coverage in the Peoria area. Can the "V", which will get out and cover some of the people out in the outlying rural areas, that the "U" won't cover, who are part of the Peoria farming market, which is the largest farming market in America, basically, the largest farming market in the area, what am I doing to those people out in the country? I don't know.

Mr. Cox. Isn't it true that you have never made a formal finding that the people out there in this rural area surrounding Peoria do not receive television service?

Mr. McCONNAUGHEY. No; you never make a formal finding, merely[3]——

In its report and order denying deintermixture, the Commission averred that—

Petitioners seek alleviation of a nationwide problem by action directed toward their individual, local communities. Whatever the merits of their contentions

[2] 231 F. 2d 498, 500 (February 1956). 234 F. 2d 686 (January 1956).
[3] Television Inquiry, transcript, p. 391.

that local deintermixture would benefit the particular UHF operators and their local communities, the Commission has serious doubts that the requested relief would be meaningful with respect to the general problem.

Granting the national character of the problem, the argument presented here would apply with equal if not more force to the destructive effect to UHF of proceeding recklessly with the grants of new VHF stations.

This appears as a direct contradiction of the view expressed to Senator Potter in an earlier hearing.[4] In the Television Inquiry, Senator Potter remarked that—

> The Chairman assured me that there would be no further grants until we had settled the problem of deintermixture the last time he appeared before this committee. Since then I think you have granted 3 or 4 applications.

A view contrasting with that of Chairman McConnaughey on the urgency of this policy of granting VHF stations irrespective of UHF degradation was expressed by Commissioner Hyde,[5] who appears to have had in mind the ideals expressed in the sixth report:

> The statement which the majority has submitted says there is television service available to 90 percent of the population, at least 2 services to as much as 75 percent.
>
> In view of that, what argument is there for this proposition that we have got to go ahead and license new stations irrespective of the consequences that may follow in regard to our allocation procedure?

In a firm statement at the Television Inquiry, Commissioner Doerfer asserted that:

> The sixth order report was based on the premise that there must be intermixture to get the full utilization of the spectrum. Now, if we are going to divert from that policy, if intermixture is going to be substituted by deintermixture, that is a very serious consideration, and if it is not, we could decide that in 30 days.

In other words—[6]

> * * * if this Congress wants the Commission to lay emphasis on a competitive system rather than a service to all the people, I can make up my mind in 10 minutes. We will (de)intermix what we have got here and try to pull some V's out that are established and let it go at that. But I am satisfied there will be many, many years when many rural inhabitants will never get a television service unless they get it through community antennas or some other means.

His position is further delineated in the order terminating the proceedings[7] wherein he concurs in the solicitation of comments on the feasibility of moving all television broadcasting to the UHF portion

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[4] Hearing before a subcommittee on interstate and foreign commerce, U. S. Senate, 84th Cong., on S. 1648 (July 7, 1955), pp. 43–44.
"Senator PASTORE. How about in the deintermixture: is that still going on?
"Commissioner DOERFER. Yes.
"Senator PASTORE. Has any policy been promulgated by the Commission as to whether or not it should continue in the public interest?
"Commissioner DOERFER. We just heard 2 days of oral argument last week.
"Senator PASTORE. Are you granting intermixtures in the meantime?
"Mr. MCCONNAUGHEY. Under the sixth report, they are; yes, sir.
"Senator PASTORE. Aren't we muddying up this soup a little more?
"Mr. MCCONNAUGHEY. We have held up the grants in these cases which have been filed.
"Senator PASTORE. Everybody seems to be of accord here that one of the big problems is intermixture, and yet we go on doing it. At the same time we are investigating it to reach a decision as to whether or not it is good policy to have it.
"Mr. MCCONNAUGHEY. We have not gone on. We have held them up. In these cases you are acquainted with we have held them up and not issued any grants at all, pending the outcome of the intermixture question."
These cases are the deintermixture cases on which Commission decision was rendered in November 1955.

[5] Television Inquiry, transcript, p. 60.

[6] Transcript, pp. 156 and 158, respectively, February 1956.

[7] Report and order, docket 11532, June 25, 1956.

of the spectrum but dissents with respect to deintermixture of a community where VHF service is available:

The Federal Communications Act provides that the distribution of frequencies among the several States and communities shall be upon a fair, efficient, and equitable basis. It makes no provision for a "nationwide competitive system." Admittedly ample competition, if attainable without doing violence to the equitable and efficient provisions of the act, would be in the public interest. But when this is to be accomplished at the expense of denying a first television service to substantial numbers of people, it is tantamount to displacing the congressional mandate of an efficient and equitable distribution and substituting therefor equal competitive facilities for a few applicants.

This philosophy contrasts interestingly with the interpretation of Commissioner Hyde given in his dissent on pages 40–2 of this brief.

If Commissioner Doerfer's position is understood to treat with competition alone, it is difficult of reconciliation with section 313 of the Communications Act which deals with the application of the antitrust laws to monopoly, at least implying a competitive system, and the express statement in section 3 (h) that the broadcaster shall not be deemed a common carrier.

If further interpretation of the act is needed on this subject, it is given by the Supreme Court in the Sanders Case:[8]

* * * thus the act recognizes that the field of broadcasting is one of free competition * * *.

Commissioner Doerfer goes on in his testimony to comment that:

I don't think that (deintermixture) should be our objective, at least without further examination. Our objective should be to try to figure out how UHF can work with intermixture in all the major markets in the next 10, 20, or 50 years.

which must somehow be rationalized with his view on the way to achieve a solution. His advocated solution would appear rather a hope than a working formula:

That is why I feel that the proper way to achieve a solution of this is to try to blend or permeate U services and V services, so that in a market which will sustain 3 U's, I think will sustain 1 V and 2 U's. That in my opinion would be the proper approach. I have been opposed to the establishment of UHF islands because of the necessary corollary that you establish VHF islands and you never will achieve the penetration of the U's and the V's.

A further interchange indicates the variations in point of view on the assignment problem:

Mr. Cox. But as I understand it, gentlemen, since 1952, when this initial allocation of the V in Madison was made, there has developed experience with respect to the probable conditions of intermixed assignments.

Mr. DOERFER. There is a more important thing at stake than the experience or the fate of UHF broadcasters. In my opinion one of the things that motivated me was that I don't think that this Commission could accomplish anything if we ever recognized the right of anybody to stay our hand in an adjudication proceeding by petitioning us for rulemaking in the adjudication proceeding. That would be devastating to our process. That would really tie us up, in all adjudicatory proceedings.

Mr. Cox. Your conception is that any comparative proceeding for the assignment or for the granting of a permit under an existing allocation should be made only in terms of the comparative qualifications of the applicants and without considering the underlying fact, or question of whether or not the sixth report should still be effectuated in this area in terms of permitting anybody to build a VHF station.

[8] Sanders, 309 U. S. 470, 474, 475.

Mr. DOERFER. As a general proposition, I think that is correct. But you may find, even in an adjudicatory case that there is some vast public interest at stake, or a peril to the public interest, which is imminent and which can be seen. But that doesn't apply in those cases where there is a good difference of opinion by reasonable minded men trying to protect the public interest.

Commissioner Doerfer was also emphatic in his view that if necessary VHF stations could and might be moved or changed to UHF at the will of the Commission. He referred to the building of VHF stations based on construction permits issued in areas where deintermixture petitions are pending in this way:

These people are *building at their peril*, so to speak. They may or may not have a V operation in those communities. [Emphasis supplied.]

The Commission Chairman, in his testimony, expressed the conviction that a VHF station grant was something which could be altered much more simply than the record would indicate [9] and seemed not to take into consideration the investment either of the broadcaster or of the public in VHF receivers:

We felt that the public deserved to have the service. It can be taken back after our study is completed. Under the law, we can take out any other V's which we may have to do when we complete this whole study. We may have to make islands of V's; we may have to make whole sections of the United States V's.

* * * * * * *

No VHF grant, whether recent or long standing, creates a necessary barrier to deintermixture, should the Commission find, in keeping with the conclusion reached in the general allocation study, that deintermixture of any community is required in the public interest.

* * * * * * *

The fact that the Commission has recently granted a new VHF station can have no more bearing on its judgment as to whether deintermixture in that locality would serve the public interest than the existence of a long-established VHF station.

* * * * * * *

None of the deintermixture proposals before the Commission contemplate the elimination of a local VHF assignment without the substitution in its place of a UHF channel. Accordingly there would be no question of a VHF going off the air. What would arrive is a requirement that a VHF station transfer its operation to a substituted UHF channel.

The Senate's Television Inquiry brought out the fact that Chairman (then Commissioner) Doerfer questioned the mutual consistency of the priorities on which the sixth report was predicated: [10]

I do not agree with the Chairman (McConnaughey) that the objectives of the sixth report and order are harmonious and that they complement each other.

I think there is definitely a conflict between the first priority and the second priority.

These priorities are given in the report as:

1. To provide at least one television service to all parts of the United States.
2. To provide each community with at least one television broadcast station.

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[9] Former Commissioner Jones was less certain on this point. In his dissenting opinion in the sixth report and order he states that: "The purpose of the allocation plan now being adopted by the Commission is to create a nationwide, competitive television system, but the effect of the plan is to deny local television to cities not included in the table. Once the table is established and construction permits are granted, followed by licenses and operation on the channels assigned in this table, the Commission will not be able to dislocate such licenses to make another plan more efficient without litigation ensuing between such licensees and the Commission."

[10] Transcript, p. 335, February 1956.

Certainly it does not follow that if all parts of the United States enjoyed a television signal each community would have a television station, nor could the reverse be true, namely, that all parts of the United States would have a television signal if each community had its own broadcast station. It is simply that on technical grounds these two priorities are mutually exclusive.

Chairman Doerfer then went on to testify that [11]—

> The sixth report as I read it did nothing more than decide that the first objective was service to all the people, and the next one, as much competition as possible. Now, in the actual administration of those two things, they are antithetical. It doesn't appear so on the surface but it is. And our problem today is whether or not we are going to shift that fundamental properly, whether or not we are going to try to rearrange the priorities to have a national competitive system with a possibility of all the people getting television service relegated to the bottom of the ladder practically—

appearing to favor the concept of service as opposed to the concept of a national competitive system.

In his dissenting statement [12] with respect to the Commission's report and order of June 1956, he is more emphatic. There he says that the act—

> makes no provision for a "nationwide competitive system." Admittedly ample competition if attainable without doing violence to the equitable and efficient provisions of the act, would be in the public interest. But when this is to be accomplished at the expense of denying a first television service to a substantial number of people, it is tantamount to displacing the congressional mandate of an efficient, equitable distribution and substituting therefor equal competitive facilities for a few applicants.

He went on to opine that [13] —

> In view of the scarcities this Commission is struggling with a priority system and whenever you have a priority system you have to choose, sometimes, between whether or not you are going to attempt an *equitable distribution* or whether you are going to get off of the course and get into the so-called *competitive system.* [Emphasis supplied.]

Some inkling of the new chairman's point of view is reflected in his interpretation of the word "equitable" in the context of the act: [14]

> But there is one thing that I think has been overlooked throughout all the comments and throughout all the criticisms of our present policy or the policy of the majority. And that is the law itself provides that *the FCC was created to provide a service to all of the people.*
>
> *And section 307 (b) provides a fair and equitable distribution of the frequencies amongst the several States and communities.* And our problem is: Is it fair and equitable that Providence have all V's and Hartford all U's or vice versa? [Emphasis supplied.]

This is an overstatement of the service the Commission can render the public. The Commission is powerless to do more than make possible the opportunity for a service to all the people. The Commission, in the preamble of its broadest regulations, has in fact stated that the broadcasting system is based entirely upon the use of this medium for advertising purposes, that is, incentive to private capital.

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[11] Transcript, p. 155, February 1956.

[12] Dissenting statement of Commissioner Doerfer, report and order docket 11532, June 25, 1956. This indeed is an interesting construction of the facts, when it is already evident that intermixture has been so administered as to encourage the dominance of VHF, its sovereignty in the larger more profitable centers, and a maximum of "equal competitive facilities for a few applicants."

[13] Transcript, p. 337, February 1956.

[14] Transcript, pp. 30, 31, January 1956.

It will be useful to compare this observation to both sections 307 (a) and (b):

SEC. 307. (a) The Commission, *if public convenience, interest, or necessity will be served thereby*, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by the Act.

(b) In considering applications for licenses, and modifications and renewals thereof, when and *insofar as there is demand for the same*, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same. [Emphasis supplied.]

One must keep in mind that the act does not establish a television system for the Nation, but affords the opportunity only. The end result is dependent on the will of private enterprise, the incentive, the source of supporting funds, i. e., the advertiser and ultimately the majority consumer or viewer. Conceivably, then, a distribution of working stations, determined as it must be by the will of private enterprise (by leave of the Commission), may in the absolute sense of the word "equitable" lead to inequities.

Chairman Doerfer, leaning on the term "equitable" free from the tempering effects of dollar incentive, gives a further interpretation: [15]

Getting back to the original premise, the policy of Congress has been an equitable distribution of the frequencies. The sixth order and report was a culmination of about 4 years of hearings and considerations. That incorporates the equitable principles which I just announced, or discussed.

We are required under the law to try to be equitable in the distribution of frequencies. Now, to unscramble the sixth order and report on a piecemeal basis is not working in compliance with the announced policy of Congress, nor is there any solution I can see which will satisfy unless we wind up with an equitable distribution of frequencies.

Furthermore, the new chaiman asserts that [16]—

I think the act, itself, does not place emphasis on a nationwide competitive service.

The Federal Communications Act provides for an equitable distribution of frequencies, and I say that it is unequitable to assign a "U" service to some people and "V" service to others under the present state of the act.

* * * * * * *

I think that the achievement of a nationwide competitive service is consistent with the act. But I do say that the act, itself, lends support to, first, the equitable distribution over the competitive.

According to an interim report in the Television Inquiry: [17]

It is for the benefit of the public, and the preservation of our American way of life, that the Congress properly insists that our radio and television broadcasting be *nationwide, competitive and responsive to local needs.* [Emphasis supplied.]

The industry's interpretation, as typified by Mr. Stanton in his testimony at the Potter hearings, is that [18]—

* * * it is not established that the UHF (without VHF) provides sufficient space fully to accommodate the number of stations which are necessary to achieve the objective of getting as close as possible to a *nationwide, multiple service, competitive television system.* Indeed there is very substantial opinion to the contrary—I believe it to be the consensus that both UHF and VHF are required if we are to approach the objective. [Emphasis supplied.]

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[15] Transcript, p. 32, January 1956.

[16] Transcript, pp. 336, 337, February 1956. It is interesting to compare the hue of this picture of the act with that expressed in the Commission's majority views on the Saunders case and its extreme views in the Southeastern Enterprises case (see pp. 170 ff, and 170–15 ff).

[17] P. 9, Interim Report, The Television Inquiry, Allocations Phase, July 1956.

[18] Record, p. 976.

It is important to review Chairman Doerfer's views on intermixture, as expressed in his testimony in the Television Inquiry. He holds that:[19]

> The problem (of deintermixture) is like trying to unscramble eggs, and that is a pretty tough job for anybody.
>
> * * * * * * *
>
> In 1951 you had 108 television stations serving 75 percent of the people; now, according to some estimates, it is 95 percent. My question is, what about it, are we going to forget about them? We have got to remember that you have to look at the VHF problem and UHF problem as though you had a plate with a saucer on top. How about that perimeter on the edge? Are those people going to be without service forever?

The Chairman's view that—[20]

> I cannot envision this Commission or any subsequent Commission nor can I envision Congress taking TV service away from the people that now have it—

appears arbitrary and foreboding when the Commission must be governed by application of the criteria, public interest, convenience and necessity, gaged by the greatest good for the greatest number.

Such a policy of expediency lays a foundation for the growth of monopoly and surrounds the VHF operating stations particularly with an aura of permanent franchisement, despite the language and spirit of the Communications Statute.

In a somewhat different vein there is the ancillary observation:[21]

> I am trying to say that by deintermixture you would not provide a service to all the people—I do think if you allow intermixture that we will eventually have a nationwide competitive system.
>
> I agree with the chairman (McConnaughey), that the needs of this whole thing is programing.

There is no clue to the inner meaning of the assertion eventually—that is, exactly how the transformation will be brought about and how distant such consummation is envisioned to be.

On the one hand, there appears to be indifference to one group predicated on a strangely arbitrary assumption,[22] contrasting with an artificially rationalized solicitude for another,

> "I think that if people live in the mountainous or the wide open spaces where they would not receive a VHF service under the present allocation, they have definitely *put themselves by choice* beyond a service.
>
> "But where the Commission has taken the entire map of the United States, and allocated various services, I would say that any of those people within the fringe areas are entitled to a service." [Emphasis supplied.]

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[19] Transcript, p. 157, February 1956.

[20] Transcript, p. 63, March 1957. Chairman Doerfer expressed a similar view in a dissent 3 years ago (p. 2 of dissenting statement of Commissioner Doerfer, report and order, docket 11532, June 25, 1956): "It is inconceivable that the present or future Commission will take any action which would disenfranchise thousands of people now receiving service in the fringe area of a present VHF operation without such assurance (that UHF receiving and transmitting equipment develops a quality of performance equal to that of VHF)." The supposed condition that the U and V equipments attain equality is a clue to a misunderstanding of the facts governing not simply the technical disparity between V and U but a failure to realize that there are already disparities between the VHF channels 2 and 7, and even greater disparity between channels 2 and 13.

As the Commission's Chief Engineer Allen testified (transcript, p. 578, February 1957) as to the difference, "but it is a matter of degree. In rough terrain, the V's do not do a very good job of coverage, in West Virginia, Pittsburgh, places where you have lots of hills" and that (p. 577) this inescapable problem also exists and has been met in AM broadcasting, as Mr. Allen testifies, "in the AM band there is a degradation from the lower frequencies to the upper frequencies. So that the stations in the lower end of an AM band can at certain times cover three or four times the area than in the other band. So you don't have a comparability of facilities in the AM band with frequencies."

[21] Transcript, p. 436, February 1956.

[22] Transcript, p. 336, February 1956.

Senator Potter propounded the question [23] of what would happen where deintermixture was effected—would there be more or fewer people receiving television. Chairman Doerfer's ready answer was—

> that means the people in metropolitan areas will have 3 services, people in in rural (areas) services will have 1 or no services, whereas they have 2 today. The rural people are the victims of this deintermixture. I say contrary to the plan, and the only standard which the Congress has set in the FCC Act the first obligation is to provide a service for all of the people, and the second is to make an actual distribution in the field. There is no provision in the statute at all to provide a *competitive situation or to equalize competition in the metropolitan areas.* [Emphasis supplied.]

To add further to the paradox, but not to its solution, the Chairman democratically asserts that—[24]

> a farmer 50 miles from Madison is just as important as John Jones in New York City.

then rhetorically inquires: [24]

> Why should John Jones in New York have 7 services and farmer Brown 50 miles from Madison (Wis.) no service—

seemingly to ignore the byproducts of the competitive system the services of which depend on incentive to private capital. This capital, despite the Government allocations, determines the availability of the station to which farmer Brown may or may not be able to listen.

Early in the inquiry, when queried on deintermixture, (then) Commissioner Doerfer opined that [25]—

> If anything is required, it would require some bold action. But whatever it is it requires a *conformance with the policy of this Congress.* It is manifestly unfair to deprive rural people of a service at the expense of the urban dwellers. That is our real problem today.

to which Chairman McConnaughey pronounced a benevolent amen—

> That is exactly right. That is the reason we put these V's in there.

The presumptive conclusion being that without the V's [26]—

> a substantial number of people may be forever without service unless they get it through community antenna systems or perhaps boosters or satellites.

In the absence of a solution to the VHF–UHF dilemma, based on the tenor of this testimony, the answer would seem to be to stretch VHF to the limit and, with an absence of conscience, let those who have not remain so. That such cavalier treatment of the problem would leave a far worse situation than the give-and-take solution arrived at by recourse to deintermixture is hardly arguable. The condition of the rural communities having a taste of fringe signals is largely a concomitant of the sixth report solutions having been arrived at by compromise. This compromise came about, it would appear, because the Commission concluded that a redistribution of and a conversion of VHF to UHF of the 108 prefreeze stations would not be countenanced even though technically it was within the law for the Commission to make such alterations if it deemed them to be in the public interest.

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[23] Transcript, p. 38, vol. 1, 1957.
[24] Transcript, p. 338, February 1956.
[25] Transcript, p. 34, January 1956.
[26] Transcript, p. 333, February 1956.

It was by surrender to this compulsion that the allocation plan of the sixth report became a compromise instrument limited by intermixture. By this token it is hardly accurate to say, in the words of Chairman Doerfer,[27] that—

> The sixth report and order was based on the premise that there must be intermixture to get the full utilization of the spectrum.

On the general proposition of succumbing to the allure of VHF for its superficial attractiveness, Commissioner Hennock had this to say in her comments in the sixth report and order: [28]

> The primary aim of this allocations proceeding must be the maximum utilization of all television channels. Certainly a system comprising only a few hundred VHF stations, each with the greatest possible coverage, would be most efficient from the point of view of those individual stations. This would not, however, even approximate a nationwide system and it would be most unfortunate if the medium were to develop in such a manner, depriving scores of cities of their sole opportunity for local self expression in television.

GENERAL OBSERVATIONS

Despite this confidence in the Commission's will and its freedom to act, up to the spring of 1957, at least, there had been no instance where a VHF station, or even an unused VHF channel, has been moved or changed to a UHF channel in the interest of a nationwide television plan. This statement also applies to the 108 prefreeze stations, not one of which was moved, changed to UHF, or deleted in the interest of even such a sweeping consideration of the public interest as that which prompted the promulgation of the sixth report and order. These one-way precedents have not gone unnoticed by the broadcast interests themselves.

In the summer of 1955, for the first time, an unclaimed noncommercial educational VHF channel, 3, in College Station, Tex., was replaced by a UHF assignment, channel 48. The VHF channel thus released was thereby made available in the same area for commercial use. No commercial VHF interest would but welcome this move. This was a painless decision safe from repercussion.

An interesting case is that of Lincoln, Nebr. There were two commercial stations in operation, on channels 10 and 12 during the period May 1953 to March 1954. The owners of channel 12 bought out [29] channel 10. The buyer then offered the physical facilities of channel 12 to the University of Nebraska for a nominal sum.[30] The table of assignments gives to Lincoln channels 10, 12, 18, and 24. UHF channel 24 is the educational assignment prescribed in the table. The university went on the air on channel 12 with commercial status. It applied for noncommercial status. [31] This led to a notice of proposed rulemaking. Subsequently, the application was granted by the Commission. The basis for the Commission's action is stated to be that this notice was a way of ascertaining whether a demand existed for a second commercial outlet in Lincoln. Since none appeared, the Com-

[27] Transcript, p. 156, February 1956.
[28] Hennock, dissent in part, concurrence in part, sixth report and order, p. 204.
[29] Purportedly a "distress sale" of channel 10 for around $300,000.
[30] The nominal sum of the proffer to the University of Nebraska was $100,000.
[31] Went on the air November 1, 1954. Notice of proposed rulemaking to change status issued July 16, 1956. Action in the affirmative effective November 7, 1956. Docket No. 11780, October 5, 1956.

mission's decision was that public interest would be served by granting the petition.

One must measure this decision in terms of its effect in delineating the Commission's determination to make UHF work, in terms of the long-range wisdom rather than immediate expediency, and by the fact that there is left no opportunity for or future threat of VHF competition to the sole remaining commercial VHF station. One must examine carefully the basis for this decision. It does not appear to have been influenced by deintermixture considerations. It would seem to fall into the category of a case-by-case procedure independent of any broad national policy. If the Commission's action was based on the conclusion that the market was only large enough to support one commercial VHF station at the time, then one wonders if this same criterion will be applied generally, cutting back the number of VHF assignments to fit the immediate economic capacity of other areas. Such a policy would be contrary to the long-range objectives—the very basis—of the sixth report and order.

The fact, stated in the report and order, that there were no comments opposing the proposed amendment does not relieve the Commission of its responsibility to preserve the principles which must be followed to protect the public interest as a whole. Whatever the motives, future opportunity for VHF competition with the remaining commercial station was arbitrarily removed. Here it would appear to have been prudent to resist commercial pressure.

Commissioner Hyde's testimony in the Television Inquiry is to the point. In discussing the circumstance of 7 VHF stations in New York City, where conformity with the priorities of the sixth report would have required some VHF dislocation, he stated:

> If it were not for the fact that these stations were constructed, the investments made, the public accustomed to listening to them, business enterprise based on these, I am quite sure the Commission would have made a better distribution of those facilities.

A corresponding concern for capital investment in the UHF field is conspicuously lacking. The failure of a UHF facility is accepted as merely an incident of business. The argument seems to be that since this is an economic phenomenon, it is outside the Commission's sphere of consideration.

The Commission's hands-off attitude toward the prefreeze stations which, because of their investments, were left undisturbed even at the expense of compromising the underlying ideal of the sixth report and order, stands in paradoxical contrast with its passive attitude toward the spectacle of UHF station failures increasing by the day. Here, too, high capital investments are at stake, and in fact the long-range future of television in this country.

In terms of the Communications Act one may ask if in this instance public convenience, interest, or necessity should not have obliged the Commission to take prompt steps to arrest the epidemic, particularly since it holds the principal responsibility for the course of events.

In the testimony at the Television Inquiry, an explanation given [32] is not without merit:

> An allocation problem exists today, therefore, principally because, as hindsight has proved, a basic mistake has been made in the nationwide pattern of

[32] W. B. Lodge, Television Inquiry, transcript, pp. 1782–1783.

television assignments. That mistake is the intermixture of UHF and VHF channel assignments in the same or overlapping television markets. While the mistake is clearer now than when the sixth report was issued, and while, as of that time, it could not be said the Commission was wholly unreasonable in its hopes and expectations, I must point out that CBS, as well as others in the industry, consistently warned against intermixture throughout the formative period of our national television system.

Throughout the hearings public interest has been given as a vital index and criterion. It will be enlightening to examine the record of the Television Inquiry to see to what extent the public really is consulted or knows that a crisis is in the making. In a colloquy too disjointed to be quoted in full, concerning an all-UHF service, Senator Wofford asked:

Senator WOFFORD. Now let me ask you just one further question, sir: Has the Commission taken into consideration fully the interests of the public in this matter?

Mr. MCCONNAUGHEY. I think that has been the principal thing that the Commission has done, is to take into consideration the interest of the public. That has been the primary thing they have done.

Senator WOFFORD. Have you made any survey or has any survey been attempted to determine the public's view? You see, after all, they have a terrific investment in these television sets.

Mr. MCCONNAUGHEY. You mean the public's view? What do you mean?

Senator WOFFORD. With reference to the public's ideas and views on the changes that you all contemplate—you realize that they have a terrific investment in television sets?

Mr. MCCONNAUGHEY. Yes; I see what you are talking about.

* * * * * * *

Senator WOFFORD. That is the very point I was getting at, or attempting to. I will go back to my original question: Has any poll been made of the public, or any attempt, as to their desires in the matter?

Mr. MCCONNAUGHEY. No, Senator Wofford. *There is no poll been taken of the public. It is a strange thing.* [Emphasis supplied.]

We go through all these investigations up here on the Hill, all these appearances, and I pointed out before, we are interested in the public, and the public hasn't screamed. It is the UHF operator who is unhappy, or somebody unhappy about a network operation, or monopoly, or this, that, and the other thing.

In the interim report to which reference has already been made, two Senators [33] comment vigorously on a significant lack in these hearings:

Not one witness qualified to present the grassroots opinion of the public appeared before the Committee during the extensive hearings. [Emphasis supplied.]

The same two Senators observed that: [34]

In our opinion, the hearings record has failed to produce an allocation plan superior to or as good as the existing one. We all believe the current allocation plan should be maintained and all possible steps should be taken to promote the growth of UHF stations in intermixed markets.

The fact that the hearings failed to produce a superior allocations plan is a literal truth. Although many ideas of value were made of record, the ultimate plan must be inspired by and come from the mind of the Commission and not from the lips of interested deponents. An allocation plan must be the result of serious study and not be an ac-

[33] Views of Senator Thomas A. Wofford on Television Inquiry by the U. S. Senate Interstate and Foreign Commerce Committee, July 11, 1956, in which he is joined by Senator Price Daniel. Television Inquiry, Allocations Phase, Interim Report, p. 18, U. S. Government Printing Office, 1956.

[34] Television Inquiry, Allocation Phase, Interim Report, p. 20 (1956).

cumulation of spot ideas cobbled together in haste. More hearings can lead to no further progress in this respect. Synthesis of the facts which originate through hearings, petitions, and responses to the Commission notices, and the search for complementary essential information including analyses, is a job for the Commission which it cannot delegate to interested parties.

There has understandably been a feeling of apprehension on the part of many over any frenetic tendency to jettison the existing controls without first determining what is clearly a better substitute and having it ready. This is what NBC had in mind in its response to the Commission in the VHF–UHF channel allocation proposed rulemaking when it argued with respect to the sixth report and order:

> We urge that the long distillate of wisdom and sound principle it contains not be abandoned for a modified plan until the factors which make up such a plan are known, fixed, and clearly recognizable as in the public interest.[35]

The great pity is that the Commission itself has not pursued the problem on the level of a serious research, going out for talent and help where necessary. This body seems to be so overburdened with routine responsibilities and with locally acute problems that it has neither sufficient talent nor adequate means for such an important crisis activity as this. A reallocations study of the magnitude and scope required deserves more than a part-time, sporadic attack. As an obligation to the public, such a study warrants recourse to the best talent the Nation can offer.

How much could have been achieved in the last 4 years if the energy which has gone into two hearings by the Senate Interstate and Foreign Commerce Committee and into the bewildered hitching and hauling of a divided Commission could have been applied to a systematic examination of the allocations problem by a professional study group, properly manned and administered. What stature this would have given the Commission, what a contribution to the public interest. Let us hope it is not too late—that the door will not be closed to such a study now. To sidestep this immediate need for analysis is to encourage continuing crises by perpetuating the existing lack of affirmative Commission action.

It seems to be the practice, unfortunately, to treat this crucial task of allocations planning as mainly technological in nature. It is, instead, more accurately described in the words of a witness[36] at the Television Inquiry:

> After all, the (re)allocations problem now is primarily an economic one, secondarily a political one, and only in a limited sense an engineering one.

A sagacious observation was made by a singularly competent group of scientists and engineers comprising an Advisory Committee on Color Television. In a report[37] to the Senate Committee on Interstate and Foreign Commerce in 1950, this committee observed:

> This (Advisory) Committee is concerned primarily with the technical factors underlying a color-television service, and is not in a position to recommend specific changes in the VHF allocation. Moreover, the committee wishes to emphasize that the transfer of spectrum facilities from one service to another

[35] NBC response in docket 11532, p. 22, November 10, 1955.
[36] W. B. Lodge, CBS vice president, transcript, p. 1780, March 27, 1956.
[37] The Present Status of Color Television, pp. 47–48. Statement by the Senate Advisory Committee on color television, accompanying letter to the Hon. Edwin C. Johnson, chairman, February 2, 1950.

involves judgments which transcend technical factors. Such judgments must be based on sound technical knowledge, but they involve also the far more difficult determination of the needs of the various services, their established positions and investments, and the quantity and quality of the service they render to the public and the national security. No technical group can properly undertake judgments of the latter type. They must be made on a high administrative level, by a group of judicial merit, having knowledge of, and properly responsible to, the needs of all the radio services. "It is the considered opinion of this committee that the distribution of the VHF and UHF regions of the spectrum to various services has not been carried out in the past on the basis just suggested. This failure has stemmed from the fact that no Government agency has been given the authority or responsibility to make a judicial review of the use of the entire portion of the spectrum involved.

These observations should have applied in the evolution of the sixth report and order which issued 2 years later—they apply equally today.

There is much of the technology the industry can and will eagerly contribute, but it is a monstrous fallacy to believe that this is all that is required. Some truly professional insight by acknowledged authorities in other fields than the technological would undoubtedly have saved the country countless millions and the public much denial of service, had such help been solicited at least by the time the UHF difficulty became apparent. Had they been called in earlier, they might have saved the Commission from indulging in oversimplification, too much plane geometry, too much illusory arithmetic, and failure to meet decisively the VHF–UHF reallocation issue before April 1952, when the problem was vastly simpler.

The Commission Chairman, in his Television Inquiry testimony, recognized all was not well with the sixth report:

It was assumed that the technical and economic handicaps would be overcome eventually, and therefore, the Commission intermixed VHF and UHF assignments in various cities and areas. Up to the present, this basic assumption has not proved out.

More recently in an address,[38] he said:

Despite the evident growth of television, the development of a nationwide competitive service has not been realized to the extent contemplated by the Communications Act of 1934, as amended, and the sixth report and order of the Commission.

In the same address, the chairman went on to say:

The Commission in my judgment should alter its present policies to permit the development and expansion of television in accord with natural economic laws insofar as this is possible within the terms of the Communications Act requiring equitable distribution of television facilities to States and Communities.[39]

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[38] National Association of Radio and Television Broadcasters, April 17, 1956.

[39] It would appear from this statement that the need for economic evaluation as a part of allocations planning is accepted. However, the chairman's skepticism over the abilities of economists as a species, as expressed in his recent Random Thoughts on Current Problems at the meeting of the Radio and Television Executive Society (New York, September 12, 1956), leaves one puzzled. His telling generality—"There has been considerable talk that this should be in addition to a research project—one that contains economic and sociological investigations. When we get into the subject of economics and sociological concepts I become a bit apprehensive. Economics is indeed one of the most inexact of all sciences. Economists are among the most uncertain of prophets. Economists do perfor[illegible]ny[illegible] services and their forecasts are helpful. The imperfections of their forecasts do not argue that they should be disregarded. However, in a field so vital and so rapidly changing as the broadcasting industry I hesitate to rely on long or short term forecasts made by economists and their statistical colleagues" leaves one securely in the dark with respect to his version of how to secure the advantages of an expansion of television in accordance with "natural, economic laws."

In appraising economists one must not overlook the fact that there are competent and weak members to be found in any profession. In making an appraisal of this needed resource, one must not overlook the miscalculations of the engineers and the attorneys in and out of the Commission as reflected in the sixth report. The task the Commission has not faced but must face is an inordinately difficult one, the solution to which is not to be found by engineers alone.

RECENT COMMISSION ACTIONS

Prior to the beginnings to the Senate Television Inquiry in January 1956, the Commission took two official steps bearing on the current television problem. One was the activation of the special staff of the network study committee [40] to proceed with the work broadly outlined in the order of the Commission issued last fall for the purpose of studying radio and television broadcasting. This study, according to Chairman McConnaughey,[41] is for the long-range guidance of the Commission with respect to networks and not to develop answers to the UHF problem.

The second step was to issue a notice of proposed rulemaking [42] on VHF–UHF channel allocations in the fall of 1955 for the purpose of revising the current allocation plan. The priority objectives set forth are substantially those of the sixth report, reexpressed as:

(*a*) At least one service to all areas.
(*b*) At least one station in the largest possible number of communities.
(*c*) Multiple services in as many communities as possible to provide program choice and to facilitate competition.

The gist of the problem posed in the notice is the failure of television to grow in accordance with the ideals of that report:

* * * it is evident from recent experience that a nationwide competitive television service has not been realized to the extent contemplated at the time the Commission issued its sixth report and order. Many of the smaller communities are without a first local outlet and the expansion of multiple, competing services in the larger economic and population centers of the country is lagging.

The decisions underlying the assignment plan of the sixth report are here questioned.

The Commission ostensibly expected the proposed rulemaking proceedings to yield material which would enable it to make definitive findings and to come out with a definitive plan: [43]

The familiar difficulties presently facing television broadcasters raise questions with respect to basic elements of the standards and principles established by the Commission in the sixth report and order * * *. The Commission is therefore convinced that any approach to their solution must take cognizance of the overall, national scope of the problem.

The Commission recognizes that some of the present hindrances to the further expansion of television service in many communities are due to causes which lie beyond its control. To an appreciable extent these problems are basically economic and arise out of the limits beyond which it is not possible, at the present stage of the development of the television art, to obtain sufficient economic support to meet the high costs of construction, programing and operations of television stations. On other aspects of the problem, relating for example to the improvement of transmitting and receiving equipment, the industry itself can make valuable contributions. At the same time, the Commission wishes to insure that to the extent that any of the present difficulties may be alleviated by possible revision of the present allocation system, such possibilities will be fully explored.

* * * * * * *

This proceeding will, we believe, facilitate an orderly review of the proposals and will afford the Commission a sound basis on which it may compare the

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[40] Network study committee order No. 1, FCC 55M–978, 25612, adopted November 21, 1955.
[41] Television Inquiry, transcript, p. 353.
[42] Docket 11532: Amendment of pt. 3 of the Commission's Rules and Regulations Governing Television Broadcast Stations, November 12, 1955.
[43] Ibid.

advantages and disadvantages of the proposals, both among themselves and with respect to the present plan, and evaluate them in terms of the opportunities they may provide for fuller realization of a nationwide competitive system.

* * * * * * *

In this initial stage, the Commission believes it would not be desirable to consider proposals whose scope is limited to action affecting only individual communities or a limited area. * * * At a later date, when the Commission has determined the general nature of any revisions to the present allocation scheme which it would be desirable to adopt, it will then be in a better position to consider comments relating to specific channel assignments proposed for individual communities.

One concludes that once again the main considerations are deemed technical. There appears to be no recognition of other underlying, dominant causes to which study and analysis might be applied with equal profit.

This notice resulted in a vast amount of productive effort on the part of the broadcasters. Some 200 communications and some 350 reply communications were turned into the Commission. There is no evidence that these communications enabled the Commission to determine the "general nature of the revisions" to be made, for a new notice soon emerged.

The Senate committee, during the Television Inquiry proceedings, questioned the Commission on this notice, asking how long it would take to study the replies. The answers are illuminating,[44] beginning with Chairman McConnaughey:

If I guessed, it would be just as wild as anything that ever could happen. I would hope, because we are putting our staff, as many of them as we can, on this thing immediately, we consider it top priority, I hope that within 3 or 4 months we could come to some conclusion on it.

Senator PASTORE. So we would definitely know, say, within 6 months anyway just what the ultimate decision is going to be on the deintermixture and what have you in VHF stations here and there, and all that sore of thing?

Mr. MCCONNAUGHEY. I certainly——

Senator PASTORE. It would resolve this whole problem and would have a definite answer whether everybody likes it or not within a period of 6 months?

Mr. MCCONNAUGHEY. Yes, sir. I am speaking personally, and I will say yes, sir.

Commissioner Webster felt that it would be somewhat longer.

It was stated that seven people in addition to heads of departments were working on the collation of the comments. Chairman McConnaughey was queried on the wisdom of moving ahead with the "digesting" of the replies and responded:

I was surprised last week, Mr. Chairman (Magnuson), to find out how rapidly these people have been—how much time they have been spending, how rapidly they are able to digest them. They indicated to me that they thought within another week they expect to have practically all of them digested.

Commissioner Webster, not satisfied with his Chairman's response, gave a more realistic view of the problem. His testimony is paraphrased:

I wouldn't want to let the impression get by on the length of time it is going to take us to come to a final decision. When these comments are digested and they are laid before the Commission, they will not be digested overnight. It is going to take some time and I don't know how long. But we have a lot of other things to do, if the work of the Commission is to go forward. After digestion

[44] February 7, 1956.

there must be a meeting to decide a course of action. That does not close the matter. We now have to work out what we think would be a practical set of changes to the rules. Now we are just starting, because we have to put those proposed rules out for rule making, for comments and reply comments. We may end up with a public hearing so that the people can come in. All we have at the present time is self-serving statements. We have no way of testing them unless we get the person who made the comment on the stand. I don't want to leave anything misunderstood here that this thing is going to wind up in a month or a few days.

After this colloquy, Chairman McConnaughey was again asked how long it would be before a set of rules could be issued on recommended changes in the allocations, and he replied:

I would have not the slightest idea.

Although the extent of the analysis of the 550 comments on the notice of November 12, 1955, is not known, the Commission seems to have found the responses inadequate. It determined to initiate yet another proceeding, in many respects resurveying old plots and causing a vast amount of additional effort, largely duplicatory.

As of June 25, 1956, the Commission issued a new report and order [45] on the subject of VHF-UHF reallocation.

In putting the November proposed rulemaking proceedings to rest, the June report concludes laconically that:

This proceeding has served the purpose for which it was instituted, i. e., determination of the basic lines on which revisions of the existing television allocation plan should be considered. It can therefore now be terminated.

It would have been helpful to have had at least the basic lines divulged.

This statement must be reconciled with the intent of the November notice it terminated, which was to arrive at a solution of the allocations problem itself, for the November notice read.

In these circumstances, the Commission believes that the public interest would be served by the institution of a general rulemaking proceeding to consider possible overall solutions to the (channel allocations) problem on a broad, nationwide basis.

The June 1956 notice goes on to state what problems the Commission now believes have arisen, all extant at the time of the Notice of the previous November:

Serious problems have arisen, however, which are impeding the continued expansion of the Nation's television services. There is general agreement on the sources of these problems. In brief they are—

(*a*) The limitation to 12 channels in the VHF band; and

(*b*) Difficulties which have been experienced in achieving fuller utilization of the 70 UHF channels:

(1) The large numbers of VHF-only receivers in use and the high proportion of VHF-only receivers which continue to be manufactured.

(2) Performance deficiencies of UHF transmitting and receiving equipment during the initial 4-year period of the utilization of UHF for television broadcasting.

(3) The consequent preference of program and revenue sources for VHF outlets.

These sources, insofar as they deal with UHF, are secondary rather than primary. Why not go to the point, to the Commission's own decision to intermix and to leave the prefreeze stations untouched,

[45] Docket 11532: FCC 56–587, 33117, Amendment of Part 3 of the Commission's Rules and Regulations Governing Television Broadcasting Stations.

which gave rise to the unhealthy conditions described in the June notice. To make an error of judgment is human. To acknowledge it can be good statesmanship and otherwise productive.

The Commission's conclusion was, evidently, that none of the numerous suggestions, proposals and petitions was adequate nor, apparently, were any of their combinations satisfactory.

The report of last June observed that:

> It has been apparent that the construction and successful operation of a larger number of stations has been impeded in numerous markets by the absence of a greater number of more nearly competitive facilities, despite the need for and the capacity of such markets to support of television outlets.

It is assumed that this oblique language implies a shortage of program sources of the network type. This, then, is related to the opportunity for such facilities the table of assignments reasonably permits. It is safe to say that the table of the sixth report, for reasons of intermixture, was inadequate for the task.

Some of the comments from the broadcasting industry, as the Commission points out, were wishfully predicated on the hope for more channels from the VHF band.

The Commission itself was not without its bias. In the fall of 1955, Commissioner Lee [46] proposed, virtually, that the Commission give up on UHF, relax the rules, expand VHF and get more spectrum space in that band.[47] A few excerpts from this address make clear his point:

> * * * in disposing of the intermixture problem the Commission relied on the fact that all channel receivers would be manufactured. This of course has not happened.
>
> * * * * * * *
>
> I have reached the conclusion that the VHF portion of the spectrum is a superior service * * *.

After listing reasons for this conclusion, best left to the paper, Commissioner Lee continues:

> Having made this appraisal, I conclude that the most logical approach is to secure the greatest number of allocations in the VHF portion of the spectrum. That of course is more easily said than done.
>
> * * * * * * *
>
> I trust that the Commission will consider action leading to conferences with the Department of Defense, other appropriate Government agencies and private industry with the view of reallocating spectrum space between 108 and 890 mcs. whereby an equitable exchange of UHF channels for VHF television channels can benefit all concerned.

These hopes vanished with the report of the special interdepartmental study made under the auspices of the Office of Defense Mobilization.[48] An additional threat now looms by the hint of the Commission that the coming needs for other (new) services will take further toll of the VHF channels—presumably from the low television band.

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[46] Address by Commissioner Lee, NARTB Regional Conference, Chicago, September 20, 1955. See also testimony, Television Inquiry, transcript, p. 28.

[47] If all other users could be moved elsewhere, this entire band would yield but 45 6-mc. channels. Its use includes services involving international agreements of mutual interest.

[48] Federal Communications Commission, Public Notice 30856, April 13, 1956. The view held by some is that this decision, had it yielded several more VHF channels, would have worked to the detriment of television in the long run by extending the VHF areas and taking care of immediate demands to the further detriment of UHF and the long-range ideals of the sixth report.

Virtually since the issuance of the sixth report and order in the spring of 1952, the Commission has witnessed the insidious effects of intermixture. These effects have mounted steadily with the passage of time. Pressure finally brought the Commission to consider a group of petitions for deintermixture. Hearings were initiated in the spring of 1955. All petitions were denied in November 1955. What is more, a VHF dropin at Vail Mills was approved, which threatened the Albany-Schenectady-Troy UHF region. The Commission's right to deny deintermixture and to execute the Vail Mills VHF intrusion was upheld by the courts. Thus 3½ years and 1 congressional investigation, the Potter hearings, showed no amelioration of a condition which had burgeoned geometrically.

The television inquiry early in 1956 presumably influenced the Commission to show action on deintermixture once again.

The Commission now finds itself in the dilemma of working toward deintermixture without having faced up to the problem in its entirety. Its first step toward deintermixture, as yet a gesture, is embraced in the 13 notices of proposed rulemaking[49] which issued contemporaneously with the report and order of June 25, 1956.

The Vail Mills case has become celebrated and many have been its repercussions. The Albany-Troy-Schenectady area was assigned 7 UHF and 1 VHF outlet by the sixth report. The Hudson Valley Broadcasting Co. had recently proposed to the Commission the establishment of channel 10 at Vail Mills. The petition was granted. The Vail Mills drop-in, as such extrasixth report assignments are termed, was approved November 1955 by a 4–3 vote at the same time all other similar requests were denied, pending the rulemaking deintermixture determination.

The Greylock Broadcasting Co., with a UHF station nearby, WMGT–TV, channel 19, petitioned the court of appeals for a stay of the Commission's order granting channel 10 to Vail Mills (through the interest of the Hudson Valley Broadcasting Co., WCDA–TV, channel 41) alleging economic injury inimical to the public interest. The stay was granted December 9, 1955.

The Hudson Valley Co. petitioned to have the stay vacated.[50] The petition was denied February 14, 1956, pending the outcome of deintermixture proceedings, presumably those of docket 11532 initiated November 10, 1955.

The Commission's position with respect to the importance of the dropin, at this point in its vacillation, is quoted in the Greylock decision on this petition,

> Refusing to make use of this valuable VHF frequency as contemplated by the present rules would, we believe, be a waste of valuable spectrum space for which active demand is indicated. Channel 10 in Vail Mills will represent a second television service to an appreciable percentage of families residing in the area as well as a first service to a significant number of families.

Commissioner Hyde's dissent in the Commission's deintermixture decisions of November 1955, a veritable polemic, has already been

[49] Notice of proposed rulemaking, dockets 11747–11759, inclusive. For both the report and rulemaking, see also FCC Public Notice 33663, June 26, 1956.

[50] As intervenors in *Greylock Broadcasting Co.* v. *U. S.*, 231 F. 2d 748 (February 14, 1956).

quoted (p. 40 ff). Commissioner Bartley was also vigorous, in fact sardonically epigrammatic, in his statement: [51]

With respect to the Vail Mills "slug-in," I cannot agree with the conclusion reached by the majority on the merits of the petition. In my judgment, the result will be the death knell of multiple UHF services in the area; consequently, less instead of more service to the public.

The American Broadcasting Co. made an interesting observation on this hot potato: [52]

A year ago there were 2 UHF stations and 1 VHF station on the air. One of the UHF's ceased operation. They have testified publicly, if they could be assured that the channel 10 dropin, of which the FCC recently did in Vail Mills, which is in effect the Albany area, if they were sure that wouldn't happen, and, therefore, instead of UHF having to fight multiple VHF competition, if they could receive assurance that the only VHF in the area would be the GE station, channel 6, they would go back on the air. They would take their chances. I am happy to report, within the month, ABC has negotiated an affiliation with this station (WTRI), which will go back on the air, I think perhaps the first UHF to go back on the air, July 1.

It is pertinent in any study to follow the court [53] on this melee:

Hudson Valley and the Commission say that Greylock's choice in the presence of the allocation is merely a matter of business judgment. But this sort of gun-to-the-head choice is not what is customarily known as the exercise of business judgment.

It also observed:

If this court were to declare now that a new VHF station, which would eliminate UHF stations presently in an area, is in the public interest, that declaration would conclude the whole controversy now being so exhaustively explored by the Commission. We cannot do that on the evidence before us; indeed it is not our function to declare initially what is in the ultimate public interest. Our function goes to the preservation of an existing situation pendente lite where irreparable damage would ensue from an immediate and possibly temporary change.

and concluded:

We find specifically that the present allocation of channel 10 to the Vail Mills area pending the outcome of the deintermixture proceeding would impose upon Greylock losses which it could not recover, and that this threat of loss is not offset by any vantage to the public interest.
The motion to reconsider and vacate our stay order will be denied.

The dissent, assuming arbitrarily the infallibility of Commission judgment, held that—

"Interference by the courts is not conducive to the development of habits of responsibility in administrative agencies." Such thinking should govern the instant case. Here, the Commission out of its own expertise found that the public interest required that additional VHF television broadcasting on available channel 10 be brought to the affected area at the earliest possible moment.

Further proceedings involving also WTRI–TV, channel 35, Albany, before the court resulted in a decision contradictory to the earlier one. Here the order creating the Vail Mills VHF channel was adjudged within the Commission's rights. The stay requested by the UHF interests was now denied on the technical grounds that the Commission had not departed from its avowed legally approved rules. In this instance, the UHF station operating petitioners were complaining of the allocation of a VHF channel (channel 10) to a

[51] Record, Television Inquiry, p. 274.
[52] Television Inquiry, transcript, pp. 1752–1753.
[53] *Greylock Broadcasting Co.* v. *U. S.*, 231 F. 2d 748, 750 (1956).

community in their area. It is helpful to examine the view taken by the Court, presupposing expertise (considered judgment) on the part of the Commission, thus bringing the problem down to the bare issues of law: [54]

> In its report and order the Commission recited that the proposed assignment was consistent with its rules and principles of its present television allocations, and that it would not be justified in withholding action which would bring additional service to a significant number of people. It said channel 10 at Vail Mills would represent a second service to an appreciable percentage of the families in the area and a first service to a significant number of families. Since this was a rulemaking and not an adjudicatory proceeding, the Commission was required to make merely "a concise general statement of their (i. e., the rules') basis and purpose."
>
> The grant of a license on the newly assigned channel is not before us, no application for a license having even been filed as yet, so far as this record shows. The matter before us is solely a rulemaking.

Nevertheless, with respect to the last paragraph it may be assumed that there was a commercial interest in the establishment of this outlet. Greylock petitioned the Supreme Court for writ of certiorari. The petition was denied December 3, 1956.

In the meantime the Commission, presumably under pressure of the television inquiry, had set up a second proposed rulemaking procedure [55] on local deintermixture, June 25, 1956, which again contemplated deintermixing Elmira, N. Y., Evansville, Ind., Fresno, Calif., Hartford, Conn., Madison, Wis., Peoria, Ill., Springfield, Mo., and the Albany-Schenectady-Troy complex, all of which was, as we have seen, old hat.

Here indeed is evidence of vacillation, and lack of a determined, consistent policy, adding further to the ambient confusion.

By March 1957 the FCC ordered 13 cities deintermixed. In six of the cities single VHF channels were ordered switched to specific UHF channels. Three of these switches involved operating VHF stations. In some areas VHF stations were added.

By June of 1957 once again the Commission had altered course. It now instituted yet another rulemaking proceeding proposing VHF status for the Albany-Schenectady-Troy area. This time channel 10 was not to be deleted from Vail Mills. WRGB channel 6 was not to be converted to a UHF facility. As part of the readjustment, channel 13 was to be added to the area. This channel was to be taken from Utica station WKTV, which was to receive channel 2 in return. By September of 1957, this imbroglio ended in a decision by the Commission confirming the new proposal. Channel 10 was back on location at Vail Mills.[56] Channel 6 remained in Schenectady.

In the last desperate hope of succor a group of UHF stations as petitioners complained that action by the Federal Communications

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[54] *Van Curler Broadcasting Corp.* v. *U. S.*, 236 F. 2d 727, 729 (July 1956).

[55] Docket 11751, June 26, 1956.

[56] WTEN, formerly WCDA. Vail Mills ownership includes Lowell J. Thomas, director and largest stockholder. See TV Fact Book No. 26.

Since this supporting brief was written, the court of appeals has upheld the FCC's right to shift channel 8 of Peoria, Ill., to Davenport, Iowa-Rock Island-Moline, Ill., as being in the public interest (that is, to deintermix Peoria). Other VHF stations which are under show cause orders to switch to UHF channels are operating channels 7 of Evansville, Ind., and 12 of Fresno, Calif., and now operating channel 2 of Springfield, Ill. Nonoccupied channel 9 was deleted from Elmira, N. Y. Excepting for Elmira, all these stations are litigating the issue. In addition there are before this court the Hartford, Conn., and the Madison, Wis., cases where the FCC refused to switch to UHF the VHF channels (channel 3 in both instances) and where the UHF stations have appealed. (See Broadcasting-Telecasting, p. 69, March 31, 1958.)

Commission threatened them individually by its granting of permits for VHF stations in their areas.[57] The petitioners sought an order staying the VHF grants in question. The group relied on a decision of the same Court granting the temporary stay in behalf of the Greylock Broadcasting Co.[58] A panel of the Court first heard the case. In this instance, instead of a drop-in as in Vail Mills, the VHF grants complained of were in the table of assignments of the sixth report. The grants had been delayed while the Commission decided which of several applicants for the same station should receive the grant.

The Court took the view that the Commission might have suspended the VHF proceedings by declaring a "freeze" but observed that,

> The Commission, however, had decided not to impose such a freeze. This is the sort of quasi-legislative policy decision which is virtually immune from attack in the courts.

After commenting on the weakness of the petitioner's case as advanced, the Court majority commented on the question of public interest and the Commission's ministerial authority and responsibility, leaving as one might expect the merits of the Commission's judgment moot—

> It is, after all, the public interest which must govern. The Commission, of course, has not found that injury to the business of UHF station operators would be in the public interest. But that is not the issue. The Commission, after considering petitioner's pleadings, has affirmatively found that the additional VHF service which intervenors will provide is required in the public interest. *If extinction of UHF stations results from the Commission's policy and actions, the responsibility must lie at the Commission's door.* [Emphasis supplied.]

The third judge of the panel, Bazelon, dissenting, said:

> This refusal frames the question on the merits of these appeals; namely, whether due process and commonsense require the Commission to consider deintermixture and other proposals as a means of saving UHF before leaving it to face certain destruction on the theretofore uncharted rocks of VHF competition.
>
> The question we found substantial enough to support the grant of a stay in Greylock was whether due process considerations required the Commission to pass upon proposed solutions in the rulemaking proceeding before *allocating* a VHF channel whose eventual operation would destroy Greylock's UHF operation. It seems to me that the authorizations in these cases to *actually operate* a VHF station presents an even sharper and more substantial question of due process.

Later all the cases were consolidated and heard en banc on the merits.[59] The Commission's stand is indicated by the Court:

> The Commission found that such action "would be tantamount to a freeze on authorizations for new television stations" and would not be in the public interest. It also found "that it would not be justified in withholding action, pursuant to our present allocation plan and rules, that would bring additional television service to a significant number of people."
>
> * * * * * * *
>
> The requests to intervene were denied by the Commission as untimely, and because the issue sought to be raised related to Commission rules of general applicability—i. e., the allocations table—rather than the comparative issues involved in the adjudicatory proceeding. The stays were denied by the Commission on the ground that it was not in the public interest to preclude the

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[57] *Coastal Bend Television Co.* v. *FCC*, 231 F. 2d 498 (February 1956). Coastal Bend protested Commission grant of VHF channel 6, Corpus Christi, Tex., December 9, 1955; Monona and Bartell of Madison, Wis., protested grant of VHF channel 3 to Radio Wisconsin, December 12, 1955. Premier and Ohio Valley and Mid-America protested grant of channel 7 to Evansville TV.

[58] Stay granted December 9, 1955; No. 12989. Opinion on reconsideration, 231 F. 2d 748.

[59] *Coastal Bend Television Co.* v. *FCC*, 231 F. 2d 686 (June 1956).

availability of additional television service pending an ultimate decision on deintermixture and because grants of the applications for VHF channels were consistent with the public interest determinations expressed in the existing rules and regulations.

The Court recognized that the hopes of the sixth report and order had in some cases been unfulfilled, although emphasis in the argument by the Commission seems to have been on the failure of industry and the inherent shortcomings of UHF. That the responsibility was in large part on the Commission was neither assumed nor made clear. It does not appear that the effect of the impasse and lack of Commission determination on the public interest was given appropriate emphasis. The decision stood clear of comment on the merits of the Commission's action, merely supporting that body's authority:

* * * we think that the Commission's decision to adhere to the 1952 allocation for the time being, as reflected in its refusal to institute a "freeze" on construction permits for VHF stations to prevent competition with existing UHF stations, is well within its statutory authority: its decision was based on its finding that the VHF stations would bring additional television service to a significant number of people. *True, there would be loss to the public if VHF competition should destroy existing UHF stations before the current rulemaking proceeding decides the ultimate fate of UHF television. But whether one factor should outweigh the other is precisely the sort of question which Congress, by employing the broad language of section 303, wished to commit to the discretion of an expert administrative agency, not the courts. It is for the Commission, not the courts, to pass on the wisdom of the channel allocation scheme.* [Emphasis supplied.]

Whatever the merits of the immediate arguments introduced by the Commission here, a void is left into which the long-range ideals of the Commission expressed by the priorities and the table of assignments fall, if not for economic reasons, for other minitserial.

On a subject with which the overall public interest is so much concerned, particularly as insurance for long-range benefits, and where VHF grants were approved irrespective of the UHF plight since the Commission felt it could not wait, one might well take to heart Mr. Justice Frankfurters' dubitante in the color litigation: [60]

Surely what constitutes the public interest on an issue like this is not one of those expert matters as to which courts should properly bow to the Commission's expertness. In any event, nothing was submitted to us on argument, nor do I find anything in the Commission's brief of 150 pages, which gives any hint as to the public interest that brooks no delay in getting color television even though the method by which it will get it is intrinsically undesirable, inevitably limits the possibilities of an improved system or, in any event, leads to potential great economic waste. The only basis for this haste is that the desired better method has not yet proved itself and in view of past failures there is no great assurance of early success. And so, since a system of color television, though with obvious disadvantages, is available, the requisite public interest which must control the Commission's authorization is established. I do not agree.

In conclusion, one might appropriately recall the pungent observation of the Court in the Pottsville case.[61]

It is always easy to conjure up extreme and even oppressive possibilities in the exertion of authority. But the courts are not charged with general guardianship against all potential mischief in the complicated tasks of government.

The lack of unity of resolution within the Commission is further illustrated by its response in the issuance of these June 1956 notices of

[60] *RCA et al.* v. *U. S. et al.*, 71 S. Ct. 806 (1951).
[61] 60 S. Ct. 437, 443 (1940).

proposed rulemaking (p. 76). In but two instances, one that of adding a drop-in VHF in Charleston, S. C., and the other the change of the unused educational VHF channel of Duluth-Superior to one of the existing unused UHF channels, was there unanimous agreement. In each of 4 of the proposals, Madison, Elmira, Albany to all-UHF for commercial outlets, and an extra VHF to Norfolk-Portsmouth-Newport News,[62] 3 Commissioners dissented. In each of 7 of the other instances, there were 2 dissents. In the proposal to move the VHF channel out of Hartford to Providence, leaving Hartford all UHF and making Providence essentially VHF, there were three dissents with a caveat by Commissioner Doerfer that if channel 3 were moved to Providence, channel 13 of New York City should go to Hartford, a practical proposal, bold in the context of past history.[63]

On the one hand, it is the Commission's view that [64]—

> It does not appear, however, that deintermixture at this stage would be practicable in a sufficient number of communities representing a sufficiently large segment of the total population to provide significantly enhanced opportunities for fuller utilization of the UHF channels on a nationwide basis.

This observation presumably is predicated on the difficulty and immediate inequities of dispossessing a VHF station, or moving it, or substituting a UHF facility. It can hardly be predicated on ultimate public good. On the other hand, the Commission appears to look favorably on what is inherently a far more difficult and drastic proposal,[65] perhaps inviting because it moves the issues to be met into the indefinite future:

> * * * to shift all television broadcasting in the United States, or in a substantial portion of the country, to the ultra-high frequency band.

There are references to the advantages of all UHF which must be scrutinized for the admixture of wishful thinking and perhaps the tincture of escapism:

> It may be expected that this would encourage the building of numerous additional stations which would bring a first local service to some communities and much needed additional services in others. These achievements would be aided by the fact that broadcasting in a single band would, after a suitable transition period, eliminate the crucial problem of receiver incompatibility. As compared with alternative solutions which have been considered, the use of the UHF band exclusively would raise the ceiling of the maximum number of television stations which could eventually be built and successfully operated.

And that—

> * * * a one-band system would permit more communities to have local service and would provide a larger number of multiple services to a greater portion of the population than would be possible with the combined use of the UHF and VHF bands.

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[62] With 2 VHF and 3 UHF channels already assigned and but 1 station on the air, a UHF.
[63] Commissioner Doerfer also proposed earlier, in a public address, that the 7 New York City VHF stations be changed to UHF. If it is capable of giving good service, said he, the city is the place for it.
[64] Par. 15, Report and Order, docket 11532, June 25, 1956.
[65] Three years ago, Commissioner Hennock stated: "The Commission has already prepared an all-UHF plan covering the Northeast, which clearly demonstrates the feasibility of providing nationwide television service in the UHF band. The nationwide UHF allocation plan should be accompanied by an economic analysis of its relation to varying population densities, and its adaptation to the differing economic circumstances of different areas. Only on the basis of such full factual data is it possible to arrive at valid conclusions concerning questions of rural service." Record, Television Inquiry, p. 293, April 29, 1955.

This new position contrasts interestingly with the view of the Commission in the summer of 1955 [66] in which it nicely shifted that which by statute was its responsibility onto the shoulders of the Congress.

The addition of substantial new VHF space or the movement of all television stations to the UHF would involve such tremendous dislocation of existing operations and have such a severe impact on millions of viewers that such action should be considered as a possible alternative only if Congress itself were to determine that the long-run benefits to the public required adoption of such drastic remedies.

The optimistic statements of June 25, 1956, must be examined carefully. It is supposed that what is meant by a "one band system" is a system in which the channels succeed one another with no gap, so that tuning from one channel to another can be continuous. This is a detail of convenience, good to have if it can be got at not too great a cost. Here at best, the problem is one of low priority.

There is, after all, no unique distinction between the VHF and UHF bands. These are arbitrary terms of convenience for the engineer in discussing regions of the radio spectrum. Whatever electrical differences there are as between discreet frequencies vary uniformly as one moves from the low end of the VHF band continuously to the high end of the UHF band. There are no jumps or discontinuities.[67]

Whatever the advantages ascribed to the VHF band over UHF, as to coverage and relative freedom of holes or white areas in rough terrain or city areas, these arguments apply with equal force in suggesting that the region below the VHF band would be even more attractive to television.

The number of octaves covered by the band gives some measure of the disparity in the efficiency of transmission between the lowest and the highest channels. There is therefore an advantage to compacting the band as far as possible to eliminate gaps. Today television transmission channels cover over 4 octaves between the radio frequency limits within which they are grouped extending from 54 megacycles to 890 megacycles. The 12 VHF channels alone cover 2 octaves, whereas the 70 UHF channels alone subtend approximately 1 octave. The electrical differences between the lowest and highest of the 12 VHF channels are greater than are the electrical differences between the lowest and highest of the 70 UHF channels.

From the standpoint of uniformity of service over the entire television band, there is from this standpoint, an advantage to the UHF alternative. The design problems would be somewhat simplified in a structural sense, but there are other electrical problems to be assessed. There is always a price one must pay and always a compromise that must be made. For instance, from the standpoint of coverage, if one were to close his eyes to all other factors, technical, social, and economic, there would be an advantage in moving television to a lower frequency band in the spectrum.

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[66] Record, Television Inquiry, p. 262.

[67] AM broadcasting channels are all in the medium frequency MF band (300–3,000 kilocycles) occupying the region from 535 to 1,605 kilocycles, yielding 107 channels 10 kilocycles in width. In 30 years the art has grown so that today almost 3,000 stations are in operation. The ratio of the high to the low end of the band, approximately 3, makes for a simple continuous tuning in the receiver. For a ratio of this value there is a considerable disparity in the propagation of the waves of the lowest and highest frequencies. This undesirable natural cvharacteristic, the radio broadcast business has grown to accept.

It is for this reason one must examine the extremities of the problem, as for example, the limitations of all VHF alone and of all UHF alone, then, when all the facts have been marshaled, with consummate wisdom draw a practical compromise for today and make a calculated predication for the long-range tomorrow, then consider the means of transition and evolution. This kind of analysis goes beyond the illusory bounds of plebiscite, collation, and recourse to unsubstantiated opinion. It goes beyond the bounds of technical factors alone. The evaluation of any move leads into the area of practical economics, individual interests, and political expediency. Public interest must be measured in concrete terms, for example, dollar costs to the broadcasters and to the public and viewers gained or lost.

As the court of appeals has said: [68]

> If the requirements of the public interest are to be satisfied, the Commission must consider not only the public benefit from the operation of the new station, but also any loss it might occasion. Only by such a balancing can the Commission reach a legally valid conclusion on the ultimate question of the public interest.

It is hard to see how a "one band system would permit more communities to have local service" and otherwise more service than could be obtained by proper compromises in the present VHF–UHF system. One must not be misled by this wishful inference. Issues will have to be faced squarely in terms of facts, not fancies, no matter in what part of the radio spectrum television broadcasting finds itself.

As Senators Wofford and Daniel put in their views set down in the interim report of the Television Inquiry: [69]

> We concur with the committee's recommendation that the Commission study the feasibility of deintermixture and the transfer of all or a substantial part of television broadcasting to the UHF band. However. we believe that the Commission should be cautioned, and in no uncertain terms, that these proposals must be made the subject of an exhaustive and thorough inquiry. The inquiry should be conducted by all available competent technical minds, both in the Government and in industry, in order to insure that adoption of these proposals would not result in loss of television service to the public and would not impose unwarranted costs upon the public first and the television industry second. Until this inquiry is completed, it is premature to invite comments as to possible nonbroadcast uses of VHF television allocations.

Whatever one's views as to the ultimate repository of television broadcasting, no amount of projected thought into the realm of UHF, however noble, will bypass the immediate studies and decisions. One must sooner or later face problems which have resulted from the unfortunate decision not to consider the readjustment of the prefreeze VHF stations, their transfer, deletion, or their change to UHF, and what was an inseparable consequence, the decision to intermix. To proceed by hurdling the known obstacles, not taking time to fathom their significance, is only to come up against new and unexpected ones, perhaps even more insidious.

It would manifestly be but an evasion of the real issue and responsibility for the Commission to visit the sins of the past on the VHF stations of today by the hegira to all UHF, as if to distribute the penalty for a situation which the industry itself tried wisely to avert

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[68] *Democratic Printing Co.* v. *F. C. C.*, 202 F. 2d 298, 301 (1952).
[69] Television Inquiry, Interim Report, Allocations Phase, July 1956, p. 20.

by forewarning the Commission of the consequences of immediate intermixture.

The Chain Broadcasting Report observed wisely:

There is the positive duty to make certain that Commission policies do not detract from the economic stability of the industry, but there is no justification for the adoption of radical measures which would revolutionize the entire economic foundation without any certain knowledge that real improvements can be obtained.

One may recall with profit the wise words of President Stanton of the Columbia Broadcasting System in a letter to the Chairman of the Federal Communications Commission, October 5, 1955:

At this stage of television's development in the United States—with a public investment of $15.6 billion and 453 stations on the air serving 36 million receivers—we believe it is imperative to recognize that there is no panacea which can increase the opportunities for a truly competitive nationwide television service without hurting someone to some degree. It is our opinion that many previous attempts to remedy the sixth report have foundered on the failure to recognize this basic fact. The result has been a continuing search to solve the problems which have developed since the sixth report by trying to find some formula under which everyone would get something and no one would lose anything. This is wishful thinking. We are convinced that no such formula exists.

But we are also persuaded that the public interest urgently requires some adjustments in the present allocation plan, and that the change would be acceptable if, while attaining the objective of a nationwide competitive service, it held to an absolute minimum dislocations to the public and, within the limits defined by these twin objectives, minimized dislocations to existing licensees.

SECTION I

NETWORKS

HISTORY

Television broadcasting like radio broadcasting has grown into a vigorous national asset largely through the medium of program generating and disseminating agencies, the networks.

The networks are an integral part of the television broadcasting matrix of this country. They have been a strong force in the evolution of a nationwide television system because of the breadth of interest and the quality of their programs. As an integrating medium, they are a great social force. As a facile means of propagating intelligence generally, they are an invaluable asset in our national security complex.[1]

A recent report says that—

*** * * all but 37 of the Nation's 455 commercial television stations have a network affiliation of 1 kind or another, and that in 36 of the top 50 markets and in 80 of the top 100 markets, all commercial television stations are affiliated with 1 or more networks.**

The field of networking involves an extraordinary degree of competition for public acceptance. Programs not meeting estimates of popular acclaim are quickly terminated. Much money is invested in productions which never reach the air. Here is a business in which the operating expenses bear little relationship to the capital invested in plant, unlike manufacture where fixed capital and inventory loom large in comparison. There is probably no field which compares in the efficiency with which the interest of the public is probed. For successful operation on a competitive basis, metrics are essential. Since the interest of the customer, the public, controls the ability to survive, it is constantly being explored with test probes to determine its state of excitation, much as a scientist would study the state of a gas under electrical influence.

For reasons difficult to understand, despite the inseparability of network and station facilities in the allocation problem, what should have been their vital influence on the table of assignments of the sixth report is missing. Numbers and distribution of stations were the consideration as if these were the unique factors.

At a time when commercial television was only a hope, William S. Paley, then president of the Columbia Broadcasting System, had this to say in testimony before the Federal Communications Commission:[2]

If television is to flourish, it must be made a part of a nationwide service—a vital part of the life of the American people. Whatever the present technical difficulties, the day can hardly be distant when the public and our national

[1] P. 22, Report of the Antitrust Subcommittee of the Committee of the Judiciary on the Television Industry, March 13, 1957, Government Printing Office.

[2] Testimony of William S. Paley, general allocation proceeding, 1936, docket 3929, transcript, pp. 166–167.

interest will demand network television. It will be tremendously costly—that goes without saying. Even the preliminary foundation work must cost millions. This can only be justified if adequate allocations are assured.

The Chain Broadcasting Report [3] of the Federal Communications Commission made this sententious comment in 1941:

Broadcasting is, essentially, a national service. It must be recognized that listeners prefer good programs originating from any source where there is superior talent and which may have greater entertainment values than would be available from a purely local source.

A vital counterpart of this national program service is the electrical distributing network supplied by the Bell System. This means comprises coaxial lines and microwave links. The ramifications of this transmitting chain are themselves complex, their extent and outer limits depending on the demand of the market. The system of the broadcasting network, its customers, the broadcast stations, and its distributing counterpart, the Bell System, brings together in combination a competitive business subject to the antitrust laws and a public utility, both regulated by the Communications Act of 1934. The electrical network, like television itself, is a relatively new entity.[4]

In television, there are now three national networks, the National Broadcasting Co., Inc., the Columbia Broadcasting System, Inc., and the American Broadcasting Co.[5]

The antecedent of television network broadcasting, radio network broadcasting, was inaugurated in 1923 through the cooperation of commercial stations and the American Telephone & Telegraph Co.[6] The potentialities of this technique were made apparent to the radio entrepreneur and the public alike when, on March 4, 1925, the Bell System network carried the inaugural address of President Coolidge to 23 radio stations in a coast-to-coast broadcast estimated to have reached an audience of some 8 million.

In 1926, the Bell System's direct interest in the broadcasting business was relinquished, RCA ultimately acquiring all the assets. Promptly the same year, RCA formed the National Broadcasting Co. From its inception, NBC operated 2 networks, the Red and the Blue, until, under FCC mandate,[7] 1 had to be sold. The Blue Network was disposed of in August 1943. Its assets became the nucleus of the American Broadcasting Co. The Columbia Broadcasting System was incorporated in 1927. The Mutual Broadcasting System was established in 1934.

The NBC, CBS, and ABC experience in radio networking led them, naturally, into television program origination and dissemination. The Du Mont television network came into existence in February 1946 with no equivalent radio experience on which to base its operations or on which to lean during its leaner days.

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[3] P. 138.

[4] Transcontinental television network program distribution coast-to-coast was inaugurated September 4, 1951.

[5] The fourth, the Du Mont network, closed operations September 15, 1955, after 10 years of operation. In radio broadcasting, there are four networks.

[6] Later that year, RCA engaged the services of Westinghouse for a tie involving WJZ, of Newark, and GE station WGY, of Schenectady.

[7] This mandate grew out of the Commission's study of chain broadcasting, FCC Order No. 37, docket No. 5060, May 1941. In the Television Inquiry, transcript, p. 1698, Mr. Jahncke put it this way: "ABC is, itself, the result of congressional mandate to the FCC to foster competition."

NETWORK SIGNIFICANCE

The immense power of network broadcasting as a national communicatory force can be seen from figures given in CBS President Stanton's testimony [8] in the Television Inquiry. The CBS network, with its 181 affiliates of that time, was estimated to reach 33.9 million families.

The networks operate broadcast stations of their own, as well as supplying program service to affiliates. The FCC currently permits a single owner to have a maximum of 5 VHF and 2 UHF stations, no 2 of which serve the same area. ABC owns its full quota of five VHF stations, but no UHF facilities. CBS owns 3 VHF and 2 UHF stations.[9] NBC owns 7 stations, its full quota of both VHF and UHF facilities. This underwriting of UHF by CBS and NBC would appear to be of immense value in the promotion of UHF. The Buffalo UHF station, WBUF-TV (channel 17), taken over by NBC had, in fact, gone off the air. This purchase was followed by an independent application for another UHF station in the area (channel 59). In the instance of the NBC negotiations for the New Britain UHF station, support came from nearby holders of UHF construction permits, because of the impetus the additional facility would give UHF in the general area.[10]

According to Dean Barrow, Chairman of the Commission's Network Study Group, only 38 of the 455 commercial television stations had no network affiliations at the time he testified before the House Judiciary Antitrust Subcommittee, June 27, 1956.

In the Potter hearings, CBS President Stanton asserted that [11]—

It is an established fact that the backbone of profits in the television broadcasting business is not networking at all, but in profits from station ownership.

The Chairman of the Commission, in his testimony in the immediate Television Inquiry, remarked that—

The networks perform a crucially important function in the television industry of today.

The Plotkin memorandum opines that—

It is only fair to say that radio and television would be far poorer and less exciting mediums if it were not for the important role played by network broadcasting. * * * A healthy television industry requires that all efforts be made to encourage the development of the maximum number of program sources.

The Commission's report and order [12] of June 25, 1956, states the problem, even though obliquely—

It has become apparent that the construction and successful operation of a larger number of stations has been impeded in numerous markets by the absence of a greater number of more nearly competitive facilities, despite the need for and the capacity of such markets to support a larger number of television outlets.

The Report on Chain Broadcasting,[13] 1941, makes many wise and foresighted observations which are equally applicable to television

[8] Television Inquiry, transcript, p. 3169, June 1956.
[9] As of April 3, 1957, CBS holds construction permit for fourth VHF station.
[10] Television Inquiry, transcript, pp. 1939, 1941.
[11] Record, p. 1003.
[12] Docket No. 11532.
[13] Commission Order No. 37, docket No. 5060, published May 1941. Chain broadcasting is defined as radio broadcasting of the same program by more than one station. The nature of this report is discussed on p. 177 ff., herein.

and as sound today as they were 15 years ago. In its conclusion, the Commission says:

We subscribe to the view that network broadcasting is an integral and necessary part of radio.

Elsewhere, the report observes that:

If radio broadcasting is to serve its full function in disseminating information, opinion, and entertainment, it must bring to the people of the Nation a diversified program service. There must be, on the one hand, programs of local self-expression, whereby matters of local interest and benefit are brought to the communities served by broadcast stations. There must be, on the other hand, access to events of national and regional interest and to programs of a type which cannot be originated by local communities. Neither type of program service should be subordinated to the other.

The necessity of efficient network organizations for the distribution of broadcast programs of national interest is axiomatic. Cohesive organizations which are always available for broadcasting intelligence to the entire Nation provide the most effective force for national unity, and may become absolutely essential in times of national emergency. There should be as many of these national network organizations in full competition with one another within the sphere of our economic system and as is practicable within the physical limitations imposed by nature. In like manner, it is highly desirable to encourage the organization of regional and State networks. Without such competitive organizations for program distribution, the very vitality of radio would disappear. Network competition for listeners has been the greatest progressive factor in the development of American broadcasting. Elimination of network programs is unthinkable. Government policies which might handicap efficient organization for network program distribution undoubtedly would create a public outcry against the depreciation in program service which would be a logical consequence.

The Plotkin memorandum, looking at the practical aspects of network service, states that—

* * * a network affiliation is a most valuable asset for all television stations and is the difference between success and failure for many stations.

Like a broadcasting license, it represents a highly valuable property right.

The constructive observation on the growth of television and the value of networks to its growth in small communities was ably put in the testimony by a NBC witness [14] in 1945:

Television for several years is going to require very large expenditures of money for facilities and operations before it can reach a self-sustaining basis. It is in the major metropolitan areas that television can be put on a sound economic basis in the shortest time. Stations in these areas, in turn, will help stations in smaller communities to become self-supporting by furnishing them with high-quality programs, over network facilities yet to be fully developed. If television is to be encouraged to grow rapidly, this encouragement must first make itself felt in the larger cities.

This interdependency of stations and networks is inescapable today. It should therefore be a prominent consideration in any allocations study. A nationwide television system concept which does not take into account the coexistence of stations and networks and plan accordingly cannot be sound. As Plotkin remarked in his memorandum report:

It is not mere accident or sheer coincidence which has led to the joining together into 1 study of 2 such apparently different subjects as UHF and network-affiliate relationships. They are both facets of a common problem: (1) How to provide for the maximum number of television stations so that all the people of the United States may enjoy television service and so that

[14] Niles Trammel, transcript, pp. 83–90, Promulgation of Television Rules and Standards, docket 6780, October 1945.

the various communities will have an opportunity of having their own television stations to serve as mediums of local self-expression; and (2) how to insure the public taste and opinion may be molded by being exposed to a multitude of programs and viewpoints coming to it from many stations and owned by as many different groups as possible, each one bringing its own individualistic approach to the task of programing stations in the public interest.

The place of networks in television broadcasting and an estimate of the number adequate for today were clearly and ably expressed by Commissioner Hyde: [15]

Historically, it has been the networks who have developed the mass audiences for radio and television. Most of the national networks have had command of large resources which they have been willing to risk in the broadcasting business. This has meant that they have attracted name writers, actors, producers, etc., from other arts to broadcasting or have developed new talent of their own. As a result of such investments, the networks have developed shows which have appealed to very sizable audiences running into many millions each evening. The interest stimulated in this way in turn creates the demand for sets. In addition, it is the networks who provide the customers for the nationwide intercity relay facilities hooking up hundreds of stations from coast to coast. Network business also profoundly affects other broadcast business * * * it is essential for effective network competition that each network have an affiliate in each of the first 50 to 75 markets, as an outlet for the network show. To the extent possible the affiliates in each of the major markets should have roughly equal technical facilities, or the potential ability to reach as many homes in each of the major markets. This means that if you could put 4 comparable stations in each of the major markets of the country, there would be the opportunity, at least, for 4 networks since each then would have the chance to obtain a full-time affiliate. Thus, network competition would be centered, as it should be, on selling the best show, rather than on some artificial scarcity of channels. To the extent there were four, or more if possible, healthy, competitive networks, not only would the public benefit by having available better programing, but there would be also greater opportunities for more stations to grow in the Nation overall, and to provide needed local outlets for self-expression.

An interchange between Chairman Magnuson and Commissioner Hyde at the Television Inquiry is illuminating.[16]

The CHAIRMAN. In the broadcasting and telecasting it says, "What was the greatest impression made upon FCC's Network Committee special staff during its clinical study of network TV and related operations in New York?"

Mr. HYDE. Unequivocally, the shortage of competitive facilities in the top hundred markets. This was recognized not only by the networks but also by the advertising agency, station representatives, and other groups contacted during the sessions which concluded last Tuesday.

The CHAIRMAN. Would you say that was a fair analysis of the situation?

Mr. HYDE. Yes; I think it is. I would add a little more to that. I believe that there are national accounts that would be available for broadcasting on a national basis now if they could obtain clearances in the first 50 markets.

ORIGINAL DU MONT PLAN

This brings one to a consideration of the strictures placed upon the natural development of television broadcasting by ignoring the admonitions and the cogent arguments against intermixture and its consequences, in effect denying the acute interrelationship of networks and channel assignments in the consideration of a nationwide, competitive allocation plan.

Recognizing the immediate problems associated with UHF development, including the momentum of already matured VHF and the

[15] Eighty-two TV Channels Versus Twelve, address to Lions Club, Washington, D. C., August 1955.
[16] Television Inquiry, transcript, p. 538.

value of network affiliation in stimulating growth, together with the character of the allocation table of the sixth report, the Plotkin report put the matter this way:

Considering the top 100 markets, the figures are as follows:

4 or more VHF assignments	7
3 VHF assignments	26
2 VHF assignments	32
Only 1 VHF assignment	18
UHF-only assignments	17

Thus, of the top 100 markets there are only 33 which have 3 or more VHF assignments.

It should be pointed out that some of the communities listed above are able to receive VHF service from stations in neighboring communities. We do not have information as to the extent of such service, but it is believed that the above figures would not be significantly affected thereby.

The stifling effect on network development resulting from the above allocation is obvious. Too many of the important markets just do not have sufficient VHF outlets for more than two networks.[17]

Many of these VHF communities do have UHF assignments but the latter are not the answer to the problem at this stage of television's development. These UHF stations have a poor circulation potential since many of the sets in the community are VHF only. Most national advertisers apparently have not been interested in such poor circulation, for it prevents them from reaching the population which they believe they need for the effectiveness of their advertising campaign and because the low circulation of UHF stations often results in a prohibitively high cost per thousand viewers reached. Hence as a practical business matter networks frequently place their programs on a delayed basis over a VHF station rather than live on a UHF station.

In the Commission's hearings leading up to the sixth report a more ominous note was sounded by a CBS official:[18]

* * * it must be obvious that during the not inconsiderable growth period of VHF, network A with UHF outlets in Chicago, San Francisco, and Boston would be under a crippling competitive disadvantage vis-a-vis network B with VHF outlets in these three cities.

And that—

It is quite possible that the Commission's allocation plan will, as a matter of practical necessity, permit the development during the critical formative years of only two full nationwide competitive television networks.

In the proceedings which led to the sixth report and order, the Allen B. Du Mont Laboratories, Inc., introduced a national allocations plan study [19] as an alternative to the one proposed by the Commission in its third notice. According to the Commission, it was the only party to submit a national plan.

The Du Mont project was exemplary for its breadth of understanding of the problem and for its professional quality. This comprehensive project, recognizing 1,400 communities,[20] took into account economic considerations, saw with lucidity the fatal dangers of intermixture. It recognized the principle of reserving space for noncommercial broadcasting by allowing nine channels for this service on a first-come-first-serve basis. Here was a plan representing a prodigious effort, and an analytical one, the equivalent of several man-years of effort in integrated talents. Technical and economic considerations were combined to turn out a job worthy of emulation.

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[17] Plotkin was himself a party to the generation of the sixth report and order.
[18] Television Allocation Report, par. 256 (d), 1949 testimony.
[19] A National Television Allocation Plan, vol. VI, revised October 28, 1949, to February 1950.
[20] The sixth report embraced some 1,200.

The plan faced realistically the vital interrelationship of stations and networks and the importance of competition between the networks themselves. It yielded a minimum of four channels, either U or V, not intermixed, in most of the major metropolitan markets. It minimized the intermixture of VHF and UHF assignments. There was but 1 intermixed city among the first 325 in market rank. The yield of nonintermixed markets was of this approximate order:

	V	U
4 or more station markets	97	75
3 station markets	8	21
2 station markets	3	88
1 station market	6	22

For the first 100 markets, the plan yielded:

	V	U
4 or more stations	54	34
3 stations	2	2
2 stations	1	6
1 intermixture–3 V, 2 U	3	2

The sixth report, in contrast, yielded:

4 or more commercial VHF and 1 or more UHF stations	7
3 commercial VHF and 1 or more UHF stations	24
3 commercial VHF and 0 UHF stations	2
2 commercial VHF and 1 or more UHF stations	29
2 commercial VHF and 0 UHF stations	3
1 commercial VHF and 1 or more UHF stations	18
UHF commercial only	17

This comparison is given not to demonstrate the perfection in the Du Mont plan but to show what really could have been done in the interest of a practical nationwide VHF/UHF television system. There is, of course, no unique solution. The principal distinction between the Commission's plan and the alternate offered by Du Mont, to demonstrate a point, was that the Commission elected not to disturb existing VHF stations. There were some 90 VHF stations on the air and 19 construction permits in effect at the time. Intermixture, consequently, was inevitable. The task as executed by the Commission then was to build out the national structure to the extent the 12 VHF channels would permit, then chink up the cracks with UHF.

Du Mont, in contrast, proposed to meet the issue head on, in the first 325 markets, changing 20 on-the-air VHF stations to UHF and changing 29 other VHF assignments to UHF to achieve the appropriate degree of nonintermixture it deemed necessary to get UHF off the ground and on the air. The Du Mont plan was predicated on two essential correlated factors, nonintermixture and the opportunity for adequate network channels.

The Commission of that time, divided perhaps by the specter of network competition as an essential and additional variable, did not take kindly to the Du Mont approach.[21] It did not avail itself of the results

[21] Among the objections advanced by the Commission were that (1) many substandard cochannel spacings were used and (2) at UHF frequencies Du Mont did not adhere to the FCC criteria that UHF stations separated by less than 6 channels should be separated by at least 20 miles.

There appears to be no technical justification to the requirement that channels separated by less than 36 megacycles must be at least 20 miles apart. There is an optimum spacing

of this prodigious effort nor of the sound technique the company study had introduced into the science and the mechanics of allocations procedure.

When it became clear to Du Mont that the Commission was insisting on intermixture, the company undertook to salvage its work through the medium of a modified plan, alternative and, it believed, also superior to the Commission's. The alternate plan was designed still to permit 4 or 5 networks to operate. The plan differed from the Commission's plan in that it continued to recognize the relatively underdeveloped status of UHF and therefore assigned four or more VHF channels to as many of the major markets as possible. Even with this allowance, the Du Mont salvage plan, it was conceded, would not have provided the excellent atmosphere for UHF growth which would have existed under the original nonintermixture plan.

Oddly it is not the original, but the modified Du Mont plan to which the Commission sets forth its many objections within the body of the sixth report and order. This is not apparent. Among the numerous criticisms, even though it was conceded that in many respects the plan was similar to its own, the Commission, on dubious grounds, objected:

> A basic objective of the Du Mont assignment plan is to provide major metropolitan centers with multiple VHF stations. In particular, Du Mont seeks the assignment of four VHF channels to such communities—an objective directly related to Du Mont's contention that this is necessary to promote network competition. By the assignment of four VHF channels in the largest markets, Du Mont assumes that it would thereby obtain an outlet for its network operations in the most important centers. Contrariwise, Du Mont fears that if only 1 or 2 VHF channels are assigned in these markets, it would be unable to obtain affiliates in such centers and would be in the position of dependence on UHF outlets. Because of the time required to develop UHF stations, Du Mont contends that it would be placed at a severe competitive handicap in relation to other networks.

There followed other objections, seemingly defensive, of which the following is illustrative:

> * * * the Commission has taken into account other significant factors. For example the Commission in fulfilling what it considers the mandate of the Communications Act to provide an equitable distribution of facilities has attempted to provide at least some VHF channels to each of the States although in some cases this was done where an assignment might otherwise have been made to a large metropolitan center in an adjacent State.

It would be interesting to observe the extent to which this "mandate" applied in the case-by-case adjudicatory method of assignment in radio broadcasting.

The sixth report, ignoring facts, on the other hand concludes:

> The Commission finds that the principles of assignment which Du Mont advocates are inadequate in that these principles do not recognize specifically the need to provide an equitable apportionment of channels among the separate States and communities and they do not provide adequately for the educational needs of the primarily educational centers.

There seemed to be little desire to profit by what the original Du Mont proposal had to offer, tangible and intangible. Along with a lack of enthusiasm was a lack of appreciation of the importance to an allocations plan of networks and of network competition. The

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for cochannel spacing, the reason being that if the spacing is too great there is noise limiting, if the spacing is too small there is service interference. This should be self-evident. The optimum is extremely broad. There is very little difference in total service anywhere from 150 to 300 miles. Because the population is not uniformly distributed it is certainly advantageous in special instances to reduce the spacing slightly to obtain more stations in large population centers.

Commission's reaction suggests a not-invented-here attitude or, as the courts might say, gives the impression of arbitrariness and capriciousness.

NETWORKS AND ALLOCATION

It is regrettable that the four national network interests and the Commission could not have collaborated more wholeheartedly at the time and thus perhaps influenced the Commission to take a more enlightened attitude. As matters stood, collaboration lay somewhere between a passive attitude and that of a competitor narrowly mindful of his own interest.

Although it cannot be said that the principles followed by the Commission in the generation of the table of allocations of the sixth report caused the DuMont network to be liquidated,[22] it is hard to believe this was not a major factor. A study of the record, at any rate, is enlightening.

The American Broadcasting Co. has had something to say on this subject. At the Television Inquiry, Mr. Jahncke, after proposing that the Commission issue a new allocation plan by June 1, 1956, prevent additional VHF stations from going on the air, and complete the processing of all pending applications by September 1, 1956, testified:[23]

> In conclusion, I would like to quote from my testimony 2 years ago in the Potter hearings to you, sir.
>
> "The proposals made above are designed to speed the difficult period of transition during which competitive facilities will become available. When that occurs, ABC will take its competitive chances in the market place of public goodwill with full confidence in its ability to originate and develop a television service second to none. ABC believes that it has a television program service comparable in quality to those of its competitors and desires only a fair opportunity to demonstrate that fact.
>
> "In conclusion, ABC again desires to point out that it is now an independent network because of the FCC's recognition 13 years ago that the public interest would not be served by concentration of radio stations under the dominance and control of a single network organization.
>
> "For reasons unrelated to the merits of its television service, ABC finds itself handicapped due to the lack of competitive television outlets.
>
> "The competitive advantages enjoyed by NBC and CBS are basically attributed to denial of fair opportunity for access to the market, rather than to the superiority of their program offerings.
>
> "If we can't get our programs into a market, we are not even judged; we are not even in the game.
>
> "This committee, therefore, is faced with an extraordinary decision of policy, for determinations reached now in the present period of television development will determine the availability and quality of competitive service in the future.
>
> "There may be those who will oppose any remedial action by this committee or by the Federal Communications Commission on the ground that it might deprive those who were first in the field of the fruits of their resourcefulness and labors.
>
> "The fruits currently enjoyed in limited facilities communities are not as much the result of individual initiative or superior ability as they are of VHF channel scarcities and the artificial freeze imposed between 1948 and 1952.
>
> "It is one thing to be the first in the field where competitors are free to follow. It is another thing to enjoy a clear field because competitors are enjoined from pursuit."

The exact number of networks which the economy can support is not clear. A rational proposition would be to have enough competi-

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[22] September 15, 1955.

[23] Ernest L. Jahncke, Jr., assistant to the president, ABC, Television Inquiry, transcript, pp. 1747–1748, March 26, 1956.

tive outlets in each community so that there is always room for one more network. Under these conditions there can be no ground for a claim of monopoly. Granting that data may have been scarce at the time of generation of the sixth report, there is no excuse today for less than a truly professional study of the problem. A calculated estimate based on facts and truly professional analysis at least has a higher probability of being sound than a catch-as-catch-can guess as an expedient.

Here is a view of one of the networks as given in the Television Inquiry: [24]

CBS plan I represents an attempt to repair, within the spectrum space devoted to television in the sixth report, one of the most serious defects of the present allocations plan. That is its failure to provide at least 3 competitive stations in each of the 100 leading television markets.

Testimony of the Columbia Broadcasting System [25] is to the effect that it invested $53 million in the television networking idea between 1934 and 1952 with no profit in any of these years. This is the nature of entrepreneurial effort. In the instance of the television networks the risk now seems to be paying off well. From recent testimony,[26] gross income for 1955 was over $175 million and NBC over $142 million for regular network service. The net was over $142 million for CBS and over $118 million for NBC.[27]

The number of networks the country can support is naturally brought into question by figures of this magnitude. In competition lies the security of the institution of networking—the interests themselves are acutely aware of this and of the dangers if it is lacking. The tendency, where there is local prosperity, is for the Government to investigate. However appropriate this may be in particular instances, there is an equal responsibility to omit no opportunity to get at the underlying causes, and so to administer their trusts as not themselves to contribute to monopoly. A witness [28] in the Television Inquiry remarked:

So to turn to the charge of monopoly, if there is monopoly in television, it exists, it seems to me, because of fundamental mistakes made long since, and I fear in danger of being repeated, by the Government's own agency, the Federal Communications Commission that has charge of such matters.

Looking at the record for the networks, in testimony in the Potter hearings, President Stanton of CBS had this to say: [29]

The more stations and the more networks—and there is no magic in the number 4, since if the economy permits, 4 most certainly should not be the

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[24] W. B. Lodge, Television Inquiry, transcript, p. 1834, March 27, 1956. The plan I referred to is contained in Proposals and Comments of Columbia Broadcasting System, Inc., December 14, 1955, docket No. 11532.

[25] Network Practices, memorandum prepared for the Senate Committee on Interstate and Foreign Commerce by Columbia Broadcasting System, June 1956; Television Inquiry, transcript, p. 3174.

[26] Celler, House Antitrust Subcommittee hearings, September 1956, CBS.

[27] The two networks, CBS and NBC, appear to have had their best years in 1956. For CBS, earnings exceeded $2 per share as against $1.83 in 1955, when the company earned $13,400,000. In 1956, NBC's sales volume was 22 percent above that for 1955. ABC sounded an encouraging note when it announced gross billings for 1956 would exceed $75 million and that for the first time, its home hours of viewing had passed the 100 million mark.

It later appeared that the corrected figures were $155 million for gross income and $131 million for net income. The figures quoted in the text excluded gross and net times sales to advertisers earning no discount in 1955.

According to a report in the fall of 1957, profits before taxes on broadcast operations (network owned stations) in 1956 for ABC were $9,727,000, for CBS were $40,733,000, and for NBC were $34,910,000 (TV Digest, October 5, 1957, p. 6.) Consolidated CBS sales for the year 1956 approximated $354 million with profits aggregating over $16 million. (Broadcasting-Telecasting, February 18, 1957, p. 86.)

[28] Edward Breen, Television Inquiry, transcript, p. 4391, June 1956.

[29] Potter, record 985, June 1954.

ceiling—the better off all broadcasters are, and even more important, the better off the public is.

By the time of the (Magnuson) Television Inquiry of 1956, the Du Mont network had gone off the air, leaving three national networks. Here was, in effect, an induced threat of monopoly. One of the CBS officials, in testifying at the inquiry, discussed the CBS proposals and comments recently filed with the Commission [30] in connection with the reallocation problem. Testimony was to the effect that there was no proposal which would help everybody and hurt nobody, that the instant proposal of CBS was to protect the existing service and that in so doing it was helping others. Counsel for the committee which was conducting the proceedings asked the witness if the one substantial addition the proposal made were not to provide the possibility of multiple service and concurrently the possibility of a third equivalent network (presumably comparable to NBC and CBS). The witness answered:

That is correct. The major objective was to improve the situation for ABC.[31]

NUMBER OF NETWORKS

At these same hearings, Dr. DuMont, speaking for his organization, observed that on the basis of study [32]—

We believe in 1949 that in order to prevent a monopolistic system of broadcasting, four networks were required. We still feel that way today. * * *

The subsequent Plotkin report, having the allocation problem in mind, expressed matters this way:

We have no way of knowing how many networks the economy can support. The only function which the Government can perform is to remove artificial competitive restrictions so that the forces of economics and the ability of management will control.[33]

Commissioner Hyde testifying in the Television Inquiry (see p. 99) summed up the problem of network prosperity versus allocation: [34]

We have as of now 3 national networks, only 2 of which are able to get in as many as the first 50 markets of the country. An analysis of the situation would go something like this: In 7 of the top markets, there are 4 or more VHF channel assignments; in 26 markets, there are 3; in 32 there are 2; in 19 of the first 100, one VHF. Now, already we have a shortage of facilities evident. As I have mentioned the third network cannot get into enough markets to operate fully competitively with the other two. The two that get into the top market have all of their time sold out in the evening hours, fully sold out, and actually there is jockeying for space there. You have the spectable of not being able to activate all of our television channels notwithstanding the fact that 2 networks are sold out and the 1 that isn't sold out can't get into all the markets on a competitive basis.

In his testimony in the Television Inquiry, Commissioner Doerfer tied the allocations and the network problems together this way: [35]

In the network situation the shortage of facilities is not by design of the networks. It happens to be by reason of the fact that the Federal Communications Commission hasn't got enough space to provide the additional facilities at this particular moment or those facilities which have been provided have not been accepted by the public or the broadcasters or the networks as advertisers because of the economic aspects.

[30] Docket 11532.
[31] Television Inquiry, transcript, p. 1858, March 27, 1956.
[32] Potter, record, p. 229, May 20, 1952.
[33] Plotkin report, p. 28.
[34] Transcript, p. 444.
[35] Transcript, p. 584.

The fact remains that a considered effort must be made to examine the problem of how many television networks it appears this country's economy can most likely support and what are the minimal revenue requirements for each. A sound allocation plan would then be one which holds the opportunity for one network beyond the number operating, N plus 1 so to speak, where N is the number of networks in business. In this way, open competition is assured, the public is offered the greatest program opportunity, and the Government is protected from threat of monopoly, real or fancied. This is a job not uniquely for engineers, but for the best professional minds in the field of economics to lead.

In its preliminary report to the Senate Interstate and Foreign Commerce Committee,[36] the Commission proposed a broad examination of the television industry:

> The Commission believes that a general study by the Commission into the entire economic structure and operations of the television industry is essential * * *. The essential objective of such a study would be to obtain for the first time a factual basis for evaluating the necessity and advisability of any action by the Commission, Congress, or the Department of Justice in this area.

These objectives, when viewed in the light of the telephone investigation of 1935 and the chain broadcasting study of 1938–41 reveal a cant toward the investigation of guilty practices. Television is a rapidly growing, not yet matured industry. While constant vigilance must be maintained to protect the public against unfair monopolistic practices by large companies, it is a pity to expend too much energy on this type of investigation at the expense of solving the more immediate and broader problem affecting the public interest, namely, the VHF-UHF allocations problem.

NETWORK STUDY

It may be considered a natural response of the Congress, when it did grant $80,000 [37] "to make a study of radio and television network broadcasting" to overlook or set aside the allocations tangle so urgently in need of immediate attention. The fact is that a solution to the allocations problem would provide equal opportunity in the sense of outlets for several networks, thus minimizing the monopolistic aspect of the network problem, at least as far as the public interest is concerned.

A network study committee was established by the Commission [38] in the fall of 1955. The substance of the order was as follows:

> (*a*) What has been and will continue to be the effect on radio and television broadcasting of the following:
>
> (i) Ownership and operation of both radio and television networks by the same person, or persons affiliated with, controlled by, or under common control with the same person;
>
> (ii) Ownership and operation of radio and television broadcasting stations by persons who, directly or indirectly, own or operate radio or television networks;

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[36] FCC 55–314, March 16, 1955.
[37] Interim report of the FCC to the Senate Interstate and Foreign Commerce Committee, July 21, 1955.
[38] Network Study Committee Order No. 1, November 21, 1955. Since the drafting of the supporting brief this study has been submitted (October 3, 1957). The results of this study are now available as a congressional print, Network Broadcasting Report of the Committee on Interstate and Foreign Commerce, H. Rept. No. 1297, January 27, 1958, Superintendent of Documents, Washington, D. C.

(iii) The production, distribution or sale of programs or other materials or services (including the providing of talent) by various persons, both within and outside of the broadcast industry, for (1) radio and television network broadcasting, and (2) radio and television nonnetwork broadcasting;

(iv) The representation of stations in the national-spot field by various persons;

(v) The relationships between networks and their affiliates, including, but not limited to, those having to do with (1) selection of affiliates, (2) exclusivity, (3) option time, (4) free hours, (5) division of revenue, and (6) term of contract;

(vi) The contracting for or lease of line facilities used in the operation of networks by persons who, directly or indirectly, own and operate networks;

(vii) Related interests, other than network broadcasting, of persons who, directly or indirectly, own or operate networks;

(viii) The ownership of more than 1 radio or television broadcast license by any 1 person.

(*b*) Under present conditions in the radio and television broadcasting industry, what is the opportunity for and the economic feasibility of the development of a multiple-network structure in terms of (1) the number of broadcast outlets available, (2) national advertising potential, (3) costs of network establishment and operation, and (4) other relevant factors?

(*c*) Under present conditions in the radio and television broadcasting industry, what is the opportunity for and economic feasibility of effective competition in the national-advertising field between networks and nonnetwork organizations in terms of (1) the number and type of broadcast outlets available, (2) national advertising potential, (3) needs of the advertiser, and (4) other relevant factors?

On its face at least, this order does not open the door enough to expose the VHF–UHF problem for more than accidental glimpse. The nature of its intent is, obviously, quite different. It is, then, natural that Chairman McConnaughey was not looking to this study to develop answers to the UHF problem.

In the words of Chairman McConnaughey: [39]

As this committee well knows, we also have been proceeding with a study of network activities, pursuant to special appropriations by Congress, with a view toward having a report from this special study group available by the end of this fiscal year. Although this study does not directly involve television allocations, we feel certain that much of the information we will develop in this study will be extremely helpful in our future efforts to encourage an expanded television system with a choice of multiple services for as great a portion of the population as is possible.

Chairman Doerfer, Commissioner at that time, felt otherwise: [40]

I think that, as we go along with the network study, we may find some basis of some change which may help solve the UHF problem. I indicated before that I am exploring the possibility of having the Commission issue some proposed rulemaking which would deny an affiliate to scoop off the cream of the best network programs of 3 networks in a market where there are 2 U's either operating or potentially capable of operating. * * *

Now, with respect to the network study, I am satisfied that some, not all, of the UHF problem has to do with programing and network programing.

This position was reiterated in later testimony: [41]

I think that this Commission could adopt a rule that, in those markets where there are mixed services, such as 1 V with 1 or 2 U's, this V would not be permitted to scoop off the cream of the top network shows of all three networks; that he be permitted to choose 1 network, and, if there are 2 more U's in the market, that the other U's be permitted to choose 1 apiece.

[39] Television Inquiry, vol. 1, p. 12, March 5, 1957.
[40] Television Inquiry, transcript, p. 354, February 20, 1956.
[41] Transcript, p. 66, March 5, 1957.

At another point in his testimony, he observed: [42]

In the networking situation, the shortage of facilities is not by design of the networks.

It happens to be by reason of the fact that the Federal Communications Commission hasn't got enough space to provide the additional facilities at this particular moment, or those facilities which have been provided have not been accepted by the public or the broadcasters or the networks or the advertisers because of the economic aspects.

As of the spring of 1957, this Network Study Committee [43] operated through a study staff, many of whom have been brought in on temporary duty. The initial budget was $80,000. This has been augmented by $141,000, which, together with out-of-pocket expenditures directly from the Commission's regular budget, brings the total to approximately $233,000. The study was to be completed by June 30, 1957, after which, presumably, the ad hoc staff would be relieved.

The major part of the first year's operation was given to the collection of material through interviews and questionnaires. The plan for fiscal year 1957 follows: [44]

The procedure to be followed with respect to the practices complained of will be as follows:

(*a*) To collect and evaluate the comprehensive data pertaining to the economic base and the operations of the industry.

(*b*) To appraise the efficacy of the chain broadcasting rules in the light of the above data.

(*c*) To decide whether rulemaking proceedings should be recommended and, if so, in respect of which rules.

(*d*) To determine through rulemaking proceedings whether the rules should be changed and, if so, in what respects.

(*e*) To transmit to the Antitrust Division any matters which are deemed to have substantial antitrust implications.

(*f*) To detremine whether the Commission has the power to make all rules deemed in the public interest.

(*g*) To recommend appropriate legislation if determined that the necessary power does not now exist in the Commission.

Recent publicity would indicate that the work of the network study has been largely if not entirely on questions of excessive concentrations of holdings in the television broadcast field. The measure of degree seems to be in terms of the Commission's philosophy with respect to community television and, thus, the extent to which it has not materialized. The ideological premise on which the allocation table of the sixth report is based, however unrealistic the proposed machinery of accomplishment, assumes the answer without examining the sociological and economic realities. It will be interesting to see if the Barrow report will trace some of the causes of the alleged overconcentration in the broadcasting industry to the failure of the Commission to anticipate the evils of its intermixture plan—if its objectives were to maximize competition. Will the report perceive the need to test the Commission theory which holds that communities, in fact, desire their own independent local outlets?

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[42] Transcript, p. 584, February 1956.

[43] The committee comprises Chairman McConnaughey and Commissioners Hyde, Bartley, and Doerfer. The staff is directed by Roscoe L. Barrow, dean of the School of Law, University of Cincinnati.

[44] Statement of Roscoe L. Barrow to the House Judiciary Antitrust Subcommittee, June 27, 1956.

IN CONCLUSION

In any evaluation, it is well to take seriously the pronouncement set forth in the Chain Broadcasting Report [45] and—

> * * * render to the public the radio service the public desires rather than to force upon the public the type of service which individuals think the public should have.

There is little evidence that this is measured anywhere except in the broadcasting industry itself, where competition demands facts because facts are vital to survival.

Senator Bricker's recent Report on Network Monopoly [46] calls attention to the fact that—

> Congress has the responsibility to act so that private monopoly does not occur where Government monopoly is avoided.

It is equally manifest that the Congress and the administrative agencies under its jurisdiction have the responsibility to recognize that they may, themselves, have induced monopoly by error and to anticipate and avoid its incubation. The thinking which culminated in the table of assignments in the sixth report and order and, thus, the Commission itself failed in this vital responsibility.

Five and a half years have slipped by, including, in effect, two Senate investigations of television. The issues which urged these investigations, for the most part, still stand much as they did in the beginning.

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[45] P. 124, May 1941.

[46] Report for the Committee on Interstate and Foreign Commerce by John W. Bricker, 1956. This thought is expressed in virtually the identical words in letter of transmittal, iii, Plotkin memorandum report, February 1955.

SECTION I

COLOR

INTRODUCTORY

From the earliest official consideration of commercial television, the promise of color picture transmission has been a tantalizing and compelling force insinuating itself into standardization and allocations deliberations, yet its promise was such that it did not achieve final official commercial status until the end of 1953. It is stated that of the estimated 7 million television sets turned out in 1956, between 150,000 and 200,000 were for color.[1]

There was the natural attractiveness of color over monochrome, Coupled with this subjective lure was apprehension lest a band width be fixed adequate for black and white but too narrow for color so that the future of color television might be permanently jeopardized. There was a faint hope that by some miracle color transmission might be accomplished with the same band width as black and white. The idea of a compatible system, that is a system which could be received in monochrome on the ordinary black and white set, was as yet but a dream. The color mirage was constantly in the eye. It engendered uneasiness. Thus the allocation problem in its broadest sense, even in its earlier stages of evolution, became inextricably involved with the uncertain ultimate requirements for color.

HISTORICAL

In at least the earlier period of the deliberations on television, there was a feeling that color television would be treated as a conventional 3-color problem and that it would therefore require a band width 3 times that for black and white. In 1936 one witness before the Commission testified that:[2]

> * * * natural color television requires either 3 channels or a single channel 3 times as wide as for television of the same definition in black and white. Inasmuch as this is an assured commercial development, the necessary space must be reserved in the ether.

In the spring of 1939, the Commission inquired of a highly qualified witness how far away color television might be, eliciting the answer:[3]

> Color television is a long way into the future, not only is it a long way into the future, I don't believe that it has a chance in the 6-megacycle channel.

In January 1941, the Commission heard testimony through the National Television Systems Committee[4] on 5 color systems, each

[1] Broadcasting Television Inquiry, December 10, 1956, p. 68.
[2] Television hearing, docket 3929, transcript 1316.
[3] Dr. Engstrom of RCA, second hearing, docket 5806, transcript 2082, March 1939.
[4] The NTSC contribution is referred to on p. 237 of section: Industrial and Professional Committees.

operating at a band width of 6 megacycles as in present day monochrome and color. Three of these systems had been demonstrated to the FCC in the summer and fall of 1940. One of the systems, that of the CBS, utilized mechanical means for effecting the three-color filtering.

RCA independently advanced a system requiring a band width much wider than 6 megacycles, free from mechanical color separation. This RCA system, early in 1940, was also demonstrated to the Commission.

In a letter to the Commission in October 1940 [5] there were further observations on color and its band-width requirements:

> We particularly feel that investigation should look toward color television at the higher radio frequencies for broadcasting where the channel width may not need to be limited to six megacycles. We feel also that investigations should be made that will give definite answers to television in color when using six megacycle channels.

Testimony in the spring of 1941 would indicate that CBS at that time felt that monochrome and color might be broadcast on a six-megacycle channel. Asked whether six megacycles was enough band width for color, their witness testified: [6]

> I think that it (6 megacycles) is enough for black and white and I think that color, because it gives more information than black and white, will therefore reach substantial degree of perfection within 6 megacycles.

In its report of May 3, 1941, the Commission observed that—

> The three-color television system demonstrated by the Columbia Broadcasting System during the past few months has lifted television broadcasting into a new realm in entertainment possibilities. Color television has been known for years but additional research and development was necessary to bring it out of the laboratory for field tests. The three-color system demonstrated insures a place for some scheme of color transmissions in the development of television broadcasting.

Although this was a six-megacycle band-width system, with the advantage of requiring no more spectrum space than black and white, the color television art as a whole was so underdeveloped that actually the question of band width for this service was not to be answered definitively for a good many years.

COLOR AND BAND WIDTH

There was a strong feeling in some quarters that investigation should be made of the possibility of color transmission at the UHF frequencies where the band width need not be limited to 6 megacycles. In fact, even the monochrome problems to be solved fully were as yet many and varied. The UHF region of the spectrum was thought of as necessary for channel widths greater than 6 megacycles even for black and white television for purposes of higher definition. The national emergency put a stop to further experimentation by the industry.

Following the war, the color issue was again raised formally. In the review hearings conducted in the fall of 1944 on allocations of bands of frequencies, there was evidence of the prevailing thought that 20-megacycle bands would be necessary for color. The Radio Technical Planning Board, for example, recommended that mono-

[5] RCA letter of October 3, 1940, to FCC, docket 19L200–08.
[6] Adrian Murphy, hearing, docket 5806, transcript 2561, March 1941.

chrome television broadcasting should be continued on 6-megacycle channels, but also recommended that:

> Provision should be made at this time for higher frequency channels in which experimentation and development may be conducted looking toward an improved service which may include color, higher definition and any other improvements which may occur. It is recommended that the channels be 20 megacycles wide, but that no other standards be established for them at this time. It is further recommended that these channels be assigned on the basis that they will subsequently be utilized for commercial broadcasting of the improved television service at such time as standards may be adopted.

In 1944, Dr. Jolliffe, chief engineer of RCA,[7] testified that—

> The primary purpose of going to higher frequencies and wider bands should be to obtain adequate color television with at least as much detail as now obtained in black and white * * *.

PRESSURE CONFLICTS

In the early fall of 1946, despite its prewar efforts at a band width of six megacycles, after extensive experimental work in the laboratory and on the air, and after careful explorations of the potentialities of VHF, CBS formally petitioned the Commission to commercialize color television embodying a field sequential system[8] utilizing a 16 megacycle band width. Here was in effect a mandate for UHF.

RCA did not support the CBS petition for commercialization. It sprang to the fore with the demonstration of another type of color technique termed a simultaneous system,[9] although it did not formally propose it. This system employed a band width of 14.5 megacycles.[10] At the Princeton laboratory demonstration[11] (closed circuit) for the Commission, the battle lines having already been drawn, President Sarnoff stated that,

> * * * any claim color is here today is just pure bunk and nothing else * * *.

Subsequent to extensive hearings, including comprehensive reports by the Radio Manufacturers Association and the Radio Technical Planning Board, in the spring of 1947 the CBS petition was denied by the Commission.[12] The Plotkin memorandum report made this observation on the period:

> While some stations went ahead with their plans for black and white television during the pendency of the CBS petition, many stations deferred their plans to enter television until after the Commission should have issued a decision on the color matter.

More ado on the color problem followed, beginning with a CBS closed-circuit laboratory demonstration for the Commission in October of 1948. This system utilized a band width of 6 megacycles, no wider than black and white. As in the older system, it included a color wheel.

The following May 1949, the Commission announced further hearings on the lifting of the freeze, on the optional use of 6 megacycle

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[7] Formerly chief engineer of the Commission. Television hearings, docket 6651, 1944–45, transcript, p. 3061.

[8] In this system successively all the odd lines of the field were scanned as red, all even lines as blue, then odd lines as green, and so on.

[9] In this system each picture was scanned simultaneously in 3 colors and the 3 images transmitted simultaneously. The 3 images were combined optically at the receiver.

[10] In the manufacturer's words, tests "indicate that it may be possible to set up a 3-color channel system plus the associated sound channel in a total channel width of substantially less than 3 times 6 megacycles, of the order of 12 to 14 megacycles."

[11] October 31, 1946, transcript, p. 644, docket 7896.

[12] Report of the Commission, March 18, 1947, mimeo 5466.

color on all channels and on the adoption of an assignment plan covering commercial operation in both the VHF and the UHF bands. The hearing on color raised issues not only technical but of a bitter, controversial nature between competing commercial interests. The hearings began in September 1949 before the Commission en banc and continued for an unprecedented period of 62 hearing days, continuing for 8 months into May 1950, resulting in some 9,700 pages of testimony.

CONGRESSIONAL ACTION

The Senate Committee on Interstate and Foreign Commerce now stepped into the fray by establishing an Advisory Committee on Color Television under the chairmanship of Dr. E. U. Condon, Director of the Bureau of Standards.[13] In his letter of May 20, 1949, requesting Dr. Condon's assistance, Chairman Johnson observed:

> One unit in the industry has demonstrated color television 6 megacycles wide and asserts that if the Commission would allocate frequencies and license commercial operation, it could go ahead "tomorrow." Another large unit in the industry also has demonstrated color television of varying width from 6 to 18 megacycles but believes that color is not yet ready for commercial operation; that much more experimental work must be done and field tests made before commercial licensing should be undertaken. Still another unit in the industry is said to be of the opinion that color television is several years away.

COMMISSION ACTION—FIRST REPORT

By this time three color systems were ready to be given serious consideration by the Commission and it is those particularly that are compared in the first report on color by the Commission.[14] Three systems were demonstrated, CBS, RCA, and Color Television, Inc., CTI, respectively. Each system operated within a band width of 6 megacycles. Existing receivers could not receive black and white pictures from the CBS unit without modification; they could from CTI and RCA systems. Receivers could be converted by the introduction of circuit changes and a color wheel so as to receive either black and white or color. RCA demonstrated no practical converter by which to enable a conventional black and white receiver to receive RCA color. At the time of the hearings, the CTI system was limited to projection receivers.

Since in addition to these important differences there were technical problems to be ironed out, the Commission, although it concluded color to be an important improvement, in its report asked for further consideration. The Commission was very strongly divided on this complex subject.

Based on demonstrations and testimony, the Commission's first report on color described what should constitute an acceptable color system. This is here paraphrased.

> For a color system to be considered for adoption it must meet the following minimum criteria—capability of operation within a 6-megacycle channel allocation structure, of producing a color picture of high quality of color fidelity, definition, brightness, and contrast range, of low enough cost to be available to the great mass of the American public, within reach of broadcasters generally so as not to restrict the class of persons who can afford to operate television stations, freedom from interference to a degree comparable with present mono-

[13] See section of this report: Industrial and Professional Committees, for the contribution of this committee.

[14] First report of Commission, Color Television Issues, docket Nos. 8736 and 8975, 9175, and 8976, September 1, 1950.

chrome systems and finally, capacity of being transmitted over relay facilities presently in existence or available in the foreseeable future.

These criteria do not include the requirement of compatibility, since as the Commission said in the report, "no compatible system was demonstrated in the hearings" and "no satisfactory compatible color system has been developed."

Here is an important assertion of the report illustrating its reasoning:

The receiver aspect of compatibility, moreover, is merely a temporary problem which will decrease progressively each year once receivers are built incorporating new standards. Based upon an assumption of 7 million sets in the hands of the public at the present time, the problem of compatibility would be diluted each year depending on the annual rate of production. It is not possible to forecast what the annual rate of production would be, but, by way of illustration, if sets were continued to be manufactured at the present rate of production (e. g., 5 to 6 million sets a year) then 1 year after the adoption of an incompatible system approximately 40 percent of the receivers in the hands of the public should be capable of receiving these signals without any change whatsoever—they will have been built that way.[15] The percentage will become progressively larger each year. So far as owners of existing receivers are concerned, if they make no change, they will still be able to receive programs broadcast in accordance with present monochrome standards—there will undoubtedly be such for several years after a decision—or they can spend the relatively minor amount of money necessary to adapt their sets and thus be able to receive all programs in black and white or they can spend a slightly larger amount and get color programs in color. It would not be in the public interest to deprive 40 million American families of color television in order to spare the owners of 7 million sets the expense required for adaptation.

The Commission's report deals specifically with the CTI, RCA, and CBS color systems giving reasons for adjudging the CTI and RCA systems to have shortcomings over the CBS system. The CBS system, it unanimously concluded, was at least as fully developed as black and white television in 1941, was most satisfactory in terms of "texture, color fidelity, and contrast," and was "bright enough" and "has sufficient contrast range."[16] The adoption of the CBS system required certain modification of the current monochrome receiver circuits. The Commission therefore issued a notice of proposed rulemaking to consider bracket standards so that existing monochrome system receivers could by means of a switch be adapted to receive color.[17]

CIRCLES OF CONFUSION

Although it had been pointed out that color wheel was not immutably an integral part of the sequential system, those opposed dubbed it a mechanical system and derisively made the most of this epithetical trick. There were those who saw the situation objectively. For instance, the note by the editor of Electronics.[18]

The sequential and simultaneous systems have been referred to as mechanical and electronic systems, respectively, but these are not significant designations, since their system can be operated electronically.

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[15] The Commission is aware that some manufacturers expressed a reluctance to build sets for an incompatible system if it is approved by the Commission. We believe that an informed public would demand receivers that are capable of getting programs from all television stations in the area and that the manufacturers would build such receivers.

[16] See report, pars. 140–145.

[17] That is, in monochrome transmission the number of scoring lines per frame was to continue at 525 interlaced 2 to 1 in successive fields, the frame frequency 30, the field frequency 60, and the line frequency 15,750 per second. For color television, however, the receiver was to be adjustable to 405 lines per frame, the frame frequency to 72, and the line frequency to 29,160 per second.

[18] Electronics, January 1947.

In coming to its conclusion, the Commission, as in the instance of sudden action in generating the table of the sixth report, was concerned over the danger of further delay of decision on the color problem and the aggravation of the compatibility problem that would ensue. Its conclusions were strongly affected by its effort to base its determinations on demonstrations rather than on what it termed speculations.

The Commission concluded that if insufficient assurance was received from the industry that they would incorporate bracket standards in their receivers, to obviate further deterioration, the Commission would issue a final decision adopting CBS color standards. For reasons of doubtful premise, manufacturers were asked to make their responses to this procedure by September 29, 1950, the report having issued on September 1. Were they to acquiesce, they were to be given 30 days in which to redesign and produce equipment. The treatment of this subject of broadcasting in the report was a masterpiece for its lack of lucidity.

Commissioner Hennock in separate views to this report agreed with the majority of the Commission that more time was desirable before a final decision was made and that a notice of proposed rulemaking concerning bracket standards be issued. She argued that should there be doubtful assurance that the industry would protect future investors by building into its receivers the proposed bracketing means, field-sequential color standards should be adopted. She did not, however, want to close the door to the development of a compatible system. As Commissioner Hennock put it:

It is of vital importance to the future of television that we make every effort to gain the time necessary for further experimentation leading to the perfection of a compatible color-television system.

Commissioner Hyde, in his separate view, expressed the feeling that a final decision should be issued forthwith adopting standards for the CBS field sequential system, that such a course would minimize dislocation and inconvenience to the public. It was his opinion that electronic means would be developed to replace the mechanical filter.

He subscribed to the view of the majority of the Commission that—

One of the easiest methods of defeating an incompatible system is to keep on devising new compatible systems in the hope that each new one will mean a lengthy hearing so that eventually the mere passage of time overpowers the incompatible system by the sheer weight of receivers in the hands of the public.

Commissioner Jones filed a biting, detailed dissenting opinion of the nature of a polemic.[19] Jones was for "color now." He did not believe that consideration of bracket standards should delay the final decision on color. He contended that industry had thwarted color for 10 years. This dissent, some 84 pages, occupies half of the mimeographed report. It is a bold piece of prose of value to one who desires to pry more deeply into the history of this highly controversial subject. (See also p. 14 of brief.)

THE SECOND REPORT

A second report of the Commission on color issued on October 11, 1950.[19a] The manufacturers who had responded to the requirements

[19] This diatribe raised openly questions of veracity. It elicited strong reaction illustrated by a sharp commentary in Electronics by Editor Donald G. Fink: Cross Talk, Electronics, p. 65, vol. 23; November 1950.

[19a] Docket 8736.

as to brackets in the first report and its corresponding rulemaking notice, in the words of the Commission:

Indicated that they are unable or unwilling to meet the requirements as to brackets set forth in the Commission's first report and in its notice concerning brackets—

and furthermore:

Simultaneously, with the release of this report we are issuing an order adopting standards for color television on the field sequential system—

the Commission believing that public interest would be served thereby.

To this hasty procedure Commissioner Sterling objected in a strong, realistic, and understanding dissent. Commissioner Hennock also dissented. Both these Commissioners saw the door closing to compatible television.

Early in 1950 the National Television System Committee began a serious, systematic examination of the color television problems. The work of this body is discussed in another section [20] of this report. This pretentious project of the NTSC led to a petition to the Federal Communications Commission for the adoption of new standards for color television, July 1953.

The RCA was not content with the two 1950 reports of the Commission. Along with its associates it brought an action against the Commission.[21]

The basis of its complaint [22] was that—

The order had been entered arbitrarily and capriciously, without the support of substantial evidence, against the public interest, and contrary to law.

The court, a three-judge panel, granted the plaintiff's application for a temporary restraining order, November 16, 1950, to be effective until the following April. The court otherwise affirmed the Commission's action. One of the judges dissented, holding the Commission's action precipitate, arbitrary, and capricious.

In its appeal from the decision of the lower court, RCA contended that the district court failed to review the record (FCC hearing) as a whole. It urged therefore that the lower court should be reversed and that the case be remanded for further consideration. To this the higher court remarked:

If RCA's premise were correct, the course which it suggests might be wholly appropriate. For as pointed out recently in considering the question of sufficiency of evidence to support an administrative order, this Court must and does rely on a first reviewing court's conclusion.

All parties to this suit agreed that—

given a justifiable fact situation, the Commission has power * * * to do precisely what it did in this case, namely, to promulgate standards for transmission of color television that result in rejecting all but one of the several systems.

The argument advanced by the appellants was that—

* * * the Commission as a matter of law erred in concluding that the CBS color system had reached a state of development which justified its acceptance to the exclusion of RCA's and that of others. Consequently, before the Commission, the district court and here, RCA's main attempt has been to persuade

[20] Industrial and Professional Committees, p. 237.
[21] U. S. D. C. (N. D. Ill.) 95 F. Sup. 660. Decision 20, December 1950.
[22] *RCA, NBC, Inc., RCA Victor Dis. Corp., et al.* v. *The U. S. A., FCC, and CBS, Inc.*, 95 F. Sup. 660 (N. D. Ill.), quoted from Supreme Court Decisions, 71 S. Ct. 806, May 28, 1951.

that no system has yet been proven worthy of acceptance for public use, that commercial color broadcasting must be postponed awaiting inventions that will achieve more nearly perfect results.

In affirming the lower court in upholding the Commission's action as not capricious, the Supreme Court interposed the thought that the—

courts should not overrule an administrative decision merely because they disagree with its wisdom * * *.

Mr. Justice Frankfurter, in an introspective dubitante saw things differently. He said:

The ultimate issue is the function of this Court in reviewing an order of the Federal Communications Commission, adopted October 10, 1950, whereby it promulgated standards for the transmission of color television. The significance of these standards lies in the sanction of a system of "incompatible" color television, that is, a system requiring a change in existing receivers for the reception of black and white as well as colored pictures.

on the theory that—

It rests on the determination that inasmuch as compatibility has not yet been achieved, while a workable incompatible system has proven itself, such a system, however intrinsically unsatisfactory, ought no longer to be withheld from the public.

The Justice observed that—

What the Commission here decided is that it could not wait, or the American public could not wait, a little while longer, with every prospect of a development which, when it does come, concededly will promote the public interest more than the incompatible system now authorized.

Surely what constitutes the public interest on an issue like this is not one of those expert matters as to which courts should properly bow to the Commission's expertness. In any event, nothing was submitted to us on argument, nor do I find anything in the Commission's brief of 150 pages, which gives any hint as to the public interest that brooks no delay in getting color television even though the method by which it will get it is intrinsically undesirable, inevitably limits the possibilities of an improved system or, in any event, leads to potential great economic waste. The only basis for this haste is that the desired better method has not yet proved itself and in view of past failures there is no great assurance of early success. And so, since a system of color television, though with obvious disadvantages, is available, the requisite public interest which must control the Commission's authorization is established. I do not agree.

Color television broadcasting by the field sequential system as approved by the Commission rules of October 1950 did not develop into a commercial reality. On the basis of frenetic work on a compatible system by RCA and of the comprehensive study initiated by the NTSC, the Commission issued a notice of proposed rulemaking [23] in August 1953 for formal consideration of the adoption of specifications for the system evolved by the NTSC.[24]

In its final report and orders [25] the Commission concluded:

Upon a careful consideration of the complete record in this proceeding, we are of the view that the signal specifications proposed by petitioners provide a rea-

[23] Docket No. 10637, adopted August 6, 1953.

[24] The color controversy characterizing the postwar period culminating in the 1953 second color report by the Commission has left its mark. Although RCA's Dr. Engstrom is a member of the NTSC whose standards were the standards ultimately adopted by the Commission, RCA President Frank Folsom was prompted to remark that the NTSC which developed compatible standards was a "phony," asserting that "NTSC was contrived by one of our competitors to get our system without paying any royalties." Dedication address, RCA Victor Distribution Center, Los Angeles, Broadcasting-Telecasting, October 29, 1956, p. 83.

[25] Docket No. 10637, adopted December 17, 1953.

sonable basis for the development of a color televsion service in the public interest. We have therefore concluded that the present rules and standards for the broadcast of a color television based on the field sequential signal specifications should be deleted and that the signal specifications in this proceeding should be adopted in lieu thereof at this time.

Here was an instance of unanimity within the Commission.[26]

The subject of bracket standards for variable line and frame frequencies referred to in the second color report was never carried to the point of hearing. Owing to the adoption of the NTSC standards in 1953, the disposition of this question is made moot.

As usual the public, in whose interest the art is expected to develop, was relatively oblivious to this complex hassle. Its custodian, the FCC, carries a heavy responsibility and obligation indeed, as an examination of the fine structure of these extraordinary proceedings will indicate.

The proceedings resulted in delay through uncertainty, with the end result, probably the end sought, of enabling development of a compatible system of color television to be brought to fruition. Here is a significant commentary on the intricacies of problems of regulation in a complex, rapidly developing technology where strong competitive forces are in conflict and where the stakes are high.[27]

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[26] Commissioner Hennock, although present, did not vote.

[27] RCA recently announced a loss of 6.9 million in its color television operations for the year 1956, Broadcasting-Telecasting, December 31, 1956, p. 74. For 1957, a $3.5 million color expansion program has been planned by NBC. Of its 201 affiliates at the end of 1956, 132 were equipped to rebroadcast network programs in color; 49 of the stations were equipped for local color transmission.

SECTION I

EDUCATIONAL TELEVISION

BACKGROUND

Television, just as radio broadcasting, offers great possibilities as an educational medium. The question arises whether this aspect of its potential can and should be left a responsibility of the commercial broadcaster, whether special privileges should be made available to educational interests themselves for the development of this field as its primary exponent, or whether the responsibility should not be shared by these complementary interests.

Certainly some of the regular network programs presented through commercial stations are highly educational but without any pronounced incentive; programs of such character are more often than not presented on a casual rather than systematic basis.[1]

The Commission in its sixth report and order gave its answer by reserving for the interior of the United States an enclave of 233 of a total of 2,000 outlets, of the table of assignments for noncommercial purposes, to which 16 outlets have since been added.[2] These reservations were to be reviewed a year later. Six years have elapsed since the issue of the sixth report but as yet there has been no review.

Twenty-seven stations are now broadcasting on a noncommercial educational basis. Twenty-two of these are VFH and five UHF. One more educational station is broadcasting on a commercial basis. If the concept takes with the public, considering the effective coverage radius of a station, then with no innovation, superior programs will be available only to scattered local areas, not to the Nation at large.

Here is an area where up to the present the initiative has had to be taken by the universities, the local communities, the State educational boards, and the foundations. There are no advertisers to underwrite the enterprise.

The Joint Council on Educational Television[3] has reported that more than $50 million has been spent on educational television, $5 million from State legislatures, $7 million from institutions of higher learning, $3 million from the boards of education and municipal governments, $5 million from commercial broadcasters, and $7 million from private institutions, business, and individuals. Foundations have contributed more than $25 million.[4]

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[1] A recent survey on the extent of educational programing on commercial stations covering 198 TV stations in 144 cities in 39 States, Alaska, and the District of Columbia, listed 531 program series presented by 160 colleges and universities, 67 city school systems, 15 county school systems, 8 State departments of education, and 5 parochial schools. Almost 40 percent of these broadcasts were for adult education. Fifty-nine of the series involved credit hours. TV Digest, December 8, 1956, p. 4.

[2] This consideration has by some been likened to the Morrill Act of 1859. This act made tracts of land in the public domain available to States to help in the establishment of public educational institutions. Out of this concept grew the Nation's land-grant centers of learning.

[3] Four Years of Progress in Educational Television, December 1956, prepared by Joint Council on Educational Television, 1785 Massachusetts Ave. NW., Washington, D. C.

[4] Broadcasting-Telecasting, p. 67, December 24, 1956.

COMMISSION ACTIVITIES

The Commission has had the subject of noncommercial educational television before it for some time. First attention appeared in a notice [5] in 1949 which, although it made no proposal, solicited guidance on this subject.

The Commission has received informal suggestions concerning the possible provision for noncommercial educational television broadcast stations in the 470- to 890-megacycle band.

This notice, opening the way for hearings on this important subject, engendered the Joint Committee on Educational Television which has been active since. These hearings led the Commission to propose provision for special immune channels to be assigned for educational purposes in its succeeding notice.[6] This provision, the notice stated—

was based upon the important contributions which noncommercial educational television stations can make in educating the people both in school—at all levels—and also the adult public.

The Commission felt that the need for special reservations was based on the theory that educational stations could not move as rapidly as commercial interests.

Commissioner Coy, in this 1951 notice, entered the conditioned view that—

It seems unnecessary for anyone to point to his belief that television has great potentialities in the field of education. I think there is universal awareness with respect to this fact. There is, however, a startling lack of data concerning the willingness and readiness of educational institutions—their boards of trustees, administrative officials, and faculties—to use television as an educational tool. The funds required to build and operate a noncommercial television station are not inconsequential. In the light of other needs of higher educational instiutions—new facilities, improved salary schedule for faculty personnel, retirement programs, etc.—it is understandable that such a decision is not easily taken. The continuing cost of operations without any income is perhaps a more difficult hurdle than the funds required to build the transmitter and studios.

Television frequencies constitute an important and large part of a great national resource, the radio spectrum. It is essential that such a resource be utilized in the public interest. It certainly cannot be regarded as being in the public interest if television frequencies, now proposed to be reserved by the Federal Communications Commission, are not utilized within the reasonably near future. What is the reasonably near future with respect to this problem? It is my opinion that the reasonably near future is the time required for educational institutions to make up their minds as to whether or not they will utilize television in their educational program and in so doing decide to become an operator or a joint operator of a noncommercial television station.

He added that—

* * * the reservation of channels for educational stations in no way relieves the licensees of commercial television stations of any responsibility to render a well-rounded program service, including a reasonable proportion of time devoted to programs that meet the educational needs of the community. Perhaps many educational institutions will decide to use television in cooperation with commercial broadcasters rather than as operators or joint operators of a noncommercial educational station.

These proceedings left Commissioner Hennock unhappy.

The Commission's proposal, by failing to give the schools a sufficient share of the remaining television spectrum, will adversely affect the course of education in the United States for generations to come.

[5] Notice of proposed rulemaking, July 12, 1949, p. 2.
[6] Third notice of further proposed rulemaking, March 21, 1951.

In pointing out that the Commission now faced the same problem in television as in radio in 1935, she said:

> It should be noted that the Commission's recommendation was based upon the expectation that commercial broadcasters, "under direction and supervision of the Commission," would cooperate with educators and make facilities available to them for service to the public. Yet, it is well known that the Federal Radio Education Committee, which was set up soon afterwards to effectuate the Commission's purpose, was, whatever its good intentions, largely unable to achieve the hoped-for objectives concerning educational broadcasting. Its effectiveness ceased long before it became moribund, which, as evidence of the untenableness of the entire arrangement, was due to the withdrawal of its financial support by commercial broadcasters.
>
> The Commission, in its 1935 report to Congress, went on to say: "The Commission feels, in particular, that broadcasting has a much more important part in the educational program of the country than has yet been found for it. We expect actively to assist in the determination of the rightful place of broadcasting in education and to see that it is used in that place."
>
> The slightest familiarity with the history of radio since that time makes clear the error of setting up committees for cooperation instead of providing the necessary channels for education. It establishes beyond question that education requires its own broadcasting facilities and that it cannot, with any assurance of success, be left solely to the bounty of commercial operations.

Not only did Commissioners Coy and Hennock express themselves individually on the subject, they were joined by Commissioners Webster and Sterling.

The sixth report and order contained in its Table of Assignments 233 noncommercial outlets, 71 of which were VHF and 162 UHF. As of July 1956, 6 VHF and 19 UHF stations had been added. In order to open the way for more noncommercial educational outlets the sixth report contained this observation:

> We recognize that cities which do not have educational reservations or a noncommercial educational station in operation should have an opportunity to use any portion of the spectrum unassigned for such purpose. Accordingly, where an appropriate showing is made in a rulemaking proceeding, as indicated above, assignments in the table will be made for noncommercial educational stations where the community involved does not have an educational reservation and no noncommercial educational station is in operation.

The unassigned portion of the spectrum may be assumed to be the UHF residue.

STATUS

As of January 1, 1957, of the 491 television stations on the air, 22[7] were noncommercial educational. Of these, 17 were VHF and 5 UHF. There were in addition 3 university-owned stations operated on commercial channels: WOI–TV, Ames, Iowa; WNDU–TV, South Bend, Ind.; KOMU–TV, Columbia, Mo. The number of noncommercial educational stations on the air as of January 4, 1958, is 27, 22 VHF and 5 UHF. There is now only one educational outlet operating on a commercial channel. As of this same date 25 more stations, 9 VHF and 16 UHF, are authorized but not on the air.

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[7] Not including one station in Puerto Rico. Educational stations expect to go on the air in 1957 in the following cities: New Orleans; Atlanta; Milwaukee; Minneapolis-St. Paul; Oxford, Ohio; Athens, Ga.; Salt Lake City; Des Moines; San Juan, P. R.; and possibly Toledo.

EDUCATORS' VIEW

The executive director of the Joint Council on Educational Television, Mr. Steetle, testified at the Television Inquiry. He indicated the value of VHF assignments to this cause: [8]

It is the stations on these VHF channels in the largest cities with their financial resources that have enabled us to turn educational television from dream to reality, and to begin acquiring the practical experience which is the basis of any developed art.

Pointing out the fact that VHF educational reservations were more immediately valuable than those in the UHF band, particularly in the larger markets,[9] he also observed that although the VHF reservations included such major centers as Chicago,[10] St. Louis,[10] Boston,[10] San Francisco,[10] Pittsburgh,[10] Milwaukee, Houston,[10] New Orleans, Minneapolis, and Seattle.[10]

In many of the larger cities, especially in the East, all available VHF channels were already occupied by commercial stations before the "freeze" of 1948, and the hearings which led to the sixth report. In these metropolitan areas, no new VHF channels were available for educational use, and, accordingly, the Commission reserved a newly assigned UHF channel.

In 7 of the first 10, and 10 of the first 20 metropolitan areas—including New York City, Philadelphia, Los Angeles, Detroit, Baltimore, Cleveland, and Washington—the present prospects of full-scale educational television are dependent upon the future of UHF service, because it is a UHF channel that is reserved for educational use.

A good example of this, Mr. Chairman: There has been in Cleveland a half million dollars set aside for the development of an educational television station. Yet the educators there are not proceeding to build this station until they find out whether or not someone else in Cleveland will come along and utilize UHF so there can be a widespread service to the total population.

The noncommercial VHF reservations lying fallow in the top markets are a great temptation to commercial groups. These centers include Little Rock, Minneapolis-St. Paul, Amarillo, Tampa, St. Petersburg, Boise, Albuquerque, Tucson, Salt Lake City, Spokane, Honolulu, Phoenix, Santa Fe, Las Vegas, Portland, Oreg., Charleston, S. C., and Dallas.

As of January 1, 1957, 17 of the 77 VHF noncommercial reservations had been taken up on the air, leaving 60 out of which 9 construction permits had been granted. The maximum number which theoretically could be released for commercial use was therefore 51. Some of these, as we have seen, have already been released for commercial use.

Of the 518 commercial VHF outlets available, 378 were on the air. Were all 518 outlets taken up along with, say 50 noncommercial stations, and converted to commercial status, they would just approximate the maximum number of program originating stations the Nation could support, according to 1 authority,[11] that is between 575 and 600. If this estimate is right, then it would mean that VHF alone, assuming appropriate outlet locations as to propitious markets, could, for the time being, take care of all commercial television broadcasting needs. On this theory, the existing UHF stations which are advantageously located from the standpoint of support, could be transferred to VHF channels. In other words, if care is not taken, the country could, by

[8] Television Inquiry, transcript, p. 1103.
[9] Ibid., pp. 1104–1105.
[10] These stations on the air.
[11] Exhibit V. Proposal and Comments of Columbia Broadcasting System, Docket No. 11532; 1955.

arbitrary means, be endangered from VHF saturation. UHF would then surely languish, and with it would go the small community ideology for the long-range future, envisioned by the sixth report.

INDUSTRY ACTIVITY

The VHF assignments in good markets are coveted by commercial interests. The argument is that channels should lie idle, particularly, of course, the VHF channels reserved for noncommercial use. Yet, adding even more VHF stations in intermixed markets only aggravates the UHF problem. Surely it is not the industry's responsibility to square this vicious circle, nor should the Commission aid and abet.

In his testimony at the Television Inquiry,[12] Mr. Jahncke expressed concern over the scarcity of VHF noncommercial educational assignments in the top markets, estimating but 10 such stations in the top 20 markets, concluding that a national educational television system could not exist without UHF.

He went on to say:

> We have, therefore, suggested to the FCC that the time has come when reservations for educational use should be abolished and replaced by the system in standard broadcasting, under which there are no reservations and educational institutions apply on the same status as all other applicants. If an educational institution, after participation in a competitive hearing, received a television grant, it would have the right to operate on a commercial basis to the extent deemed necessary. This would enable many smaller educational institutions with limited financial resources to operate a television station.

Senator Potter with his usual penetrating humor, was quick to observe at this point:

> We have an educational channel allocated in my State to a town of about 10,000 and the largest educational institution is a high school.

COMMISSION ACTION

In July of 1956 the Commission approved the release, its first, of unclaimed VHF educational channel 3 in College Station, Tex., for commercial use, replacing it by UHF channel 48. The justification given was that there was no indication of any immediate prospect of an application for it by educational interests. By a 4–3 vote, a similar request to relinquish educational reservation 11 of Des Moines, Iowa (8, 11, 17, 23), for commercial use, replacing it by a UHF was denied. More recently the Commission deleted the educational reservation channel 5 of Weston, W. Va., reassigning it for commercial use.

An interesting shift from an educational UHF to VHF, described on pages 63–64 of this brief, is the grant of channel 12 to the University of Nebraska, Lincoln, in place of the UHF channel 18 originally assigned for educational use in the table of the sixth report and order.

The Commission's reaction to pressure from the commercial interests to get as many Vs as possible on the air has affected the educational reservations. As of August 1956, proposed rulemaking notices existed for at least four shifts to free noncommercial VHF reservations for commercial use.

Two proposals, at least, for rulemaking had been formalized in which application has been made to replace a UHF assignment to

[12] Transcript, pp. 1741 and 1744–1745.

VHF by taking over a VHF commercial reservation; namely, Lubbock, Tex., educational channel 50 to channel 5, there having been no commercial application filed for channel 5, and educational channel 18 of Lincoln, Nebr., with channel 12.

TALLY, SPRING OF 1957

Of the 77 VHF reservations for noncommercial educational television, 17 are on the air as of the spring of 1957. Nine of these 17 VHF noncommercial educational stations on the air are in the top 100 television markets. Two of these 17 are in cities assigned 1 commerical VHF channel each, and this 1 is on the air. Six of the cities are assigned 2 commercial stations, 4 have both these stations on the air, another has only 1 on the air, and 1 has neither on the air. Six cities have 3 commercial VHF stations assigned, 4 of these cities are on the air with 3 stations, and 2 with 2 stations. Two cities are assigned 4 commercial VHF stations, 1 has 4 stations on the air, the other 3. In this listing, the number of UHF channels assigned to these cities has here been omitted. Seven of the cities have UHF assignments. A UHF station is on the air in only two.

Of the 172 UHF noncommercial educational reservations, 5 are on the air. The cause of the low yield of educational stations up to this point is perhaps one of the few degradations in current television which cannot be attributed to the allocation policy underlying the sixth report and order—at least as yet. The interim report of the Television Inquiry, however, takes the view that:

*** * * the development of an all-UHF system would substantially promote the development of educational television. The great majority of educational allocations throughout the country are in the UHF band. If UHF television does not survive, or survives only in atrophied form, large areas of the country will be deprived of an opportunity to have their own educational television stations. For example, under the present allocations, multiple VHF commercial services are provided in such major cities as New York, Los Angeles, Philadelphia, Detroit, Cleveland, and many others. No additional VHF channels can be made available, so that the educational allocations in these communities fall in the UHF band. Under present circumstances this makes the development of educational stations very difficult, if not impossible.**

Here is a proposition to be carefully questioned and evaluated.

COMMENTARY

The slow going of educational television is apparent. It appears up to this point as a noble experiment which if it can survive the immediate vicissitudes will gradually take on substance and form. Today it is in the groping stage. Like any social institution, it must be the natural product of evolution. It cannot be given body and soul by legislative fiat. Here is something the public must want and must be educated to want. An interesting indicator of the public acceptance of an educationally conceived program and of the temper of the commercial networks is found in the broadcasts of Dr. Frank Baxter of the University of Southern California. His Shakespeare on Television had its premiere as an educational presentation. Soon it was on the CBS network. The product must, however, first be clearly delineated. Perhaps first of all its proponents must have a clear idea of what it is that is being sought. Whereas the public may have to

be conditioned to appreciate a substantial product, it needs no academic lectures to detect confusion.

Once the educational proponents know what should be sought in this new medium of tele-enlightenment, then comes the matter of programing. Here, fortunately, the importance of live programing does not present a serious issue. Film and, above all, the more recent videotape technique may take the place of network service and, thus, make the educational stations independent of commercial television. Such a projection, however, seems neither constructive nor healthy. It would be more salutary to hope that there would evolve a community of interest and, thus, cooperation which, in the ideal let us say, would do away with the need for the existence of privileged stations altogether. One may take the view that the idea of special channel reservations was engendered by the trend of commercial television itself.

The network's point of view was put this way by Mr. Weaver, NBC's board chairman:

> There will be no cultural programing that is not fought for, and that goes for progress of any kind. Sponsors are not going to ask for cultural programs. They are going to have to be sold it all the way. It's going to be very difficult and, probably, it will be a long time before cultural or straight information programing will have any really safe position.

Public sentiment will control what the network interests will contribute, directly and indirectly, to the educational aspects of television. NBC has recently come forth with a promising gesture in which it proposed to make its television-network facilities and personnel available gratis to assist in the production and transmission of live educational programs to all noncommercial outlets.[13] This may well mark the beginning of a pattern salutary to both commercial and educational interests. This gesture may emerge into a worthy pattern of cooperation in which all the networks will find a way to become an organic part of the Nation's efforts to probe and develop the full potentialities of the new educational medium. If educational television as an institution is made a success, better because of the constructive support of the networks than despite them.

The Board of Regents of the State of New York has taken an active interest in educational television. It is being supported financially in this projection by the State legislature. In collaboration, there is the Metropolitan Educational Television Association (META) chartered by the Board of Regents in 1954 to develop educational television facilities and services in New York City, Westchester, Nassau, and Suffolk Counties. META trustees represent 19 major colleges, museums, libraries, besides other cultural institutions of the metropolitan area. Foundations have pledged over three-quarters of a million dollars for META's development, including programing. Since the fall of 1957, META has broadcast over 250 live educational programs.

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[13] NBC–TV plans to telecast to all the Nation's noncommercial educational stations five live programs from New York over its regular network facilities Monday through Friday, 6:30–7 p. m., eastern standard time. Stations out of time may telecast by kinescope recording. Tentative starting date, March 11, 1957 (Broadcasting Telecasting, Jan. 21, 1957, p. 90).

SUPPORT

In the foreseeable future, the educational television effort will depend, as in ordinary education, on public and private funds, on donors and legislators and inspired entrepreneurs. Its permanent position will be determined by the vision of inspired souls whose untiring efforts will clarify the way in which it can best serve. Fortunately, there are such dedicated men effectively at work in this search.

Station WQED, the first community-financed educational television station, has been on the air since April 1954. It owes much of its success to the dedicated efforts of a public-spirited citizen.[14] He observes, rhetorically, "Why should television be considered the exclusive property of the bazaar?" Other community stations are St. Louis (9), Pittsburgh (13), San Francisco (9), Cincinnati (48), Memphis (10), Chicago (11), Detroit (56), and Boston (2).

The Ford Foundation has been of immense value for its support of experimentation in this medium. The end product of the educational television and radio center at Ann Arbor, Mich., is providing serviceable programs. One hopes there will evolve imaginative, creative centers capable in their own right of creating program material. Surely, there can be outstanding educational products worthy of national distribution rather than gradual diffusion from the originating institution by way of migration of its privileged students.

The Ford Foundation has believed in the cause of educational television. It has supported the ideal over the past 7 years with funds totaling over $20 million. Some $11 million of this exploratory underwriting has come through the Fund for Adult Education, financed by the Foundation. The fund's contribution includes $2 million to aid the general educational television movement, particularly the services of the National Association of Educational Broadcasters and the American Council on Education. Nearly $4 million of the fund went for construction and equipping of stations and some $5 million for programing, especially supporting the educational TV and radio center at Ann Arbor, Mich. Of more than $8 million contributed in 1956 by the foundation itself, $1.5 million was for grants to colleges and universities to enable distinguished faculty members to appear on educational TV; more than $6 million for the educational radio and television center; and the remainder for general services by the National Association of Educational Broadcasters, the Joint Council on Educational Television, and the American Council on Education. In 1957, an additional $2.5 million was distributed to educational television by the Ford Foundation.

In addition, the Fund for the Advancement of Education, also established and financed by the Ford Foundation, has granted funds to several colleges and universities for experimental use of television in the classrooms; this is part of a program to encourage better use of teaching resources as a way of meeting the teacher shortage.

[14] The capital investment of this station is about $500,000; the current annual budget, $275,000. An idea of the breadth of the enterprise is given by the cooperating interests: The University of Pittsburgh, Carnegie Institute of Technology, Duquesne University, Chatham College, all armed service recruiting officers, parent-teachers' associations, Allegheny County Health Department, Conference of Christians and Jews, county bar association, county medical society, Bureau of Internal Revenue, Boy and Girl Scouts, and city recreation department. See, also, Educational Television, Leland Hazard, the Atlantic Monthly, November 1955.

Fortunately, closed-circuit television is making headway and leading rapidly toward centers of exploration where its logical domain can be determined by trial and error. Over 100 closed-circuit installations have been made.[15] One of the latest, an extensive project, has been made in Washington County, Md., centering around Hagerstown. Eventually, the entire Washington County will be tied together through a six-channel cable. This project is sponsored jointly by RETMA and the Ford Foundation.[16]

The most ambitious educational television project is one under the aegis of the Southern Regional Education Board. This project includes 16 Southern States, covering 309 schools, with programs originating in some 30 of these. This closed-circuit system contemplates the establishment of a six-channel microwave circuit for black and white and color. Engineering estimates include a $200 million capital venture and a $7 million annual operating budget.

Sweeping the educational field is the feeling that, henceforth, school buildings should be designed to take into account the new medium. Cincinnati, it is reported, hopes to have television in every primary school—an audience of 200,000. In Philadelphia, 100,000 students a week have been exposed. One authority, Dr. Alexander J. Stoddard, onetime superintendent of schools in Philadelphia and Los Angeles, advocates every public school be equipped with television. Here, indeed, is unbridled enthusiasm, if not endorsement, for a technique as yet only in the exploratory stage. This energetic effort in behalf of closed-circuit television will surely mitigate the danger of misapplying the educational potentialities of television broadcasting, which already suffers from overenthusiastic notions that here is the great mass educational panacea.

CONCLUSION

Here in television broadcasting is a relatively new vehicle of great social significance warranting careful consideration if the public interest is to be served with a maximum of effectiveness. The report of the Broadcasting Committee [17] in 1949 contained the following appraisal:

> Broadcasting as an influence on men's minds has great possibilities, either of good or evil. The good is that if broadcasting can find a serious audience it is an unrivaled means of bringing vital issues to wider understanding. The evil is that broadcasting is capable of increasing perhaps the most serious of all dangers which threaten democracy and free institutions today—the danger of passivity—of acceptance by masses of orders given to them and of things said to them. Broadcasting has in itself a tendency to encourage passivity, for

[15] Closed-circuit equipment sales for 1956 are estimated to be $2.75 million, including some 800 camera chains. Corresponding total sales to date approximate over $5 million, some 1,500 to 1,600 camera chains. Corresponding estimate for 1957 is $5 million. Here is virtually a new industry. See Television Digest, December 29, 1956.

The Commission's position on closed-circuit television, as expressed in the sixth report (par. 45), is interesting for its superficial prejudgment:

"Several alternative methods for utilizing television in education have been presented to the Commission, but we do not think that any of them is satisfactory. One proposal is to utilize a microwave relay or wired-circuit system of television for in-school educational programs. It appears that the cost of a wired circuit for the schools in larger cities might be prohibitive, but the determinative objection to such a proposal is that it would ignore very significant aspects of educational television. It is clear from the record that an important part of the educator's effort in television will be in the field of adult education in the home, as well as the provision of after-school programs for children."

[16] Another Ford Foundation contribution, indirectly, is through the Fund for the Republic, announced at the end of last year. A study is to be undertaken on the subject of mass mediums of communication. This project is said to begin with an analysis of the relationship between Government and television and include an appraisal of the effectiveness of the first-amendment guaranty of freedom of speech of the medium of television.

[17] Cmd. 8116 (1951).

listening as such, if one does no more, is a passive occupation. Television may be found to have this danger of passivity in even stronger form.

Mr. Justice Frankfurter has reflected on this telecommunication innovation with trenchant perspicacity: [18]

One of the more important sources of the retardation or regression of civilization is man's tendency to use new inventions indiscriminately or too hurriedly without adequate reflection of long-range consequences. No doubt the radio enlarges man's horizon. But by making him a captive listener it may make for spiritual impoverishment. Indiscriminate use of the radio denies him the opportunities for reflection and for satisfying those needs of withdrawal of which silent prayer is only one manifestation. It is an uncritical assumption that every form of reporting or communication is equally adaptable to every situation. Thus, there may be a mode of what is called reporting which may defeat the pursuit of justice.

Doubtless, television may find a place among the devices of education; but much long-headed thought and patient experimentation are demanded lest uncritical use may lead to hasty jettisoning of hard-won gains of civilization. The rational process of trial and error implies a wary use of novelty and a critical adoption of change. When a college head can seriously suggest, not by way of irony, that soon there will be no need of people being able to read—that illiteracy will be the saving of wasteful labor—one gets an idea of the possibilities of the new barbarism parading as scientific progress.

Man forgets at terrible cost that the environment in which an event is placed may powerfully determine its effect. Disclosure conveyed by the limitations and power of the camera does not convey the same things to the mind as disclosure made by the limitations and power of pen or voice. The range of presentation, the opportunities for distortion, the impact on reason, the effect on the looker-on as against the reader-hearer, vary; and the differences may be vital. Judgment may be confused instead of enlightened. Feeling may be agitated, not guided; reason deflected, not enlisted. Reason—the deliberative process—has its own requirements, met by one method and frustrated by another.

Here is an opportunity for the Commission to take advantage of its obligation under the Communications Act [19] to—

Study new uses for radio * * * and generally encourage the larger and more effective use of radio in the public interest.

There appears to be no allowance in the new or immediate budget for a critical examination of this portentous subject.

Should the theory that educational broadcasting is a separate entity prove itself in practice, then indeed under the present reservation scheme there will be anything but a nationwide availability of educational programs. In the absence of commercial networks' cooperation, the distribution of live programs is out. The NBC proffer, the reverse of this procedure, giving live programs to educational stations can be a godsend for its immediate value in engendering new efforts on behalf of the educators and it may mark the beginning of an enlightened trend which will become bilateral.

The overall situation, if left as it is and without cooperative support in supplemental dissemination by air over commercial stations, makes for a random distribution of enlightening educational cases in a desert of commercial sands.

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[18] *RCA and NBC* v. *U. S.*, 71 S. Ct. 806.
[19] Sec. 303 (g).

SECTION II

THE COMMUNICATIONS ACT

Interpretations by the Commission and by the Courts

INTRODUCTORY

Many are the impressions of what should be the national objectives of commercial television broadcasting in this country. These objectives, whatever their natures and extremes, must fall within the contour established by the law or urge its modification. Moreover, they must be recognized as subject to contemporary political, social, economic, and technical forces as they are shaped through Commission proceedings and interplay with the courts.

It is perhaps because of the immediate impact of technology on almost every aspect of life that the tendency has been to pass off the problems of television as essentially technological. This is unfortunate. Only on this hypothesis can one explain the fact that in the Commission's proceedings the testimony and influence of engineers have been predominant. In the business of allocation, for example, there has been too little mature consideration of other than the engineering aspects of the problem. Yet it is out of these limited proceedings in large measure that the administrative policies and rules governing television broadcasting have evolved.

For perspective and understanding beyond the technological, it will be worthwhile to review the record for facts and conclusions involving other disciplines. Most fruitful sources delineating the functions of the Commission are the official opinions and actions of the Commission itself and the decisions of the courts. First of all, however, it is important to examine the law under which commercial television broadcasting[1] has grown and now operates, the Communications Act of 1934. The purpose of the act, in its broadest sense, was to regulate interstate and foreign commerce in communications.

Under the general provisions for radio, including television, it is declared that—

> It is the purpose of this act, among other things, to maintain the control of the United States over all the channels of interstate and foreign radio transmission; and to provide for the use of such channels, but not the ownership thereof, by persons for limited periods of time, under licenses granted by Federal authority, and no such license shall be construed to create any right, beyond the terms and conditions, and periods of the license (sec. 301).

As described in a Supreme Court decision[2]—

> The purpose of the act was to protect the public interest in communications.

[1] The word "television" does not appear in the act. Commercial television broadcasting did not begin until 1941.

[2] *Scripps-Howard* v. *FCC*, 63 S. Ct. 875, 882 (1942).

In yet another decision [4] by the same court it was asserted that—

> The avowed aim of the Communications Act of 1934 was to secure the maximum benefits of radio to all the people of the United States—

and in yet another observation [5] the perspicacious note that the act—

> expresses a desire on the part of Congress to maintain through appropriate administrative control, a grip on the dynamic aspects of radio transmission.

The objectives of the national television system as expressed by the formal orders, rules and standards promulgated by the Commission, must first of all conform to the general provisions of the act, enacted—

> * * * so as to make available, so far as possible, to all the people of the United States, a rapid, efficient, nationwide, and worldwide wire and radio communication service * * * (sec. 1).

and [3]—

> to avoid concentration of control of the valuable electronic public domain.

The Federal Communications Commission [6] was established by this act to serve as the administrative agency, the expert and quasi-judicial body of the Congress to carry out the provisions of the law.[7] Its responsibilities, in contradistinction to those of the courts, are succinctly stated in the same Supreme Court decision:

> The Commission, not the courts, is the ultimate custodian of the public interest under this act.

And—

> Unlike courts, which are concerned primarily with the enforcement of private rights although public interests may thereby be implicated, administrative agencies are predominantly concerned with enforcing public rights although private interests may thereby be affected.[8]

In the words of Mr. Justice Frankfurter [9]—

> * * * these agencies deal largely with the vindication of public interest and not the enforcement of private rights * * *.

The act decrees that—

> No station license shall be granted by the Commission until the applicant therefor shall have signed a waiver of any claim to the use of any particular frequency or of the ether as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise (sec. 304).

Moreover—

> All applications for station licenses, or modifications or renewals thereof, shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station; the ownership and location of the proposed station and of the stations, if any, with which it is proposed to communicate; the frequencies and the power desired to be used; the hours of the day or other periods of time during which it is proposed to operate the station; the purpose for which the station is to be used; and *such other information as it may require* (sec. 308 (b)). [Emphasis supplied.]

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[3] *Allentown Br. Corp.* v. *FCC*, 232 F. 2d 57, 59 (1955).
[4] *NBC* v. *U. S.*, 63 S. Ct. 997, 1010 (1943).
[5] *FCC* v. *Pottsville*, 60 S. Ct. 437, 438 (1940).
[6] The Commission is made up of seven members appointed by the President with the advice and consent of the Senate. The Atomic Energy Commission, Civil Aeronautics Board, Federal Power Commission, and Federal Trade Commission are five-member bodies. The Interstate Commerce Commission is an 11-member agency. Formal procedures of these bodies and the Patent Office are unified through the Administrative Procedure Act of June 1946.
[7] Because of their unusual power, administrative agencies are often referred to as a fourth branch of the Government.
[8] 63 S. Ct. 1935, 1930 (1943).
[9] *Ashbacker Radio Corp.* v. *FCC*, 66 S. Ct. 148, 152 (1945).

All actions by the Commission must withstand the test of public "convenience, interest, or necessity." Theirs is the unique privilege and responsibility to endow these words with explicit meaning.

The Supreme Court has said [9a] that:

> The "public interest" to be served under the Communications Act is thus the listening public in the "larger and more effective use of radio" (par. 303 (g)).

In the Sanders case,[9b] for instance, the Supreme Court observed that:

> An important element of public interest and convenience affecting the issue of a license is the ability of the licensee to render the best practicable service to the community reached by his broadcasts.

The courts are exceedingly cautious in passing on questions of public interest. Take, for instance, the following passage: [10]

> * * * indeed it is not our function to declare initially what is in the public interest. Our function goes to the preservation of an existing situation pendente lite where irreparable damage would ensue from an immediate and possibly temporary change.

Again the Supreme Court held that [11]—

> The public [interest], not some private interest, convenience, or necessity governs the issuance of licenses under the act.

Subject to these universal, all-pervading criteria of the act, as set forth in section 303, the Commission shall, among other things:

(*a*) Classify radio stations;
(*b*) Prescribe the nature of the service to be rendered by each class of licensed stations and each station within any class;
(*c*) Assign bands of frequencies to the various classes of stations, and assign frequencies for each individual station and determine the power which each station shall use and the time during which it may operate;
(*d*) Determine the location of classes of stations or individual stations;
(*e*) Regulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and from the apparatus therein;
(*f*) Make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this Act: *Provided, however*, that changes in the frequencies, authorized power, or in the times of operation of any station, shall not be made without the consent of the station licensee unless, after a public hearing, the Commission shall determine that such changes will promote public convenience or interest or will serve public necessity, or the provisions of this Act will be more fully complied with;
(*g*) Study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest;
(*h*) Have authority to establish areas or zones to be served by any station;
(*i*) Have authority to make special regulations applicable to radio stations engaged in chain broadcasting; . . . ."

In respect to section 303, the Supreme Court had issued an interpretation of vast significance: [12]

> These provisions, individually and in the aggregate, preclude the notion that the Commission is empowered to deal only with the technical and engineering impediments to the "*larger and more effective use of radio in the public interest.*" [Emphasis supplied.]

[9a] *NBC* v. *U. S.*, 63 S. Ct. 997, 1009 (1943).
[9b] *FCC* v. *Sanders*, 60 S. Ct. 693, 697 (1940).
[10] *Greylock Br. Co.* v. *U. S.*, 231 F. 2d 748, 750 (1956).
[11] *Ashbacker* v. *FCC*, 66 S. Ct. 148, 151 (1945).
[12] *NBC* v. *U. S.*, challenging the chain broadcasting order, 63 S. Ct. 997, 1010–1011 (1943).

Note that the italicized portion of this quotation applies to (g) of the section.

In the same decision the network petitioners argued that the Commission was empowered to act substantially with respect to the technical aspect of chain broadcasting only. To this contention the Court said:

> For the cramping construction of the act pressed upon us, support cannot be found in its legislative history. The principal argument is that paragraph 303 (i), empowering the Commission to make special regulations, applicable to radio stations engaged in chain broadcasting, intended to restrict the scope of the Commission's powers to the technical and engineering aspects of chain broadcasting.

Again in this decision, on the subject of public interest, the Court observed:

> The "public interest" to be served under the Communications Act is thus the interest of the listening public in "the larger and more effective use of radio" (303 (g)). The facilities of radio are limited and therefore precious; they cannot be left to wasteful use without detriment to the public interest.

License applications, renewals, and modifications must therefore ever pass the test of public convenience, interest, or necessity. It is the control of construction permit, license, and license renewal wherein lies the power whereby the Commission exacts compliance with its rules and regulations and the law.[13]

The statute makes it a crime for anyone willfully or knowingly to violate the conditions of the act. This includes, of course, the operation of a radio station without a license. It is the denial of this license which is the Commission's real sanction. The general penalties are covered in sections 501 and 502 of the act.

Electrical interference is referred to in section 301 of the act:[14]

> No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio * * * when interference is caused by such use or operation with the transmission of such energy, communications, or signals from within said State to any place beyond its borders * * * except under and in accordance with this Act and with a license in that behalf granted under the provisions of this Act.

Also in section 303:

> Except as otherwise provided in this Act, the Commission from time to time, as public convenience, or necessity requires shall—
>
> (f) Make such regulations not inconsistent with law as it may deem necessary to prevent interference between stations and to carry out the provisions of this Act * * *
>
> (m) (1) Have authority to suspend the license of any operator upon proof sufficient to satisfy the Commission that the licensee—
>
> (E) Has willfully or maliciously interfered with any other radio communications or signals. * * *

The word "interference" as used in the act is not electrical interference generally but solely interference between one communications facility and another.

It is significant, though not generally perceived, that the act gives the Commission no legal authority to deal with the offending party where the electrical interference to a communications facility is by a noncommunications source. Any remedy with respect to interference

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[13] Prior to the enactment of the Radio Act of 1927, the Secretary of Commerce was powerless to deal with the problems radio broadcasting had posed. It had been held that he could not deny a license to an otherwise legally qualified applicant on the ground that the proposed station would interfere with existing private or Government stations.

[14] See also secs. 320 and 321.

from such a source must come entirely as pragmatic compromise by the offending party over whom the Commission has no legal control whatsoever.[15]

With respect to the allocation of nongovernmental facilities for broadcasting, the act requires in section 307 that—

> The Commission, if public convenience, interest, or necessity will be served thereby, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by this Act.

and that—

> In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same * * * No license granted for the operation of a broadcasting station shall be for a longer term than 3 years * * *.

That commercial television broadcasting is to be a competitive enterprise is implied by section 313. Here is the statement that—

> all laws of the United States relating to unlawful restraints and monopolies and to combinations, contracts, or agreements in restraint of trade are hereby declared to be applicable to the manufacture and sale of and to trade in radio apparatus and devices entering into or affecting interstate or foreign commerce and to interstate or foreign raido communications.

It is asserted indirectly by the definition in section 3 (h) that—

> * * * a person engaged in radio broadcasting shall not, insofar as such person is so engaged, be deemed a common carrier.

In section 314, under the heading "Preservation of competition in commerce," there is further definition of this nature.

Government-owned services do not come under the control of the Commission. This exception complicates greatly the matter of intelligent allocations planning and telecommunications planning. It is a shocking fact that there is in this country today no overall administrative agency to look after our communications interest in an authoritative manner. Coordinate solutions must be the answer, and these must be arrived at by compromise. Government services look to the Commission only as indicated in section 305 (b) of the act:

> Radio stations belonging to and operated by the United States shall not be subject to the provisions of sections 301 and 303 of this Act. All such Government stations shall use such frequencies as shall be assigned to each or to each class by the President. All such stations, except stations on board naval and other Government vessels while at sea or beyond the limits of the continental United States, when transmitting any radio communication or signal other than a communication or signal relating to Government business, shall conform to such rules and regulations designed to prevent interference with other radio stations and the rights of others as the Commission may prescribe,

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[15] Corollary is the instance where a noncommunication device which in its operation incidentally radiates energy lying in the spectrum utilized for radio communication becomes an article of commerce. There is nothing in the law which compels the manufacturer or the user to seek from the Commission authorization of a band in the spectrum containing the spurious radiation. Strictly, at the present time, the Commission is without jurisdiction over noncommunications devices which radiate energy interfering with communications systems. Another interesting compromise involves the armchair situation selector by which, with no physical connection, the set may be remotely controlled. In legalizing these devices the Commission has adjudged them nonradiation devices, else the set owner would have had to have a transmitter license. The dodge, a subtle expedient indeed, was to declare the device to operate by induction rather than radiation. Since the Communications Act, a Federal law, can deal only with interstate communications, the likelihood of interstate communication would be the real test.

That the Government is a prodigious user of the available radio spectrum is brought out in the Stewart report[16] on telecommunications to the President, 1951. This report shows that at the time the Federal Government used about 50 percent of the spectrum space between 30 and 30,000 megacycles, or around a third of the channels derivable from this special segment.

The Commission has full authority and power to institute inquiry on its own initiative, in addition to the usual hearings incidental to its immediate operation. It thus has the means by which to seek independent information for the purpose of making judgments and for long-range planning in the public interest. Here is a power, the full benefits of which have not yet been fully exploited.

Section 403 of the act states that—

> The Commission shall have full authority and power at any time to institute an inquiry, on its own motion, in any case and as to any matter or thing concerning which complaint is authorized to be made, to or before the Commission by any provision of this Act, or concerning which any question may arise under any of the provisions of this Act, or relating to the enforcement of any of the provisions of this Act. The Commission shall have the same powers and authority to proceed with any inquiry instituted on its own motion as though it had been appealed to by complaint or petition under any of the provisions of this Act.

The courts have passed on this point many times. In *Stahlman* v. *FCC* the Court said:[17]

> In the Communications Act, as in the amendment to the Interstate Commerce Act, full authority and power is given to the Commission with or without complaint to institute an inquiry concerning questions arising under the provisions of the act or relating to its enforcement. This, we think, includes authority to obtain the information necessary to discharge its proper functions, which would embrace an investigation aimed at the prevention or disclosure of practices contrary to the public interest.

Here the Commission was interested in obtaining information to determine what statement of policy or what rules should be issued concerning (FM) stations which are associated with the publication of one or more newspapers, and newspapers which might in the future desire to acquire broadcasting stations. The appellant, a newspaper publisher, had ignored a subpena to appear before the Commission to testify on this subject.

Again, in *Johnston Broadcasting Company* v. *FCC*, the Court observed:[18]

> We think, therefore, that the Commission is entitled to assume that in such a proceeding the record of the testimony will contain reference to all the facts in respect to which a difference between the parties exists, and that the parties will urge, each in his own behalf, the substantial points of preference. The Commission need not inquire, on its own behalf, into possible differences between the applicants which are not suggested by any party, *although in its discretion it may do so.* [Emphasis supplied.]

In the instance of the Commission's recent network study (S. B. pp. 112–115), the Federal court upheld FCC's right to subpena confidential data,[19] saying that it seemed—

> to come within the framework of powers of inquiry granted by Congress to the FCC upon subject matter which vitally affects the public interest.

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[16] Telecommunications, a Report by the President's Communications Policy Board. Washington. March 1931, p. 43.
[17] 126 F. 2d 124. 127 (1942).
[18] 175 F. 2d 124, 127 (1942).
[19] TV Digest, September 1957, p. 14.

The Commission was, however, warned to treat the information so obtained as confidential.

THE COURTS

Appeals from final decisions and orders of the Commission may be taken to the United States Court of Appeals, District of Columbia, and under certain conditions to the district courts. Grounds for such appeal under paragraph 402 (b) include denial of construction permit, of license renewal, license modification, and station transfer or other disposition. Appeal may also be taken by others as intervenors who are aggrieved by acts of the Commission.

The court of appeals' jurisdiction over the acts of the Commission is limited strictly to points of law. The court of appeals' judgment is reviewable by the Supreme Court of the United States, subject to grant of writ of certiorari.

Another form of relief is found under the provisions of the Urgent Deficiencies Act of October 22, 1913, which is incorporated in paragraph 402 (a) of the Communications Act. It provides for a specially constituted district court, with direct appeal to the Supreme Court. The Urgent Deficiencies Act authorizes the district court to issue temporary stays of an order under review, for instance where irreparable damage would otherwise befall the petitioner.

As an illustration:[20]

* * * if the Commission on its own motion modifies a station license, review is had under paragraph 402 (a) in the appropriate district court. However, if it grants an application for modification of a license, an appeal lies under paragraph 402 (b) to the Court of Appeals for the District of Columbia. Both cases give rise to the same kind of issues on appeal. Both orders are equally susceptible of being stayed on appeal. As the legislative history of the act plainly shows, Congress provided the two roads to judicial review only to save a licensee the inconvenience of litigating an appeal in Washington in situations where the Commission's order arose out of a proceeding not instituted by the licensee.

A clear statement of the background and function of the courts has been given in the Pottsville case:[21]

Under the Radio Act of 1927, as originally passed, the Court of Appeals was authorized in reviewing action of the Radio Commission to "alter or revise the decision appealed from and enter such judgment as to it may seem just." * * * Thereby the Court of Appeals was constituted "a superior and revising agency in the same field" as that in which the Radio Commission acted. * * * Since the power thus given was administrative rather than judicial, the appellate jurisdiction of this Court (the Supreme Court) could not be invoked. * * * To lay the basis for review here, Congress amended paragraph 16 (of the Radio Act) so as to terminate the administrative oversight of the court of

[20] 62 S. Ct. 882, 883 (1942).

[21] *FCC* v. *Pottsville Br. Co.*, 60 S. Ct. 437, 442–443 (1940). The power of the lower courts to determine administrative policy was terminated by Amendment Act of July 1, 1930, c. 788, 46 Stat. 844. Just prior to this amendment, in *FRC* v. *General Electric*, 50 S. Ct. 389 (1930), the Supreme Court held that it could not be invested with jurisdiction over court of appeals decisions which were not of the nature of judicial judgments. In this instance, the General Electric Co. had made application for renewal of its radio broadcast license. The Radio Commission ordered the license be issued not on existing terms but on new terms much less advantageous to the company. GE appealed. The court of appeals found that public convenience, interest, and necessity would be served by renewing the license on the old or original terms, remanded the case, and ordered the Commission to grant the license with original terms preserved. In this decision, the court of appeals was acting as a superior and revising agency in the same field as the Commission. The Commission petitioned for writ of certiorari. The jurisdiction of the Supreme Court in the matter was challenged. The Supreme Court, in dismissing the writ, said that "the proceeding in that court (appeals) was not a case or controversy in the sense of the judiciary article, but was an administrative proceeding, and therefore that the decision therein is not reviewable by this Court."

appeals. * * * In "sharp contrast with the previous grant of authority" the court was restricted to a purely judicial review. "Whether the Commission applies the legislative standards validly set up, whether it acts within the authority conferred or goes beyond it, whether its proceedings satisfy the pertinent demands of due process, whether, in short, there is compliance with the legal requirements which fix the province of the Commission and govern its action, are appropriate questions for judicial decision." (*FRC* v. *Nelson*, 53 S. Ct. 627.) On review the court may thus correct errors of law and remand. The Commission is bound to act upon the correction. * * * The Commission's responsibility at all times is to measure applications by the standard of "public convenience, interest, or necessity. * * *"

* * * But courts are not charged with general guardianship against all potential mischief in the complicated tasks of government. The present case makes timely the reminder that "legislatures are ultimate guardians of the liberties and welfare of the people in quite as great a degree as the courts."

Judicial jurisdiction with respect to the Commission actions may be gleaned from the decision of the court of appeals in the Yankee Network case.[22]

* * * our jurisdiction on appeal under the Communications Act depends upon whether reasons of appeal are assigned, which if well founded, would show that the appellant is a person aggrieved or where interests are adversely affected by the decision of the Commission from which the appeal is taken.

The Supreme Court has said:[23]

Whether the Commission applies the legislative standards validly set up, whether it acts within the authority conferred or goes beyond it, whether its proceedings satisfy the pertinent demands of due process, whether, in short, there is compliance with the legal requirements which fix the province of the Commission and govern its action, are appropriate questions for judicial decision. These are questions of law upon which the court is to pass. The provision that the Commission's findings of fact, if supported by substantial evidence, shall be conclusive unless it clearly appears that the findings are arbitrary or capricious, cannot be regarded as an attempt to vest in the court an authority to revise the action of the Commission from an administrative standpoint and to make an administrative judgment. A finding without substantial evidence to support it—an arbitrary or capricious finding—does violence to the law. It is without the sanction of the authority conferred. And an inquiry into the facts before the Commission, in order to ascertain whether its findings are thus vitiated, belongs to the judicial province and does not trench upon, or involve the exercise of, administrative authority. Such an examination is not concerned with the weight of evidence or with the wisdom or expediency of the administrative action.

The Supreme Court, for instance, in upholding the chain broadcasting regulations promulgated by the Commission in 1941, said:[24]

It is not for us to say that the public interest will be furthered or retarded by the chain broadcasting regulations * * *.

This Court has many times said that it is the Commission, not the courts, who must be the judge of public interest.

ANTECEDENT CONSIDERATIONS

It is important to understand something of the background which led to the enactment of the Communications Act of 1934.

Herbert Hoover, when Secretary of Commerce, in testimony leading up to the Federal Radio Act of 1927, stated [25] that—

It is urgent that we have an early and vigorous reorganization of the law in Federal regulation of radio. Not only are there questions of orderly conduct

[22] *Yankee Network* v. *FCC*, 107 F. 2d 212, 224 (1939).
[23] *Federal Radio Commission* v. *Nelson Bros.*, 53 S. Ct. 627, 632 (1933).
[24] 63 S. Ct. 997, 1013 (1943).
[25] Quoted in minority views on H. R. 9971, p. 11, Rept. No. 464, 69th Cong., 1st sess.

between the multitude of radio activities, in which more authority must be exerted in the interest of every user, whether sender or receiver, but the question of monopoly in radio communication must be squarely met.

It is inconceivable that the American people will allow this newborn system of communication to fall exclusively into the power of any individual, group, or combination. * * * It cannot be thought that any single person or group shall ever have the right to determine what communication may be made to the American people.

A succinct account of the background leading up to the Hoover recommendation is given in the decision of the Supreme Court in *National Broadcasting* v. *United States:*[26]

"The enforcement of the Radio Act of 1912 presented no serious problems prior to the World War. Questions of interference arose only rarely because there were more than enough frequencies for all the stations then in existence. The war accelerated the development of the art, however, and in 1921 the first standard broadcast stations were established. They grew rapidly in number, and by 1923 there were several hundred such stations throughout the country. The act of 1912 had not set aside any particular frequencies for the use of private broadcast stations; consequently, the Secretary of Commerce selected 2 frequencies, 750 and 833 kilocycles, and licensed all stations to operate upon 1 or the other of these channels. The number of stations increased so rapidly, however, and the situation became so chaotic, that the Secretary, upon the recommendation of the National Radio Conferences which met in Washington in 1923 and 1924, established a policy of assigning specified frequencies to particular stations. The entire radio spectrum was divided into numerous bands, each allocated to a particular kind of service. The frequencies ranging from 550 to 1,500 kilocycles (96 channels in all, since the channels were separated from each other by 10 kilocycles) were assigned to the standard broadcast stations. But the problems created by the enormously rapid development of radio were far from solved. The increase in the number of channels was not enough to take care of the constantly growing number of stations. Since there were more stations than available frequencies, the Secretary of Commerce attempted to find room for everybody by limiting the power and hours of operation of stations in order that several stations might use the same channel. The number of stations multiplied so rapidly, however, that by November 1925, there were almost 600 stations in the country, and there were 175 applications for new stations. Every channel in the standard broadcast band was, by that time, already occupied by at least one station, and many by several. The new stations could be accommodated only by extending the standard broadcast band, at the expense of the other types of services, or by imposing still greater limitations upon time and power. The National Radio Conference which met in November 1925, opposed both of these methods and called upon Congress to remedy the situation through legislation.

The Secretary of Commerce was powerless to deal with the situation. It has been held that he could not deny a license to an otherwise legally qualified applicant on the ground that the proposed station would interfere with existing private or Government stations. *Hoover* v. *Intercity Radio Co.* (52 App. D. C. 339, 286 F. 1003). And on April 16, 1926, an Illinois district court held that the Secretary had no power to impose restrictions as to frequency, power, and hours of operation, and that a station's use of a frequency not assigned to it was not a violation of the Radio Act of 1912. *United States* v. *Zenith Radio Corp.* (D. C. 12 F. 2d 614). This was followed on July 8, 1926, by an opinion of the Acting Attorney General Donovan that the Secretary of Commerce had no power, under the Radio Act of 1912, to regulate the power, frequency or hours of operation of stations (35 Op. Atty. Gen. 126). The next day the Secretary of Commerce issued a statement abandoning all his efforts to regulate radio and urging that the stations undertake self-regulation.

But the plea of the Secretary went unheeded. From July 1926, to February 23, 1927, when Congress enacted the Radio Act of 1927 (44 Stat. 1162), almost 200 new stations went on the air. These new stations used any frequencies they desired, regardless of the interference thereby caused to others. Existing stations changed to other frequencies and increased their power and hours of operation at will. The result was confusion and chaos. With everybody on the air,

[26] 63 S. Ct. 997, 1007–1008 (1943).

nobody could be heard. The situation became so intolerable that the President in his message of December 7, 1926, appealed to Congress to enact a comprehensive radio law:

"Due to the decision of the courts, the authority of the department (of Commerce) under the law of 1912 has broken down; many more stations have been operating than can be accommodated within the limited number of wavelengths available; further stations are in course of construction; many stations have departed from the scheme of allocations set down by the department, and the whole service of this most important public function has drifted into such chaos as seems likely, if not remedied, to destroy its great value. I most urgently recommend that this legislation should be speedily enacted" (H. Doc. 483, 69th Cong., 2d sess., p. 10).

The plight into which radio fell prior to 1927 was attributable to certain basic facts about radio as a means of communication—its facilities are limited; they are not available to all who may wish to use them; the radio spectrum simply is not large enough to accommodate everybody. There is a fixed natural limitation upon the number of stations that can operate without interfering with one another. Regulation of radio was therefore as vital to its development as traffic control was to the development of the automobile. In enacting the Radio Act of 1927, the first comprehensive scheme of control over radio communication, Congress acted upon the knowledge that if the potentialities of radio were not to be wasted, regulation was essential.

The resultant Radio Act of 1927 was exclusively a licensing statute. Jurisdictional control was left in the Interstate Commerce Commission.

The Communications Act of 1934 followed the Radio Act of 1927 as a consolidating device. It was thus described in *Scripps-Howard* v. *FCC*:[27]

The Communications Act of 1934 is a hybrid. By that act, Congress established a comprehensive system for the regulation of communication by wire and radio. To secure effective execution of its policy of making available "a rapid, efficient, nationwide, and worldwide wire and radio communication service with adequate facilities at reasonable charges," Congress created a new agency, the Federal Communications Commission, to which it entrusted authority previously exercised by several other agencies. Under the Radio Act of 1927, * * * the Federal Radio Commission had broad powers over the licensing and regulation of radio facilities. The Mann-Elkins Act of 1910, * * * gave the Interstate Commerce Commission general regulatory authority over telephone and telegraph carriers. In addition the Postmaster General was empowered, under the Post Roads Act of 1866, * * * to fix rates on Government telegrams. The Communications Act of 1934 was designed to centralize this scattered regulatory authority in one agency.

In yet another decision, the Supreme Court describes the origin of the act as follows:[28]

* * * the Communications Act of 1934 derives from the Federal Radio Act of 1927 * * *. By this act Congress, in order to protect the national interest involved in the new and far-reaching science of broadcasting, formulated a unified and comprehensive regulatory system for the industry. The common factors in the administration of the various statutes by which Congress had supervised the different modes of communication led to the creation, in the act of 1934, of the Communications Commission. But the objectives of the legislation have remained substantially unaltered since 1927.

Congress moved under the spur of a widespread fear that in the absence of governmental control the public interest might be subordinated to monopolistic domination in the broadcasting field. To avoid this Congress provided for a system of permits and licenses * * *. In granting or withholding permits for the construction of stations, and in granting, denying, modifying or revoking licenses for the operation of stations, "public convenience, interest, or necessity" was the touchstone for the exercise of the Commission's authority. While this criterion is as concrete as the complicated factors for judgment in such a field

[27] 62 S. Ct. 875, 878 (1942).
[28] *FCC* v. *Pottsville*, 60 S. Ct. 437, 438 (1940).

of delegated authority permit, it serves as a supple instrument for the exercise of discretion by the *expert body* which Congress has charged to carry out its legislative policy. * * * Underlying the whole law is recognition of the rapidly fluctuating factors characteristic of the evolution of broadcasting and of the corresponding requirement that the administrative process possess sufficient flexibility to adjust itself to these factors. Thus, it is highly significant that although investment in broadcasting stations may be large, a license may not be issued for more than 3 years; and in deciding whether to renew the license, just as in deciding whether to issue it in the first place, the Commission must judge by the standard of "public convenience, interest, or necessity." The Communications Act is not designed primarily as a new code for the adjustment of conflicting private rights through adjudication. *Rather it expresses a desire on the part of Congress to maintain, through appropriate administrative control, a grip on the dynamic aspects of radio transmission.* [Emphasis supplied.]

Elsewhere,[29] at least by implication, there is imputed to the Commission responsibilities which oblige it to consider social, economic, and political factors:

Without such national regulation of radio, a condition of chaos in the air would follow, and this pecular public utility, which possesses such incalculable value for the social, economical, and political welfare of the people, and for the service of the government, would become practically useless.

BIFURCATED FUNCTIONS

The Pottsville decision, already quoted, gives an enlightened interpretation to the growth of administrative tribunals such as the Federal Communications Commission. There a striking comparison is drawn wherein the Commission, unlike the courts, can go beyond the limits of the data and other facts offered by the litigants in making its judgments. It may bring its own expert judgment to bear and it may also seek outside expert help to extend its background knowledge of a question beyond the bounds fixed by the offerings of parties appearing before it.[30]

Courts, like other organisms, represent an interplay of form and function. The history of Anglo-American courts and the more or less narrowly defined range of their staple business have determined the basic characteristics of trial procedure, the rules of evidence, and the general principles of appellate review. *Modern administrative tribunals* are the outgrowth of conditions far different from those. To a large degree they have been a response to the felt need of governmental *supervision over economic enterprise*—a supervision which could effectively be exercised neither directly through self-executing legislation nor by the judicial process. That this movement was natural and its extension inevitable was, a quarter century ago, the opinion of eminent spokesmen of the law. Perhaps the most striking characteristic of this movement has been the investiture of administrative agencies with power far exceeding and different from the conventional judicial modes for adjusting conflicting claims—modes whereby interested litigants define the scope of the inquiry and determine the data on which the judicial judgment is ultimately based. *Administrative agencies have power themselves to initiate inquiry, or, when their authority is invoked, to control the range of investigation in ascertaining what is to satisfy the requirements of the public interest in relation to the needs of vast regions and sometimes the whole Nation in the enjoyment of facilities for transportation, communication, and other essential public services.* These differences in origin and function preclude wholesale transplantation of the rules of procedure, trial, and review which have evolved from the history and experience of the courts. [Emphasis supplied.]

The Commission is thus a body of mixed functions, for it is not only an administrative arm of the Congress, to which is imputed expert-

[29] *General Electric Co.* v. *Federal Radio Commission,* 50 S. Ct. 389 (1930).
[30] *FCC* v. *Pottsville,* 60 S. Ct. 437, 441 (1940).

ness in its field, but a legislative body in that within the scope of the statute under which it operates it makes rules which in effect become law, and finally a quasi-judicial body. This function is delineated in a court decision where an intervenor was deemed to have been improperly denied a hearing:

The Commission is not, strictly, a court, but it has quasi-judicial powers and its proceedings must satisfy "the pertinent demands of due process" (*Federal Radio Commission* v. *Nelson Bros. Bond & Mortgage Co.*, 1933, 53 S. Ct. 627). * * * For due process there must be an orderly proceeding in an appropriate and impartial tribunal; but due process is not necessarily judicial process; it may for some purposes be accorded by an administrative board or officer.

The distinguished statesman, jurist, and scholar Elihu Root made this oracular pronouncement many years ago [31]—

There is one special field of law development which has manifestly become inevitable. We are entering upon the creation of a body of administrative law quite different in its machinery, its remedies, and its necessary safeguards from the old methods of regulation by specific statutes enforced by the courts. * * * There will be no withdrawal from these experiments. * * * We shall go on; we shall expand them, whether we approve theoretically or not, because such agencies furnish protection to rights and obstacles to wrongdoing which under our new social and industrial conditions cannot be practically accomplished by the old and simple procedure of legislatures and courts as in the last generation. Yet the powers that are committeed to these regulating agencies, and which they must have to do their work, carry with them great and dangerous opportunities of oppression and wrong. If we are to continue a Government of limited powers these agencies of regulation must themselves be regulated. The limits of their power over the citizen must be fixed and determined. The rights of the citizen against them must be made plain. A system of administrative law must be developed and that with us is still in its infancy, crude and imperfect.

THE LICENSE

Congressional regulation of broadcasting by means of a separate agency is commented upon in *Ashbacker* v. *Federal Communications Commission:* [32]

In the regulation of broadcasting, Congress moved outside the framework of protected property rights. * * * Congress could have retained for itself the granting or denial of the use of the air for broadcasting purposes, and it could have granted individual licenses by individual enactments as in the past it gave river and harbor rights to individuals. Instead of making such a crude use of its constitutional powers, Congress, by the Communications Act of 1934, * * * formulated an elaborate licensing scheme and established the Federal Communications Commission as its agency for enforcement.

In a somewhat different vein, Mr. Chief Justice Hughes, in another decision,[33] includes reference to the reciprocal interests of both the broadcaster and the public.

No State lines divide the radio waves, and national regulation is not only appropriate but essential to the efficient use of radio facilities. In view of the limited number of available broadcasting frequencies, the Congress has authorized allocation and licenses. The Commission has been set up as the licensing authority and invested with broad powers of distribution in order to secure a *reasonable equality of opportunity in radio transmission and reception.* [Emphasis supplied.]

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[31] 41 A. B. A. Rept. 335, 368–369 (1916).
[32] 66 S. Ct. 148, 152 (1945).
[33] *Federal Radio Comm.* v. *Nelson Bros.*, 53 S. Ct. 633 (1933).

BROADCASTING AND PUBLIC SERVICE

The court of appeals, in one of its decisions,[34] recognized certain important similarities between the regulation of broadcasting and that of other forms of public service. Both the viewer and the broadcaster are looked upon as having a common interest and the broadcaster as having rights to be protected. Moreover, here is dictum against uncontrolled competition and for a maximal competition measured in terms of public service. Here is constructive recognition of the broadcast station's equity, i. e., competition should not be carried to the point of *destructive* economic injury.

In our decision in the Sanders Brothers case, we referred to dicta which appears in previous decisions of this court, and to the opinion of Justice Groner in the Jenny Wren case. The latter paraphrases language—originally used in the Texas and Pacific case—to describe the underlying purpose of the Communications Act as follows: "* * * the act recognizes the preservation of the earning capacity, and conservation of the financial resources, of the individual broadcasting station as a matter of national concern, for the reason that the property employed must be permitted to earn a reasonable return or the system will break down; thus indicating, as it seems to me, an identical or reciprocal interest between the owner and the public, in which it is the right of either to see that competition between stations is not carried to the point of destruction."

The Commission denies the applicability of the paraphrased language to radio broadcasting. It calls attention to the fact that in the Communications Act Congress specified a different method of regulation for common carriers engaged in interstate communication by radio than for radio broadcasters; that broadcast licensees are expressly exempted, in the definition section of the act, from the classification of common carriers; and that such a licensee "has unregulated discretion to determine the rates necessary to insure the profitable operation of his station in the area served." It refers to the decision of this court in *Pulitzer Pub. Co.* v. *Federal Communications Comm.* (68 App. D. C. 124, 126, 94 F. 2d 249, 251), in which we said that a radio broadcasting station is a public utility in a more restricted sense than a railroad or other common carrier and that the term, "public convenience, interest, or necessity," should be given a less broad meaning than is applied to it elsewhere in public utility legislation. It contends that in the regulation of radio broadcasting Congress intended that monopolies should be prevented rather than protected; that while under the Transportation Act, the power to regulate rates and the necessity of maintaining fair competition, resulted logically in requiring that a carrier should have a right to protest against regulatory action which produced economic injury, under the Communications Act "A station owner's rights are subject to the paramount authority of Congress to exercise reasonable regulation of broadcasting." And, the Commission concludes, the interpretation placed by the Supreme Court upon the Transportation Act cannot properly be applied by analogy to that portion of the Communications Act which deals with radio broadcasting as distinguished from radio communication for hire by a common carrier.

But in spite of these differences the two acts contain vital similarities which make analogy proper, and the conclusion of the Commission is a non sequitur. Radio broadcasting, the subject of one, is affected with a public interest in fully equal measure as is railway transportation, the subject of the other. Congress recognized this fact by making the Communications Act speak in terms of the public interest from beginning to end. "There is no closed class or category of businesses affected with a public interest * * *. The phrase * * * can, in the nature of things, mean no more than that an industry, for the adequate reason, is subject to control for the public good." This court has said that the radio business is impressed with a public interest, and, further, that Congress, in establishing the standard of public interest, convenience, and necessity, evidently had in mind that broadcasting should be of a public character rather

[34] *Yankee Network* v. *Federal Communications Commission*, 107 F. 2d 212, 220 (1939).

than a mere adjunct of a particular business. Rate fixing is only one of many regulatory procedures. The fact that it is specified for carriers and not for broadcasters is by no means conclusive. In both acts other forms of regulation are specified, which are closely similar; as for example, the power of the appropriate commission in each case to require adequate facilities. The powers of regulation possessed by the Federal Communications Commission over broadcasters are comprehensive and inclusive; and judicial review of its actions is highly important just as it is in the case of the Interstate Commerce Commission.

In the regulation of radio broadcasting as distinguished from transportation or radio communication, Congress was dealing with a newer and less well established form of public service. * * * In some respects the powers delegated by Congress for the regulation of broadcasters are even more drastic than those possessed by the Interstate Commerce Commission over railroad carriers; notably the power of the Federal Communications Commission to issue licenses for short periods, and to require, each time, a full showing of financial and other qualifications, as a condition of renewal. Such a regulation applied to the railroads of the United States would probably soon disrupt them.

Congress had power to provide safeguards against destructive economic injury to existing licensees, and did so in both acts, in order to secure a similar legislative purpose in each. In the case of the railroads Congress waited until the condition of many of them was desperate. The Commission argues that the Transportation Act and the recent Emergency Railroad Transportation Act were intended "to administer oxygen to critical patients." But in the case of radio broadcasters the intent of Congress was to anticipate and prevent desperate, chaotic conditions. The latter form of statesmanship is equally as commendable as the former, and may serve better the interests of the people. In both instances the privilege of free enterprise was curtailed.

In each case Congress had delegated the power to regulate public utilities in interstate commerce for the purpose of safeguarding a dual interest, involving a reciprocal and correlative relationship between the public and the owner of the utility. As between the two, the public interest is of greater importance. Therein lies the justification for governmental regulation, and for placing in the hands of such administrative agencies as the Federal Communications Commission powers, which if arbitrarily exercised, may destroy the very subject of regulation. It is entirely true, as the Commission in this case argues, that "A station owner's rights are subject to the paramount authority of Congress to exercise *reasonable regulation* of broadcasting." [Italics supplied.] It is equally true that carriers are subject to *similar reasonable* regulation of transportation. But it would be absurd, in one case as well as in the other, to contend that Congress intended to permit such arbitrary and uncontrolled exercise of power as would destroy meritorious and respectable licensees which had been thus selected to serve the public interest and to achieve the major purpose of each act. We said in *Journal Co.* v. *Federal Radio Comm.*, that "The installation and maintenance of broadcasting stations involve a very considerable expense. Where a broadcasting station has been constructed and maintained in good faith, it is in the interests of the public and common justice to the owner of the station that its status should not be injuriously affected, except for compelling reasons."

LICENSES AND IMPLIED RIGHTS

The Communications Act and its interpretation by the courts both emphasize the absence of unconditioned property rights in the granting of a license. It was observed in a decision [35] of the court of appeals that—

No language of the present act, relating to grants of rights to licenses, suggests an intent to recognize or to vitalize any common law rights in radio broadcasting or in the use of frequencies therefor. Some of its language definitely repudiates the idea.

The courts also recognize that the act does impute certain equities on the part of the station owner:

The act provides that one shall be guilty of a crime if he does willfully and knowingly operate such a station without a license (par. 501), or even if he shall

[35] *Yankee Network* v. *FCC* (107 F. 2d 212, 216). See also page (12 herein) from the decision of Mr. Justice Frankfurter.

willfully and knowingly violate any rule, regulation, restriction, or condition made or imposed by the Commission under authority of the act (par. 502). It is apparent, therefore, that a radio broadcasting station is valueless without a license to operate it. It is equally apparent that the granting of a license by the Commission creates a highly valuable property right, which, while limited in character, nevertheless provides the basis upon which large investments of capital are made and large commercial enterprises are conducted. As it is the purpose of the act to secure the use of channels of radio communication by private licensees under a competitive system, those licensees must be protected in that use, not merely from unlicensed stations and unlicensed operators, but from improper activities of licensed stations and operators, and from arbitrary action by the Commission itself, in the exercise of its regulatory power.

These rights cannot be capriciously destroyed: [36]

Granting that those who operate broadcasting stations do so subject to the Commissioner's power of regulation, this power is not an unlimited power; and the Commission's licensees, who on the faith of the license have invested money and established a goodwill, thereafter undoubtedly have rights, *which though they may be revoked in the public interest, nevertheless, may not be arbitrarily or capriciously destroyed.* * * * If it were otherwise, the millions of dollars invested in radio broadcasting stations would be wholly subject to the caprice or favor of the regulatory body. Such a grant of power would be so clearly unreasonable, so oppressive, and so partial as to make it unthinkable, without more, that the Congress ever intended to grant it.

Nor may meritorious stations be deprived of their privileges without reasons arising from strong factors of public interest: [37]

It is not consistent with true public convenience, interest, or necessity, that meritorious stations * * * should be deprived of broadcasting privileges when once granted to them, which they have at great cost prepared themselves to exercise, unless clear and sound reasons of public policy demand such action. The cause of independent broadcasting in general would be seriously endangered and public interests correspondingly prejudiced, if the licenses of established stations should arbitrarily be withdrawn from them, and appropriated to the use of other stations. This statement does not imply any derogation of the controlling rule that all broadcasting privileges are held subject to the reasonable regulatory power of the United States, * * *.

ECONOMIC INJURY—DESTRUCTIVE COMPETITION

Economic injury to an established station by the appearance of a new station, or the move of another station into its service area and the effect of this injury on the public interest, have presented issues which are the subject of controversy of critical significance today in the regulation of broadcasting. The Yankee Network case constitutes an important segment of the historical picture of this subject. The Sanders Brothers [38] case is also germaine and currently in the forefront of disputations on the subject of economic injury. The decisions in these two related cases give essential background and will be examined. Because of the importance and the timeliness of the subject of economic injury, commentary will be somewhat detailed.

The Sanders decision by the court of appeals antedates the Yankee decision. The Sanders decision by the Supreme Court postdates it. The Sanders case had been before the Commission and the courts since 1936.

The Telegraph Herald applied for a construction permit for a station in Dubuque, Iowa, and at the same time Sanders Bros. applied for

[36] *Sykes* v. *Jenny Wren Co.*, 78 F. 2d 729 (1935).
[37] *Chicago Federation of Labor* v. *Federal Radio Comm.*, 41 F. 2d 422.
[38] *Sanders Bros. Radio Station* v. *FCC*, 106 F. 2d 321 (January 1939); 60 S. Ct. 693 (March 1940).

permission to move its station from East Dubuque, Ill., to Dubuque, Iowa. Quoting from the Supreme Court decision:

An examiner reported that the application of the Telegraph Herald should be denied and that of the respondent (Sanders) granted. On exceptions of the Telegraph Herald, and after oral argument, the broadcasting division of petitioner made an order granting both applications, reciting that "public interest, convenience, and necessity would be served" by such action. The division promulgated a statement of the facts and of the grounds of decision, reciting that both applicants were legally, technically, and financially qualified to undertake the proposed construction and operation; that there was need in Dubuque and the surrounding territory for the services of both stations, and that no question of electrical interference between the two stations was involved. A rehearing was denied and respondent appealed to the Court of Appeals for the District of Columbia.[39]

The court of appeals held that in respect to intervenor's grant (Telegraph Herald), Appellant Sanders:

correctly contends that the Commission's findings were insufficient to support this determination and decision, insofar as it relates to intervenor's application, since no finding was made concerning the matter of economic injury.

The Commission conceded that no finding was made upon the issue of economic injury. It contended that Sanders, although given the opportunity to furnish evidence, failed to establish the issue. Thus, concluded the Commission, it was not required to make a finding on this issue.

The court observed otherwise:

The issue of economic injury having been clearly presented, the Commission was bound to decide it one way or the other, and to make appropriate findings of fact in support of its decision. Absence of findings, whatever the reason therefor, cannot take the place of adequate findings, and the Commission's decision as to public interest, convenience, and necessity cannot stand unless supported by such findings.

The court, inferentially, took the position that the Commission had totally disregarded the issue of economic injury to Sanders and—

that economic competition between the two will cover the entire area served by appellant and that if the available potential economic support in that area is inadequate, the result may well be disastrous for appellant or for both.

with the conclusion that—

the Commission's decision was arbitrary and capricious and consequently must be set aside.

The court remanded the case for reconsideration. The Supreme Court then granted certiorari [40] sought by the FCC to resolve what had now become important issues of substance and procedure.

Shortly after the decision in Sanders, the Yankee Network decision [41] referred to on pages 165–168 was handed down by the same court of appeals.[42] In Yankee the Commission had strenuously urged that the court reconsider its position on the question of the standing of a party to appeal in the event of economic injury, as passed upon in the Sanders case. The Commission asserted—

that the necessary implications of the interpretation given to the appeal section in the Sanders Bros. case—permitting appeal by one adversely economically affected—would produce a result almost as extreme and would extend its operation to include newspapers, magazines, and other advertising media of all kinds.

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[39] 60 S. Ct. 693. 696 (March 1940).
[40] Granted December 11, 1939.
[41] *Yankee Network, Inc.* v. *FCC*, 107 F. 2d, 212 (August 1939).
[42] The Sanders appeal was heard by Chief Justice Groner and Associates Justice Miller and Vinson, Miller writing the decision. The Yankee appeal was before Chief Justice Groner and Associate Justices Miller and Stephens, Miller again writing the decision.

The Yankee appeal was from a decision of the Commission granting an application for increase of power and unlimited time to a neighboring station and, after hearings, dismissing all protests including those of appellant Yankee.

The Commission challenged the power of the Court to hear the appeal, contending that an appeal by an existing licensee claiming to be economically injured because of the grant of another application is not contemplated by the Communications Act. The Commission held that the Yankee Network had no statutory right to appeal since any injury suffered or threatened by competition was damnum absque injuria, in plain text, a wrong for which the law provides no remedy. The Commission averred—

> that even if destructive economic competition may constitute a sufficient basis for contest on appeal, the appellant has failed to show any such injury in fact.

The Commission, in its brief, presciently guarded its position:

> Unquestionably, the Commission should, in determining whether the "public interest, convenience, and necessity" will be served by the licensing of a new station in a community, give careful and painstaking consideration to the question of whether the effect of granting the new license will be to defeat the ability of the holder of any one or more outstanding licensees to carry on in the public interest. The Commission is entirely in accord with the view that, if the effect of granting a new license would be to defeat the ability of the holder of an outstanding license to carry on in the public interest, the application for the new station should be denied unless there are "overweening" reasons of a public nature for granting it. And the Commission also believes that it is obviously a stronger case where neither licensee will be financially able to render adequate service.

The Court, on the contrary, considered the following reason for appeal as suggesting the issue and of sufficient substance to give the appellant standing. This was the decision by the Commission that,

> The protestants (Yankee) have failed to establish facts to show that operation by the applicant, as proposed, would adversely affect their (Yankee's) economic interests. There is nothing in the record indicating that the entry of the applicant into the regional field would so affect the economic welfare of the protestants, or any of them, as to have any ultimate effect whatsoever on the public interest, convenience, and necessity.

The Court found a substantial basis both for the Commission's findings and for its determination and therefore dismissed the Yankee appeal.

This Yankee decision, incidentally, thoughtfully develops as obiter dicta cogent observations of practical prophetic significance.

The court of appeals' decision in the Sanders case, previously before it, is well summarized in the Yankee decision:[43]

> We have held that the reasons assigned in the Sanders Brothers case were sufficient to furnish proper grounds of contest on appeal upon the issue of "economic injury to an existing station through the establishment of an additional station." In that case the reasons given showed (1) that the appellant was a licensee under the act; (2) that it was engaged in the operation of a broadcasting station; (3) that the Commission had granted an application for a competing station license; (4) that the operation of the proposed station would necessarily result in such severe loss of operating revenue as to impair the service rendered by appellant; and (5) destroy its ability to render *proper service in the public interest*. Such a showing is sufficient to present the issue on appeal. [Emphasis supplied.]

[43] *Yankee Network, Inc.* v. *FCC*, 107 F. 2d 212 (1939).

Now came the decision of the Supreme Court [44] reversing the judgment of the court of appeals. In the words of the Supreme Court, the case was taken—

to resolve important issues of substance and procedure arising under the Communications Act of 1934, as amended—

namely, the function and powers of the Commission.

This decision has acquired an aura of unusual importance, first because of the critical issues of substance and procedure it passes upon, secondly, because of the wide divergence of opinion as to what explicitly the decision says and what it means. In recent words of the Commission: [45]

We are aware that there is a sharp divergence of opinion among members of the bar as to what portion of the Sanders decision is ratio decidendi and what portion should be considered as obiter dicta. The adoption of one view would be diametrically opposed to the other.

The lower court held that the Commission should have tried the issue of alleged economic injury to the Sanders station by the establishment of an additional station. (See pp. 170–171.) To this finding, the Supreme Court said:

First. We hold that resulting economic injury to a rival station is not in and of itself, and apart from considerations of public convenience, interest, or necessity, an element the petitioner must weigh and as to which it must make findings in passing on an application for a broadcasting license—

observing that—

The act contains no express command that in passing upon an application the Commission must consider the effect of competition with an existing station.

The Commission's interpretation of this aspect of the decision at the time of framing the chain broadcasting regulations [46] was rationally and simply that the Supreme Court had held—

that the Commission was not required to give such loss (economic injury to a station) "*separate and independent*" consideration. [Emphasis supplied.]

Further on, after a dissertation on the nature of the Communications Act, and dicta on the character of competition in the broadcast field, the Court concluded that:

economic injury to an existing station is not a separate and independent element to be taken into consideration by the Commission in determining whether it shall grant or withhold a license.

On the issue of standing to appeal, the Court observed that it does not follow that where the grant of a station may result in economic injury to an existing station, the injured has no standing to appeal from an order of the Commission granting the station. On this issue, the Court observed:

Congress had some purpose in enacting section 402 (b) (2). It may have been of the opinion that one likely to be financially injured by the issue of a license would be the only person having a sufficient interest to bring to the attention of the appellate court errors of law in the action of the Commission in granting the license. It is within the power of Congress to confer such standing to prosecute an appeal.

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[44] *FCC* v. *Sanders Bros. Radio*, 60 S. Ct. 693 (1940).
[45] FCC Decision, *Southeastern Enterprises*, docket No. 11411 (March 1957), p. 9, mimeo.
[46] P. 50, Report on Chain Broadcasting, May 1941.

And that:

We hold, therefore, that the respondent had the required standing to appeal and to raise, in the court below, any relevant question of law in respect of the order of the Commission—

in this sense agreeing with the decision of the court below.

As if to safeguard against misinterpretation, the court cautioned:

This is not to say that the question of competition between a proposed station and one operating under an existing license is to be entirely disregarded by the Commission, *and, indeed, the Commission's practice shows that it does not disregard that question.* It may have a vital and important bearing upon the ability of the applicant adequately to serve his public; it may indicate that both stations—the existing and the proposed—will go under, with the result that a portion of the listening public will be left without adequate service; it may indicate that, by a division of the field, both stations will be compelled to render inadequate service. These matters, however, are distinct from the consideration that, if a license be granted, competition between the licensee and any other existing station may cause economic loss to the latter. [Emphasis supplied.]

There has been the tendency in some quarters, wishfully perhaps, to assume for their purposes that the High Court's summary statement, "The judgment of the court of appeals is reversed," rendered nugatory the entire opinion of the lower court and imputes to the decision definitive resolution of issues beyond those before the Court. Moreover, this decision is taken by some advocates categorically to negate the Yankee Network decision, obiter dicta included.

In reality the Supreme Court agreed with the lower court on the right of the aggrieved to appeal. It disagreed with the lower court's opinion that since the issue of economic injury to Sanders was raised, the Commission was obliged to make appropriate findings of fact as to economic injury in support of its decision.

Obfuscation to the contrary, whether economic injury to a station by the grant of a new station constitutes a right to appeal and whether it constitutes grounds for relief, devoid of any consideration of its adverse effects on the public interest, were the two aspects of the only issue in this case.

An interesting interpretation of Sanders appeared in *Stahlman* v. *FCC* [47] soon after the Supreme Court decision.

The Communications Act requires no more of an applicant for a radio license than proof of citizenship, character, and financial and technical qualifications to operate in the public interest. Possessing these, the applicant's eligibility is unchallengeable, assuming there is an unused frequency free of interference with an established station. This is the rule announced by the Supreme Court in the Sanders case. But the determination of these qualifications is an administrative function which Congress has committed to the Commission, subject only to the requirement that in granting or refusing the license it shall act as the public convenience, interest, or necessity requires. This, however, as the Supreme Court remarked, is not a grant of unlimited power, but only the right to control the range of investigation in ascertaining what, within the compass of the act, is proper to satisfy the requirements. It does not embrace and should not be extended by implication to embrace a ban on newspapers as such, for in that case it would follow that the power to exclude exists also as to schools and churches; and if to these, the interdict might be applied wherever the Commission chose to apply it.

It would seem, then, that in this instance the court of appeals had no difficulty in concluding that the dictum in Sanders referred to,[48]

[47] 126 F. 2d 124, 127 (1942).
[48] 60 S. Ct. 693, 697 (1940).

In short, the broadcasting field is open to anyone, provided there be an available frequency over which he can broadcast without interference to others, if he shows his competence, the adequacy of his equipment, and financial ability to make good use of the assigned frequency—

was not to be interpreted as unqualified by the inherent condition that the criteria of public interest, convenience, and necessity must be satisfied.

The implications of the ultimate decision in the Sanders case were quick to be felt. That decision of March 1940 was almost immediately injected into a hearing before the Committee on Interstate and Foreign Commerce of the Senate.[49] The part quoted in the committee record was:

But the act does not essay to regulate the business of the licensee. The Commission is given no supervisory control of the programs, of business management, or of policy. In short, the broadcasting field is open to anyone, provided there be an available frequency over which he can broadcast without interference to others, if he shows his competency, the adequacy of his equipment, and financial ability to make good use of the assigned channel.

Quite clearly, obiter dicta thus taken out of context can lead to irreconcilable, insidious deductions and can often be shown contrary to fact when taken broadly.

Commission Chairman Fly, when questioned as to the significance of the decision, had this to say: [50]

Then, the specific question there, and the only question, which was raised was whether or not a competitor of a regular radio broadcasting station could appeal from a Commission decision granting a license. That is the only question that the Supreme Court decided. That language, which has been quoted broadly, is, I think, entirely inappropriate. I think the best thing to do here is to go right back to the statute for the specific duties which you gentlemen placed upon us.

An interesting colloquy then took place between the chairman of the Senate committee and the witness, Lawyer Fly: [51]

The CHAIRMAN. Mr. Chairman, coming back to the Supreme Court decision, they use this language:

"In short, the broadcasting field is open to anyone, provided there is an available frequency over which he can broadcast without interference to others, if he shows his competency, the adequacy of his equipment, and financial ability to make good use of the assigned channels."

As I understand you, you do not feel that the Supreme Court intended to say that if there was an available frequency and it did not interfere with anybody else and the man was competent and had adequate equipment and financial ability, he would be entitled to a frequency, unless he complied with certain standards set up by the Commission?

Mr. FLY. I think, sir, the Supreme Court had no intention of having language like that applicable in this field, and, of course, the Supreme Court cannot overrule the very explicit language of this statute (the Communications Act), and I know it would not undertake to do so, and I have heard no one—no lawyer—suggest that the Court endeavor to reach out in such a farflung field and, by a few words that were purely dicta, try to envelope a situation like this.

Now, if you please, this (the committee hearing) is a matter of making rules and regulations. The other (Sanders) was a matter of competing applications for a broadcast station. This is a matter of regulating the experimental uses of the frequencies, to quote the language of the statute. In that case there was no experimentation. This is a matter of fixing the standards. In that case the standards were already fixed.

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[49] S. Res. 251, Development of Television, April 10, 11, 1940, U. S. Printing Office, Washington, 1940, p. 11.
[50] S. Res. 251, p. 12.
[51] S. Res. 251, p. 22.

Moreover, sir, to take the basic philosophy out of that language, what does it mean? It means that this is a competitive industry. That is what the language means, and that is what the Court is trying to say—this is a competitive industry—and I think that in that way it bears upon our duty here to rest assured that the public is going to have the benefits of competition in this sturdy, infant industry.

Another exchange brought further reaction:

The CHAIRMAN (interposing). If you will pardon me, I do not like to criticize our Supreme Court, but it seems to me that when the Supreme Court rendered that decision and used that language—that dictum—they went further than they should have. They should have modified it to the extent, at least, of saying that they were entitled to it (a frequency). The most they should have said was that they were entitled to it provided that they complied with the prerequisite standards set up by the Commission.

Mr. FLY. Yes, of course. I think you are entirely right.

The CHAIRMAN. That is the reason why the language to the ordinary layman is confusing.

Mr. FLY. Oh, yes. The language, in a superficial sense, just seems to take in a lot of territory. I think the Supreme Court would be very much surprised to find out we were discussing that problem here today.[52]

In similar vein are other obiter dicta from Sanders of the same character as that which puzzled the Senators and Commissioner Fly. One often-quoted sweeping passage follows:

Plainly it is not the purpose of the act to protect a licensee against competition but to protect the public. Congress intended to leave competition where it found it, to permit a licensee who was not interfering electrically with other broadcasters to survive or succumb according to his ability to make his programs attractive to the public.

The interpretations of the Supreme Court's Sanders decision have been many, some of these by partisan laymen. In hearings on a proposed amendment to the Communications Act, Senate bill 1333, there is the statement made by the executive vice president of the National Association of Broadcasters:[53]

In this section of the White bill, the authors probably refer, in the words "needs and requirements thereof," to the economic needs and requirements as well as others. Radio broadcasting in the United States is a free competitive enterprise and is not, in any sense, a public utility. This concept is clearly spelled out in the Communications Act of 1934 and confirmed beyond the shadow of a doubt by the Supreme Court in the decision in the Sanders Bros. case *in which the Court prohibited the Commission from taking into account, in its licensing process, the economic aspects of a grant.* This section 9 could, in effect, nullify this decision of the Supreme Court and would give the Commission discretion to take into consideration, in the granting of licenses in a community, the economic consequences of the addition of stations in that community. The National Association of Broadcasters takes strong issue with this section. [Emphasis supplied.]

Here indeed is a wishfully inaccurate interpretation supported neither in text nor context, irresponsible in that it ignores the issuer heard by the Court.

In *FFC* v. *National Broadcastoing Company*,[54] the Supreme Court interprets its own decision,

There (in Sanders) the question was whether a rival station, which would suffer economic injury by the grant of a license to another station, had standing to appeal under the terms of the act. We held that it had. We pointed out that while a station license was not a property right, and *while the Commission was not bound to give controlling weight* to economic injury to an existing station consequent upon the issuance of a license to another station, yet economic

[52] S. Res. 251, p. 25.
[53] A. D. Willard, Jr., hearings on S. 1333, June 1947, p. 201 printed record.
[54] 63 S. Ct. 1035, 1038 (1943).

injury gave the existing station standing to present questions of public interest and convenience by appeal from the order of the Commission. [Emphasis supplied.]

Again in *Ashbacker Radio Corp.* v. *FCC*,[55] the Supreme Court referred to its decision in the Sanders Case and here identified economic injury and interstation electrical interference as constituting grounds for appeal:

In *FCC* v. *Sanders Bros. Radio Station* * * *, we held that a rival station which would suffer *economic injury* by the grant of a license to another station had standing to appeal under 402 (b) (2) of the act. In *FCC* v. *National Broadcasting Co.*, * * * we reached the same conclusion where an application had been granted which would create such *interference* on the channel given an existing licensee as in effect to modify the earlier license. Petitioner (Ashbacker) is at least as adversely affected by the action of the Commission in this case as were the protestants in those cases. [Emphasis supplied.]

In this decision,[56] Mr. Justice Douglas in his dissent states:

The interest, if any, of the appellant KOA is the interest of a private person and accordingly must be measured in terms of private injury. That interest must be substantial and immediate if the standard of the statute and if the constitutional requirements of case or controversy, as interpreted by the Sanders and the Scripps-Howard cases, are to be satisfied. It is necessary to show in effect that KOA has sustained or is about to sustain some direct and substantial injury * * * an injury which for the purpose of this case must result from electrical interference. The Sanders case and the Scripps-Howard case do not dispense with that requirement. They merely hold that *an appellant has his case decided in light of the standards of the public interest, not by the criteria which give him a standing to appeal.*

I do not understand that the opinion of the Court takes a contrary view. It only holds on this phase of the case that KOA made an adequate showing under paragraph 402 (b). I disagree with that conclusion. [Emphasis supplied.]

Over 10 years later in *Democrat Printing Co.* v. *FCC*,[57] the court of appeals, following its interpretation of Sanders, explicitly stated the effect of economic injury on public interest:

The mere loss of profit to an existing station would not, of course, be an adequate basis for denying a license to a proposed station. If, however, the result of the grant to the proposed station is to make it financially impossible for an existing station to continue its operations or maintain a high level of service, the resultant loss of service might be adverse to the public interest and therefore warrant denying the new license. *Federal Communications Commission* v. *Sanders Brothers Radio Station* ((1940) 309 U. S. 470, 473–476, 60 S. Ct. 693).

In the same case, the court also said:[58]

If the requirements of the public interest are to be satisfied, the Commission must consider not only the public benefit from the operation of the new station, but also any public losses which it might occasion.

It is fitting here to quote an observation made by the Commission in 1941 in its Report on Chain Broadcasting:[59]

It is fundamental that any determination of public interest must be based upon a consideration of the service a station renders against the background of the service it could render

and that[60]—

The public interest of other operators must be afforded some opportunity for consideration in this field of changing circumstances.

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[55] 66 S. Ct. 148, 151 (1945).
[56] *FCC* v. *NBC*, 63 S. Ct. 1035, 1037 (1943).
[57] 202 F. 2d 298, 302 (footnote) (1952).
[58] Ibid., 301.
[59] Commission order No. 37, docket No. 5060, May 1941.
[60] *Peoples Broadcasting* v. *U. S.* 209 Fed. 2d 286 (1953).

Finally, the Supreme Court itself, only 2 years ago, sensibly and succinctly clarified this controversial matter in *F. C. C.* v. *Allentown.*[60a]

> The distribution of a second license to a community in order to secure local competition for originating and broadcasting programs of local interest appears to be likewise within the area of (Commission) discretion.

SOUTHEASTERN ENTERPRISES

The controversy over the validity of economic injury as a consideration in regulatory procedure suffered a recrudescence in a recent cases arising in Cleveland, Tenn.[60b] Here the grant of an application for a construction permit for a standard radio broadcast station to Southeastern Enterprises was protested by the holder of a station license for the sole station in the local area, Robert W. Rounsaville.

The Commission, after preliminary skirmishes, in order to resolve the issues before it directed that all parties to the proceedings file briefs—

> discussing the legal and policy questions involved in the "economic injury" issues, including the legal authority of the Commission to deny broadcast applications solely for reasons of the economic injury which may be caused to existing stations by the establishment of new ones in competition therewith, and assuming the Commission has such authority, whether as a matter of policy the Commission should exercise it by a denial of broadcast applications for new competitive stations (FCC 57–252 42750, March 22, 1957).

Of the 6 issues designated for evidentiary hearing before the Commission en banc, 4 had to do with the effects of competitive service upon the public in the area, the fifth with the financial qualifications of the applicant and the sixth with the effect of competitive service upon public interest, convenience and necessity.

On the subject of injury to public service, the Commission decision observes:

> The protestant asserts that the Commission has broad discretionary power to consider the deleterious effects to the public service consequent upon authorization of additional competitive service. Our failure to consider such effects would be, he asserts, an error of law. *We conclude, however, that our refusal to consider four of the issues relating to the adverse effects of competition upon the public is not an error of law.* [Emphasis supplied.]

On the economic issues, during the course of the hearings, the Commission—

> raised the question whether it had the power to adopt as policy a denial of a license to a proposed competitor for an available frequency which would cause no electrical interference but would cause economic injury to an existing licensee.

It is peculiarly appropriate for the sake of contrast to intercollate at this point the following observation taken from the Commission's Report on Chain Broadcasting:[61]

> The present policy of the Commission is to encourage competition regardless of adverse economic effects. This general concept of the law is at variance with the natural laws which force a limited market.
>
> Unfortunately, efforts to apply a concept of unlimited competition in the teeth of a technical limitation in the availability of channels encourages concentration of facilities in larger communities at the expense of smaller com-

[60a] 75 S. Ct. 855, 858 (1955).
[60b] FCC Decision *Southeastern Enterprises*, Docket No. 11411, mimeograph, March 1957.
[61] P. 120, Chain Broadcasting Report (under Additional Views of Commissioners, T. A. M. Craven and Norman S. Case), May 1941.

munities. This trend is augmented by the economic tendency to concentrate facilities in large centers of population where there is greater purchasing power to support profitable stations. The desirable social objective to render radio service to all listeners, both rural and urban, at times conflicts with the pressure to make multiple transmission facilities available in all of the metropolitan centers of the Nation. These factors unless controlled cause inequitable distribution of facilities to the various States and communities, contrary to the requirements of the Communications Act of 1934. Thus, a policy of unlimited competition is in conflict with the legal mandate to distribute facilities fairly, efficiently and equitably throughout the Nation. This dilemma becomes even more difficult to resolve because allocation of facilities to any area is dependent upon voluntary applications. It is obvious that unlimited competition among stations in any community is impractical when the total number of facilities available for the entire Nation is limited. Emphasis, therefore, should be placed upon an equitable distribution of facilities to the various communities of the Nation, rather than upon an impractical objective of unlimited competition which can never be wholly achieved because of physical facts.

The protestant admitted—

that the economic injury to him, standing alone, would not entile him to protection * * * but * * * if such economic injury indicated an adverse effect on public service in the area, the Commission has not only the power to weigh and consider it, but the duty to protect the public by denying entrance of such competition.

The decision concluded that—

we do not have the power to consider the adverse effects of legal competition upon the service to the public.

This conclusion was, in effect, a reiteration of an earlier statement in the decision that—

If, in consideration of the evidence elicited under issues 1 to 4, we should determine that the competition of the new applicant would result in public injury in the area of Cleveland, Tenn., we would still have no power to relieve against it. Congress having decided that free competition is a good thing, it is not for us to decide otherwise.

And another supporting affirmation that [62]—

We take this opportunity now to disclaim any power to consider the effects of legal competition upon the public service in the field of broadcasting. [Emphasis supplied.]

This ukase, it would appear, says, categorically, that competition in broadcasting, whatever its effects on service rendered to the public, or on what the Commission may earlier have proclaimed to be in the public interest (UHF, for instance), is decreed by the act to bear no practicable regulatory relation to the criteria of public interest, convenience, and necessity. This astringent interpretation must be read into the words of the act, for neither is it explicit therein nor is it obvious that this interpretation is in the best long-range interest of broadcasting as a public service.

Rounsaville argued that, in accordance with the Commission's previously declared policy, it would be contrary to the public interest to permit the proposed competition of Southeastern Enterprises. To this, the Commission responded, referring to the Voice of Cullman,[63] that the policy to which protestant referred had been changed; that, since the Meyer case,[64] the Commission had consistently held that nothing in the Communications Act required a definite showing of the need

[62] Cf. p. 170–34 ff.
[63] Voice of Cullman, 6 R. R. 164 (1950).
[64] 7 FCC 551 (1939).

for a service in granting an application unless section 307 (b) of the act; namely:

> In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same—

or interference problems were involved.

In the Voice of Cullman, the Commission had concluded:

> Thus, against speculative and, at the most, temporary injury to the public interest as a result of competition we must weigh the real and permanent injury to the public which result from restriction of competition within a regulatory scheme designed for a competitive industry and without the safeguards which are necessary where government seeks to guarantee to any business enterprise greater security than it can obtain by its own competitive ability. With these considerations in mind, the Commission has determined that, *as a matter of policy*, the possible effects of competition will be disregarded in passing upon applications for new broadcast stations * * *. [Emphasis supplied.]

In the Meyer case, the Commission had concluded:

> The "public interest, convenience, or necessity," which the statute provides as a basis for a grant, cannot be construed as a mandate that actual necessity for the particular facilities must be shown.

In the light of Cullman, Meyer, its interpretation of what may be taken as obiter dicta in the Supreme Court's decision in Sanders, and a later interpretation of Sanders,[65] the Commission's decision in Southeastern was that should they determine that—

> the competition of the new applicant would result in public injury in the area of Cleveland, Tenn., we would still have no power to relieve against it. Congress having determined that free competition is a good thing, it is not for us to decide otherwise.

Of necessity, for its instant purpose, the Commission was bound to interpret the following language of the Supreme Court in the Sanders case as obiter dicta:

> This is not to say that the question of competition between a proposed station and one operating under an existing license is to be entirely disregarded by the Commission, and, indeed, the Commission's practice shows that it does not disregard that question. It may have a vital and important bearing upon the ability of the applicant adequately to serve his public; it may indicate that both stations—the existing and the proposed—will go under, with the result that a portion of the listening public will be left without adequate service; it may indicate that by a division of the field both stations will be compelled to render inadequate service.

And to dramatize, by isolating from context and from actual fact and practice, the following passage, giving it a completely antithetical aura:

> Plainly, it is not the purpose of the act to protect a licensee against competition, but to protect the public. Congress intended to leave competition in the business of broadcasting where it found it, to permit a licensee who was not interfering electrically with other broadcasters to survive or succumb according to his ability to make his programs attractive to the public.

The Commission, in dismissing the idea that the first of these passages has force, correctly submits that in Sanders the issue of the effect of competition on the public interest was neither raised by

[65] *Easton Publishing Co.* v. *FCC*, 175 F. 2d 344, 346 (1949).

appeal nor argued before the High Court. In other words, that in Sanders—

> It was the economic injury to the respondent from competition and his right to appeal—not the adverse effects of service upon the public—which were at issue.

Only on this basis could the Commission majority proclaim that—

> We take this opportunity now to disclaim any power to consider the effects of legal competition upon the public service in the field of broadcasting.

May it not be imperative to interpret the passages in the Sanders case as tempered implicitly by the fact that this case treats with a limited and, by regulation, a rationed resource. As the Supreme Court said:[66]

> Unlike other modes of expression, radio inherently is not available to all. That is its unique characteristic, and that is why, unlike other modes of expression, it is subject to governmental regulation. Because it cannot be used by all, some who wish to use it must be denied.

Only in this way can the words of the Sanders decision be reconciled with reality. How else may these passages be interpreted, unless it is assumed the Court was jousting with the hypothetical.

If there are not "certain rights to exclusivity," one is prompted to ask: How can it be that, after decreeing that the addition of the 70 UHF channels was in the public interest, the Commission failed to make a corresponding readjustment of the 108 prefreeze stations vis-a-vis the UHF assignments. Leaving these stations untouched was, certainly, not consistent with the declaration of the need for adding to the 12 VHF channels and for establishing a reallocation table by which to accomplish its avowed intention—to achieve an integrated, realistic, nationwide plan.

In supporting the Commission's plan involving the additional UHF channels, the Court accepted the Commission's expertise in assessing the need and in making a sound plan, also its power to execute the plan objectively once made, vacating stations, moving them, or converting operating stations from VHF to UHF or vice versa. It said:[67]

> * * * if modifications of licenses were entirely dependent upon the wishes of existing licensees, a large part of the regulatory power of the Commission would be nullified. The public interest and the interest of other operators must be afforded some opportunity for consideration in this field of changing circumstances.

Senator Lausche, at the Television Inquiry,[68] perspicaciously queried a Commission witness:

> Don't you, eventually, however, destroy the competitive aspect of the industry if you drive the UHF out and the VHF stations stay?

The majority position in Southeastern must, somehow, be reconciled with the actual regulatory practice of the Commission which, it will be shown, has in the past evaluated the individual and relative capabilities of stations to render service in the public interest in the face of reckoned economic vicissitudes.

It is enlightening, for instance, to review the Commission's views and actions which led to the issuance of the chain broadcasting regulations in 1941, regulations supported later by the Supreme Court.

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[66] *NBC* v. *U. S.*, 63 S. Ct. 997, 1014 (1943).
[67] *Peoples Broadcasting Co.* v. *U. S.*, 209 F. 2d 286 (1953).
[68] Vol. I, March 5, 1957, transcript, p. 150.

Here is a comment [69] on the very case, Sanders, so leaned upon in this Southeastern decision.

> There is nothing in the Sanders opinion which gives any support to the contention that we cannot, in exercising our licensing function, consider factors which might affect the ability of the station to serve the public interest just because those (economic) factors happen to be what might be called the business of the licensee.

The Commission also leaned on that section of the act which decrees that a person engaged in broadcasting shall not be deemed a common carrier. The decision observes that:

> Congress has not given us the power, as in the case of the carriers that we regulate under title II, to regulate the business of a broadcast licensee.

and went on to say, in contrasting the broadcaster's prerogatives with those of a common carrier—

> admittedly, however, an existing common carrier has, if not monopolistic prerogatives, certain rights to exclusivity in the area of operation.

This implied contrast is in some instances dubious and in others contrary to fact. The very fact that broadcasting is subject to regulation leaves no doubt that competition is neither pure in the sense of the economist's view nor is it free in the sense of nonregulated enterprise. The fact that for television the number of channels is limited and by the technical nature of the problems communities are rationed makes of the term free competition mere catchwords. Once the channels assigned to given community are taken up there is virtual monopoly—all that can now be left is rivalry among those who are licensed to use these facilities. Moreover, the very manner of administering a limited resource as, for example, by establishment of a table of allocations as in the sixth report and order, may make way for incipient or quasi-monopoly.[70]

The Commission trips agilely over a bit of pseudo logic which may warrant scrutiny in the light of broadcasting regulation history, holding that [71]—

> Restriction of competition is a corollary of exclusivity, and exclusivity is tolerable only by the application of public-utility concepts and techniques.

The term "free competition" has been so loosely handled as to lose precise meaning. Free competition, in effect, calls for an unlimited number of buyers and sellers. The very court which issued the Sanders decision, in a decision [72] of not long ago said:

> It is only in a blunt, indiscriminatory sense that we speak of competition as an ultimate good * * *. Surely it cannot be said in these situations that competition is of itself a national policy.

The Yankee Network [73] decision pointed out the danger of loose thinking in these words:

> Uncontrolled competition argued for by the Commission is in fact one way of creating monopoly.

This decision, if interpreted broadly, may be a Pyrrhic victory. Moreover, it was unanimous in an attenuated sense. There was una-

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[69] P. 84, Report on Chain Broadcasting, Commission order No. 37, docket No. 5060, May 1941.
[70] Note the Lincoln, Nebr., juggling of stations, pp. 63, 141.
[71] Southeastern, p. 14.
[72] *FCC* v. *RCAC*, 73 S. Ct. 998, 1003 (1953).
[73] 107 F. 2d 212, 223 (1939).

nimity only on the point that it was in the public interest to grant the new application for a construction permit by Southeastern Enterprises and therefore to deny the protest of Rounsaville. Three Commissioners, Chairman McConnaughey, Commissioners Hyde and Bartley, appended statements.

Chairman McConnaughey expressed some doubt that the Commission has the power to consider matters involving economic injury except perhaps in instances falling within the scope of section 307 (b), see page 156. Why the application in this instance only, is obscure. The degree of the Chairman's uncertainty is further accented by his subjunctive observation that:

> If the Commission had power to consider the effect of economic injury in a case such as this, I do not believe it could exercise the power until it adopted some kind of rule or regulation defining the public interest guide posts. No such rule—assuming statutory foundation therefor—exists.

The position of Commissioner Hyde was definitive:

> In sum, I would conclude not that we do not have authority under the public interest standard to consider the matters which have been raised here, but that upon such consideration the grant of competitive application is in the public interest.
>
> * * * * * * *
>
> Where I differ with the majority of the Commission is in its conclusion that the Commission has no authority under the public interest standard to consider the economic impact of a grant it makes in the broadcasting field. The Commission's decision reaches this conclusion by denominating those portions of the Supreme Court's decisions in the Sanders case with which it wishes to disagree as obiter dicta. I do not believe that because a pronouncement of the Supreme Court in a particular case may be dicta it is for that reason erroneous. And, contrary to the majority, I see nothing in sections 308 or 319 of the Communications Act which delimits the scope of the Commission's inquiry into the public interest, convenience and necessity, the basic licensing standard we are enjoined to apply. While I personally would believe that the language of sections 308 (b) and 319 (a) upon which the majority appears to rely is not in any way intended to be a definition of the term "public interest, convenience, and necessity" I should think that if it were it would clearly be broad enough to give us authority to consider economic matters if it were in the public interest to do so.

Commissioner Bartley concurred in the denial of the protest by Rounsaville for failure to sustain his case. Rounsaville carried the burden of proof. In his statement, Commissioner Bartley said:

> I cannot join the majority in what amounts to a disavowal of a portion of the Commission's statutory jurisdiction, solely upon the basis of a chosen interpretation of certain language used by the Supreme Court in the Sanders case, upon which even the legal profession is divided.
>
> I find it difficult to believe that the Supreme Court of the United States would use "superfluous language" in a decision as important to a construction of the Communications Act as was the Sanders case. To me, the language quoted by the majority (see par. 25)—upon which the controversy stands—is pointed and meaningful as regards the Commission's jurisdiction under the act where applicable.

The unqualified, cramping interpretation of the act by the majority; namely, that it gives the Commission immunity from responsibility for the consideration of questions of economic injury, irrespective of the consequences, is to impute to the act an arbitrary mandate in this respect which certainly is not explicitly set forth and which, if it is there at all, exists only by adumbration.

The Commission decision was appealed by Fitch & Kile, Inc., successors to Rounsaville. The court of appeals issued an order staying the grant to Southeastern. At this point, the Court observed:

> Here, as in Television Corporation of America, the Federal Communications Commission, No. 13,803, decided by order dated May 3, 1957, the probabilities of success appear to lie heavily with appellant; and unlike the case, the showing of irreparable injury here is sufficient when coupled with such probability of success, to justify a stay.

Later the same court denied a petition for rehearing by Southeastern. At the same time however it vacated the stay of the Commission grant to Southeastern. Fitch & Kile now faced competition from Southeastern during further proceedings which would no doubt be protracted and costly. The consequent result was an agreement of dismissal filed by both parties. The assumption is that Fitch & Kile could not afford to pursue a protracted litigation. In all probability the contest would have reached the Supreme Court for clarification of the meaning of the Sanders decision and clarification of the Communications Act in so far as economic injury is concerned.

The question of economic injury, or more precisely consideration of economic factors as affecting public interest, remains a vexing enigma to be resolved, either by further ruling by the Supreme Court or by incisive legislation.

By way of postscript, the majority in arriving at their decision were evidently concerned over the specter presented by the additional task imposed were economic factors to be given weight. In setting forth the nature and magnitude of this additional burden, they said: [74]

> Once we have decided which of the two parties will render the service, we must assume the responsibility of preventing an avoidance of our determination or we in reality will have given that person a license to do otherwise; we must impose conditions upon him to render the service that we found was necessary and to maintain an efficient and effective operation to that end, which would be nothing more or less than the regulation of his business—to a degree even greater than exercised of common carriers.

This doctrinal declaration says in effect that in the instance of sole applicants the Commission has the responsibility of passing on whether or not the party has proposed an acceptable program plan but that once the permit is granted, the Commission has no continuing responsibility for seeing to it that the asserted plan was carried out in spirit and fact. In the instance of comparative hearings, this doctrine is even more insidious. Here, particularly, there is a premium on proposing an imposing program plan for the purpose of winning the contest. There is no penalty for falling short of the proposal, once the contestant is victorious, for the Commission disclaims responsibility "to render the service that we found was necessary to maintain an efficient and effective operation."

The Commission's policy as asserted above gives an unrealistic interpretation to the provisions of sections 308 (b) and 319 (a) of the act and their interpretation by the Supreme Court: [75]

> an important element of public interest and convenience affecting the issue of a license is the ability of the licensee to render the best practicable service to

[74] P. 14, par. 46.
[75] *FCC* v. *Sanders*, 60 S. Ct. 693, 697 (1940).

the community reached by his broadcasts. That such ability may be assured the act contemplates inquiry by the Commission, inter alia, into an applicant's financial qualifications to operate the proposed station.

The Court's reading of the statute implies something more than an abstract, monitory consideration of an applicant's hypothetical ability to give the public a specified level of program service. It implies a continuing followup by the Commission.

The specter of economic consideration has been up before. It was an issue in hearings before the Interstate and Foreign Commerce Committee in 1947.[76] There Commission Chairman Denny testified that—

We have insisted that all applicants demonstrate that they have sufficient financial resources to construct and operate a station to insure that the limited number of available radio frequencies will be adequately utilized to give the listening public maximum radio service. We do not go beyond that to consider the possible economic effects of competition.

One might ask how, under these conditions, ignoring the effects of competition, one insures adequate utilization and maximum radio service.

As if perhaps the difficulties involved in studying the effects of competition, the added burden on an already overloaded Commission, were the real underlying issue, Chairman Denny assayed the potential problem in the vein of a Jeremiad:

What is equally important is an understanding of just what consideration of economic and competitive factors by the Commission would involve. Suppose, for example, a city has five stations and an application is made for a sixth. As we see it, we could not adequately make any determination as to the economic effect of a sixth station without first making an estimate of the potential radio advertising revenue in the market, and, as this would inevitably vary with the efficiency of the operators to tap that potential market, we would have to make an appraisal of the efficiency of the present broadcasters and the new applicant.

Then, it would be necessary to determine what a fair revenue for the existing broadcasters would be in order to determine whether there would be enough left over for a new station. To insure that all similarly situated broadcasters are treated alike, we would have to prescribe a uniform system of accounting. The result inevitably would be to require the Commission to concern itself with the details of the business activities of the broadcasters even to the point of saying what their income should be.

This is the theme of paragraphs 43, 44, and 45 of the Southeastern decision.

In the petition for stay filed in the court of appeals by the successors to Rounsaville,[77] another theory is advanced as to why the Commission, in its decision in Southeastern, may desire to disclaim any right to consider economic injury, namely:

Perhaps the explanation for this disavowal of statutory authority is predicated upon the Commission's deep-rooted and open abhorrence of section 309 (c) of the Communications Act of 1934, as amended. It has requested Congress to repeal this section of the act and its decisions rendered under this section of the act have been uniformly reversed by this court.

Section 309 (c) was enacted in 1952. It grew out of the Supreme Court's decision in Sanders which held that[78]—

Congress had some purpose in enacting section 402 (b) (2). It may have been of opinion that one likely to be financially injured by the issue of a license would be the only person having a sufficient interest to bring to the attention of the appellate court errors of law in the action of the Commission in granting the license. It is within the power of Congress to confer such standing to prosecute an appeal.

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[76] A bill to amend the Communications Act of 1934, and for other purposes, S. 1333.
[77] *Fitch & Kile* v. *FCC*, case No. 13868 (May 17, 1957).
[78] 60 S. Ct. 693, 698 (1940).

In words of the court of appeals, later: [79]

What is required [of a protest under sec. 309 (c)] is merely an articulated statement of some fact or situation which would tend to show, if established at a hearing, that the grant of the license contravened public interest, convenience and necessity, or that the licensee was technically or financially unqualified, contrary to the Commission's initial finding.

Chairman Doerfer particularly has been opposed to this appeal section of the act. In his testimony on a bill [80] to amend section 309 of the act, he observed with respect to the Supreme Court's decision in Sanders:

This language seemed to lay at rest any serious contention that a broadcaster was entitled to economic protection from the competition of another or a new broadcaster. However, the decision went further. It held, in effect, that any person aggrieved or whose interests are adversely affected by any decision of the Commission granting or refusing any application would have the requisite standing to appeal such decision and to raise any relevant question of law in respect of any order of the Commission.

In other words, one who is likely to suffer economic injury now becomes, by virtue of section 309 (c) a party in interest, but only for the purpose of asserting that a grant of a license was, or may be, contrary to the public interest.

and that:

The Federal Communications Commission, as an administrative agency, is essentially an arm of the legislative branch of Government. It does that which, except for the burdens of detail and lack of time, Congress could do itself.

It is well to recognize that this intrusion should not suggest that the Commission abjure its cardinal responsibility, under the statute, as a quasi-judicial body or administrative tribunal. In *Wilson* v. *FCC*, the Court observed: [81]

The Commission is not, strictly, a court, but it has quasi-judicial powers and its proceedings must satisfy "the pertinent demands of due process." (*FRC* v. *Nelson Bros.*, 53 S. Ct. 627).

Although not courts in the strict sense, administrative tribunals such as the Commission are characterized by the investiture of—

power far exceeding and differing from conventional judicial modes for adjusting conflicting claims * * * Administrative agencies have power themselves to initiate inquiry, or, when their authority is invoked, to control the range of investigation in ascertaining what is to satisfy the requirements of the public interest. * * * [82]

Chairman Doerfer continues:

Administrative agencies were not intended to function as courts of law. Elimination of delay and implementation of the legislative policy fairly and promptly are the main reasons for their creation and existence. Section 309 (c) adds additional and unnecessary burdens upon the FCC in achieving these objectives.

I am in substantial accord with the recommendations of my fellow Commissioners, but I go further. I urge complete repeal of that section.

In a similar trenchant vein was his testimony in the Television Inquiry: [83]

I'd like to say something with respect to that. I think we are up to our necks in due process, and that has been the result of a series of laws and court decisions, piecemeal, which, when added up, really hobble us. For illustration, section 309 (c), which I don't think even today, as amended, goes far enough.

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[79] *Fed. Broad. Systems* v. *FCC*, 225 F. 2d 560, 563 (1956).
[80] S. 1648 hearing, July 7, 1955, pp. 51, 50.
[81] 170 F. 2d 793, 801 (1948).
[82] *FCC* v. *Pottsville*, 60 S. Ct. 437, p. 441 (1940).
[83] Pt. I, UHF–VHF Allocations Problem, p. 58, 1956.

Nonetheless, Congress have even engrafted upon the FCC procedure a remedy without a right. People now have the right to come in to prevent competition, when the act itself calls for a competitive system.

More recently in two addresses he reemphasized the extremity of his stand with respect to what he has dubbed an instrument of extortion: [84]

In the face of the desire to keep broadcasting in the competitive field and to have a broadcaster survive or succumb according to his ability to compete, I would like to have someone do a "motivational research job" of those who supported the adoption of the so-called protest law (sec. 309 (c)). It is incompatible both with the basic philosophy of the Communications Act and the purpose in the creation of administrative agencies. You cannot have the right to compete and thereafter be protected from competition upon the flimsy ground that it is contrary to the public interest to be supplanted. And yet, we must not only accord such protestants extended hearings and all the other appurtenances of due process; we must, if need be, stop all other processing and allow the protestant to squeeze in at the head of the line.

And [85]—

Two years later, in the Sanders case, the Supreme Court held that although a person is not protected against economic injury from a would-be competitor, he is, nonetheless, a person aggrieved and, therefore, has the right to appeal but only to show a harm to the public interest. When Congress in the year 1952 modified this novel doctrine by the enactment of section 309 (c) of the Communications Act, it granted a forum for protestants to litigate their own personal conceptions of what constituted the public interest. Naturally, any threat of competition was deemed by them to be contrary to the public interest.

A critical study of the Clarksburg Publishing Co. case, treated elsewhere herein (pp. 186 ff), with its subtleties and underlying implications, taken alone, proclaims the value of the protest section. And there are other illustrations as the record attests.

COMMUNITY NEED

The Commission's immediate policy in determining the need for a station in terms of public interest, convenience or necessity is presumably that expressed in the Southeastern case.[86] Here the Commission declares that it—

does not follow a policy of determining the need for a station in a given community, section 307 (b) aside. That is left to the genius of free enterprise.

Section 307 (b) is as follows:

In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

To the policy declaration quoted, section 307 (a) is germane. It is as follows:

The Commission, *if public convenience, interest or necessity will be served thereby*, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by this act. [Emphasis supplied.]

Thus it would appear that it is not the statute but current policy (as stated) which determines the Commission's action with respect to an evaluation of the need for a new facility.

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[84] Speech by FCC Chairman John C. Doerfer before the Radio and Television Executives Society, New York City, September 12, 1957.
[85] Address by FCC Chairman John C. Doerfer before Federal Communications Bar, October 24, 1957, Washington, D. C.
[86] FCC decision, *Southeastern Enterprises*, docket No. 11411, mimeo. March 1957.

There is at least one instance in which the Commission did not intend to leave determination of the need for a station to "the genius of free enterprise." This was a circumstance where two parties applied for construction permits for stations in a community where none had been before. The Commission, after a hearing, was unable to find that a need existed for any local station at all. Therefore both applications were denied. One of the parties appealed from the Commission's decision.[87] The Court found the Commission in error—that a need did exist to serve the particular local [88] interests. The Court noted that service was available from other stations, but that—

none of these stations provided for the local needs of Hannibal.

In 1939 through the medium of the Meyer case,[89] the Commission asserted in its decision, that the Hannibal decision neither directly nor indirectly said the Commission was acting beyond its authority in passing on the question of need for a given station facility. In Meyer, the Commission said:

Public interest, convenience, or necessity which the statute provides as the basis for a grant, cannot be construed as a mandate that actual necessity for the particular facilities must be shown.

In another instance, relatively recent, the Commission denied the application for an original construction permit for a first primary service. Here the Commission did not limit itself to the applicant's qualifications alone but considered the limited economic potentialities of the broadcast community the applicant proposed to serve. The breadth of the considerations is particularly interesting in the light of the Southeastern decision pronouncements: [90]

The Commission has expressed satisfaction with the qualifications of the applicant, except with respect to his financial qualifications. The question of financial qualifications has at least two important aspects: One, whether the applicant has sufficient financial resources to construct the station and operate it for a reasonable initial period of time without expected normal revenue; and, two, whether there is a reasonable likelihood of sufficient financial return from the operation to defray the expenses necessary to keep the station operating in the public interest and, if not, are the applicant's personal resources such that he is able and willing to operate the station for a considerable period at a loss. See *Saginaw Broadcasting Company* v. *Federal Communications Commission* (96 F. 2d, 554 at 562; *Scripps-Howard Radio, Inc.* v. *Federal Communications Commission* (189 F. 2d, 667, 681) * * *

In view of the limited capital of this applicant it would be necessary for the station to have advertising revenue of a substantial amount in order to operate. The applicant has not met the burden of proof by showing that the economic life of the Big Rapids community and that portion of Mecosta County, which would be served, are such as to lead the Commission reasonably to believe that the station would obtain the financial support from the community vitally necessary for its operation in the service of the public. * * *

We have given careful consideration to the fact that a grant of the application would provide Big Rapids with its first broadcast station in the city with its first primary service. While these are highly important and persuasive factors, the fact that a proposed operation would provide a city with its first primary service as well as with its first broadcast station does not per se make a grant of the application in the public interest. Consideration must be given to all problems which are presented by such proposal. * * *

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[87] *Courier Post Pub. Co.* v. *FCC*, 194 F. 2d 213 (1939).

[88] The court cited a Commission definition of a local station, "to present programs of local interest to the residents of that community; to utilize and develop local entertainment talent which the record indicates is available to serve local, religious, educational, civic, patriotic, and other organizations; to broadcast local news; and to generally provide a means of local public expression and a local broadcast service to listeners in that area."

[89] FCC 551 (November 1939).

[90] Construction permit application of Frank D. Tefft, Jr., 8 RR 179, 190 (1952).

The Commission had already considered economic injury in a precautionary sense in an earlier case:

If the financial qualifications of an applicant depend upon his ability to compete for business with existing licensees, the question of the effect of competition on the applicant is an important fact to be considered by the Commission in determining whether the applicant is financially qualified to operate the proposed station. (*Sanders Bros. Radio Station* v. *FCC*, 106 F. 2d 321 (January 1939); 60 S. Ct. 693 (March 1940).)

REGULATION, ECONOMICS, AND BUSINESS METHODS

In the Southeastern decision, the Commission states that it regulates with respect to electrical interference and with respect to statutory standards provided in sections 308 and 319 to be met by applicant for license or for construction permit, respectively. The decision asserts that:

Upon these standards (specified in secs. 308 and 319 as pertinent) the finding of public interest, convenience and necessity is made.

The pertinent standards referred to are section 308 (b)—

All applications for station licenses, or modifications or renewals thereof shall set forth such facts as the Commission by regulation may prescribe as to the citizenship, character, and financial, technical, and other qualifications of the applicant to operate the station; the ownership and location of the proposed station and of the stations, if any, with which it is proposed to communicate; the frequencies and the power desired to be used; the hours of the day or other periods of time during which it is proposed to operate the station; the purposes for which the station is to be used; and such other information as it may require.

And section 319 (a) which for the purpose here may be considered identical. In each there is the omnibus prerogative:

And such other information as it (the Commission) may require.

If, as the Southeastern decision declares, it is upon these standards that the findings of public interest, convenience and necessity are made, it would appear that there is no language excluding from consideration economic factors or denying the Commission the right to weigh these factors when germane. Any exclusion would then appear to be determined entirely by the will of the Commission and not under compulsion of the law, at least in so far as these passages of the act are concerned.

Witness the consistency of this exclusion policy on the history of UHF, in 1952 adjudged by the Commission to be in the public interest (sixth report and order)—a position neither altered nor renounced by the Commission since.

One does not have to divine the sophistry. The sixth report (par. 77) states that:

The Commission is of the view that healthy economic competition in the television field will exist within the framework of the assignment table adopted therein * * *.

At that time this optimism was founded on hope and conjecture. That the judgment was in error soon became apparent.

Commissioner Hyde testified in the Potter hearings (p. 210), in effect, that the Commission had taken into consideration in the evolution of the sixth report and order:

Economic realities * * * and the economic possibilities of the stations.

At least here is recognition of the importance of economic factors and the Commission's responsibility to give them consideration.

The Commission's subsequent hands-off-economic-factors policy, despite station crisis after crisis in which some 65 stations have failed with losses aggregating millions of dollars—an economic disaster clearly affecting the declared public interest, can, of course, be rationalized (not justified) if the philosophy of the Southeastern decision is taken as an absolute.

The following comment [91] on the sixth report and order by Commissioner Hennock was prophetic:

> The Commission's experience with FM, where the set problem was so critical, should make it clear beyond question that practical economic considerations cannot be left largely to chance in the establishment of a new service.

The Commission decision in Southeastern cites on the following successive paragraphs in Sanders in the argument against its right to take economic factors into consideration: [92]

> An important element of public interest and convenience affecting the issue of a license is the ability of the licensee to render the best practicable service to the community reached by his broadcasts. That such ability may be assured the act contemplates inquiry by the Commission, inter alia, into an applicant's financial qualifications to operate the proposed station.
>
> But the act does not essay to regulate the business of the licensee. The Commission is given no supervisory control of the programs, of business management or of policy. In short, the broadcasting field is open to anyone, provided there be an available frequency over which he can broadcast without interference to others, if he shows his competency, the adequacy of his equipment, and financial ability to make good use of the assigned channel.

Surely the points of view of these two paragraphs were not intended to be antithetical, nor to be taken literally and out of context in a way that would lead to an inconsistent or absurd result. There is real question as to whether the Commission's position in Southeastern is tenable even with the most radical interpretation of Sanders. It is worth refreshing one's mind with the clear, reasoned prose of Associate Justice Groner dissenting in the Jenny Wren case,[93] the commonsense of which does not appear to conflict with the spirit of the later Sanders decisions:

> The basic principle of congressional control is public interest, convenience, and necessity, and since the passage of the act the policy of the Commission has been to accomplish this object through private enterprise. The Commission, in the preamble to its regulations, says: "This system is one which is based entirely upon the use of radio broadcasting stations for advertising purposes. It is a highly competitive system * * *." In these circumstances it may be said, somewhat as was said by Mr. Justice Brandeis of a like condition in the transportation field, the act recognizes the preservation of the earning capacity, and conservation of the financial resources, of the individual broadcasting station as a matter of national concern, for the reason that the property employed must be permitted to earn a reasonable return or the system will break down; thus indicating, as it seems to me, an identical or reciprocal interest between the owner and the public, in which it is the right of either to see that competition between stations is not carried to the point of destruction.

It is germane to consider to what degree regulation had drawn the Commission into a consideration of questions directly affecting the broadcasting business, considerations which are in conflict with this interpretation of the Sanders somewhat offhand obiter dicta quoted above.

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[91] P. 204, sixth report and order (1952).
[92] 60 S. Ct. 693, 697 (1940).
[93] *Sykes* v. *Jenny Wren Co.*, 78 F. 2d 729, 734 (1935).

The Commission expressed its policy on competition and monopoly some years ago through a translation of the statute as follows: [94]

[The] underlying doctrine of the Communications Act of 1934 is rightfully that which encourages competition and discourages monopoly in any form *both direct and indirect.* [Emphasis supplied.]

The Commission's Report on Chain Broadcasting [95] asserted that—

The present policy of the Commission is to encourage competition regardless of adverse economic effects. This general concept of the law is at variance with the natural laws which force a limited market.

Presumably the reason the Commission made the study and report was to arrive at means to regulate the kind of competition then practiced. In fact, the chain broadcasting regulations which the Commission consequently promulgated were for just that purpose.

Application of these regulations led to an appeal to the courts on behalf of the network interests (following the Sanders decision) in which their contention was made that the Commission's power was limited to technological matters—a limitation the Commission, in this instance at least, contended did not apply.

The Commission, in justifying its right under the act to get at the business aspects of broadcasting, observed that [96]—

The general objectives of the Communications Act, as stated in section 1, are to "make available, so far as possible, to all people of the United States a rapid, efficient, nationwide, and worldwide wire and radio communication service." This provision is supplemented by section 303 (g) which provides that the Commission shall "study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest." With the number of radio channels limited by natural factors, the public interest demands that those who are entrusted with the available channels shall make the fullest and most effective use of them. If a licensee enters into a contract with a network organization which limits his ability to make the best use of the radio facility assigned him, he is not serving the public interest.

And that—

The Commission's licensing function is not limited to determining simply whether the service of one station is satisfactory as compared with that of other stations. The Commission has the duty to grant licenses and renewals only to those applicants who propose a maximum utilization in the public interest of the facilities they request.

And that—

It is fundamental that any determination of public interest must be based upon a consideration of the service a station renders against the background of the service it could render.

Buttressing its construction that the spirit of the act generally permitted it to consider economic factors in its regulatory activities, it said: [97]

If any doubts exist as to the propriety of the regulations viewed as an exercise of the Commission's licensing power, they are completely dispelled by section 303 (i). This section gives to the Commission the specific power to "make special regulations applicable to radio stations engaged in chain broadcasting." No language could more clearly cover what we are doing here.

It has been contended, however, that this provision only empowers the Commission to deal with problems of a technical nature involved in chain broad-

[94] Commission report released January 24, 1938, Social and Economic Data Pursuant to the Informal Hearing on Broadcasting, docket 4063.
[95] P. 120, Commission Order No. 37, docket No. 5060, May 1941.
[96] Chain Broadcasting Report, pp. 80, 81, 82.
[97] Ibid., p. 85.

casting. The complete answer to this contention is that the language employed by Congress is too broad and general to permit of so narrow an interpretation. We cannot assume that Congress did not mean what it said.

Following with this interpretation of Sanders [98]—

There is nothing in the Sanders opinion which gives any support to the contention that we cannot, in exercising our licensing function, consider factors which might affect the ability of the station to serve the public interest just because those factors happen to be what might be called the business of the licensee.

Sustaining the Commission, the Supreme Court had this to say: [99]

The "public interest" to be served under the Communications Act is thus the interest of the listening public in "the larger and more effective use of radio" (sec. 303 (g)). The facilities of radio are limited and, therefore, precious; they cannot be left to wasteful use without detriment to the public interest. "An important element of public interest and convenience affecting the issue of a license is the ability of the licensee to render the best practicable service to the community reached by his broadcasts" (*FCC* v. *Sanders Bros. Radio Station*, 60 S. Ct. 693, 697). The Commission's licensing function cannot be discharged, therefore, merely by finding that there are no technological objections to the granting of a license. If the criterion of "public interest" were limited to such matters, how could the Commission choose between two applicants for the same facilities, each of whom is financially and technically qualified to operate a station? Since the very inception of Federal regulation by radio, comparative considerations as to the services to be rendered have governed the application of the standard of "public interest, convenience, or necessity."

Thus going far beyond a perfunctory interpretation of the Sanders quotation above as reflected in the Southeastern decision.

Emphasizing the breadth contemplated by the act, the Court opined that [1]—

While Congress did not give the Commission unfettered discretion to regulate all phases of the radio industry, it did not frustrate the purposes for which the Communications Act of 1934 was brought into being by attempting an itemized catalog of the specific manifestations of the general problems for the solution of which it was establishing a regulatory agency. That would have stereotyped the powers of the Commission to specific details in regulating a field of enterprise the dominant characteristic of which was the rapid pace of its unfolding.

The Commission, thus encouraged, was subsequently prompted to go further in its consideration of economic and social factors. It published "a blue book," in effect a code, relating to programing. This tract, Public Service Responsibility of Broadcast Licensees,[2] went far in involving the Commission in the commercial business of programing.

The Commission's argument for this unusual encyclical ran thus: [3]

While much of the responsibility for improved program service lies with the broadcasting industry and with the public, the Commission has a statutory responsibility for the public interest, of which it cannot divest itself. The Commission's experience with the detailed review of broadcast renewal applications since April 1945, together with the facts set forth in this report, indicate some current trends in broadcasting which, with reference to licensing procedure, require its particular attention.

In issuing and in renewing the licenses of broadcast stations the Commission proposes to give particular consideration to four program service factors relevant to the public interest. These are: (1) The carrying of sustaining programs, including network sustaining programs, with particular reference to the reten-

[98] Ibid., p. 84.
[99] *NBC* v. *FCC*, 63 S. Ct. 997, 1009, 1010 (1943).
[1] Ibid., 63 S. Ct. 997, 1011 (1943).
[2] FCC Public Notice 95452, March 7, 1946.
[3] Report by FCC, March 7, 1946, p. 55.

tion by licensees of a proper discretion and responsibility for maintaining a well-balanced program structure; (2) the carrying of local live programs; (3) the carrying of programs devoted to the discussion of public issues; and (4) the elimination of advertising excesses.

The document paternalistically opined [4]—

The problem of program service is intimately related to economic factors. A prosperous broadcasting industry is obviously in a position to render a better program service to the public than an industry which must pinch and scrape to make ends meet. Since the revenues of American Broadcasting come primarily from advertisers, the terms and conditions of program service must not be such as to block the flow of advertising revenues into broadcasting. Finally, the public benefits when the economic foundations of broadcasting are sufficiently firm to insure a flow of new capital into the industry, especially at present when the development of FM and television is imminent.

A review of the economic aspects of broadcasting during recent years indicates that there are no economic considerations to prevent the rendering of a considerably broader program service than the public is currently afforded. Detailed statistics are found in two annual Commission publications, Statistics of the Communications Industry in the United States, and Financial and Employee Data Respecting Networks and Standard Broadcast Stations. Some selected and additional statistics are presented below.

Defensively the tract observed: [5]

The contention has at times been made that section 326 of the Communications Act, which prohibits censorship or interference with free speech by the Commission, precludes any concern on the part of the Commission with the program service of licensees. This contention overlooks the legislative history of the Radio Act of 1927, the consistent administrative practice of the Federal Radio Commission, the reenactment of identical provisions in the Communications Act of 1934 with full knowledge by the Congress that the language covered a Commission concern with program service, the relevant court decisions, and this Commission's concern with program service since 1934.

Finally, to remove any doubt as to its power to assert itself in the field of the business of program service, the book contains this supporting precept: [6]

The question of the nature of the Commission's power was presented to the Supreme Court in the network case. The contention was then made (by the contesting networks) that the Commission's power was limited to technological matters only. The Court rejected this, saying (*National Broadcasting Company v. United States*, 319 U. S. 190, 216–217): "The Commission's licensing function cannot be discharged, therefore, merely by finding that there are no technological objections to the granting of a license. If the criterion of 'public interest' were limited to such matters, how could the Commission choose between two applicants for the same facilities, each of whom is financially and technically qualified to operate a station? Since the very inception of Federal regulation by radio, comparative considerations as to the service to be rendered have governed the application of the standard of 'public interest, convenience, or necessity.'" The foregoing discussion should make it clear not only that the Commission has the authority to concern itself with program service, but that it is under an affirmative duty, in its public interest determinations, to give full consideration to program service.

In its Chain Broadcasting Report, the Commission said that—

The nature of the radio spectrum is such that the number of broadcasting stations which can operate, and the power which they can utilize, is limited. The limitations imposed by physical factors thus largely bar the door to new enterprise and almost close this customary avenue of competition. NBC's brief, taking cognizance of this situation, states: "Free competition in any enterprise exists only when the field is open to everyone."

[4] P. 47.
[5] P. 9.
[6] P. 12.

The Commission, in this report, drawing on one of its decisions,[7] interpreted the benefits of competition in these terms:

> Competition between stations in the same community inures to the public good because only by attracting and holding listeners can a broadcast station successfully compete for advertisers. Competition for advertisers, which means competition for listeners, necessarily results in rivalry between stations to broadcast programs calculated to attract and hold listeners, which necessarily results in the improvement of the quality of their program service. This is the essence of the American system of broadcasting.

It also observed that—

> The Commission's licensing function is not limited to determining simply whether the service of one station is satisfactory as compared with that of other stations. The Commission has the duty to grant licenses and renewals only to those applicants who propose a maximum utilization in the public interest of the facilities they request.

Maximum utilization may after all be a factor over which the applicant has no control. A comparison of this policy with that which emanates from the decision in Southeastern, already discussed, is interesting as illustrating lack of consistency if not of logic.

The Commission has gone quite far in its assumption of power to control programing, not hesitating to deny an application because the applicant asserted that he proposed to broadcast solely the programs available from one of the large networks. The denial was affirmed by the court of appeals.[8]

The Commission has established rules which prescribe the number of stations which a single owner may possess. There are other proscriptions including the policy of diversifications to guard against monopoly or undue concentration of communications facilities—press, radio, television.

With such manifold encroachments in the form of controls of the business of broadcasting[9] directly affecting the economics of the enterprise, it is hard to endow with substance the language of the Southeastern Enterprises case which treats with "free competition" and which disclaims power to "regulate the business of a broadcast licensee" (or even the network where no license is involved). On the basis of the record, what is the uniqueness imputed to the term "economic injury" that detaches it from these precedental actions and entitles the Commission arbitrarily to exclude it from broad consideration, even mayhap when monopoly might be averted.

The ultimate question to be answered is whether in the regulation of broadcasting, arbitrarily ignoring or bypassing economic considerations as a matter of policy on avowed legal grounds, for purposes of expediency, for fear of the labor such consideration would entail, or for any other reason, is really in the public interest.

CONTROL OF MASS COMMUNICATIONS MEDIA

It was not until the art of broadcasting developed that the enforcement of radio regulations became a serious problem. The first standard broadcast stations were established in 1921.

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[7] *Spartansburg Advertising Co.*, docket No. 5451, January 9, 1940.

[8] *Simmons* v. *FCC*, 169 F. 2d 670 (1948).

[9] The manner in which business considerations enter into the problems of Commission control is well brought out in such notable hearings as Development of Television, Committee on Interstate Commerce, S. Res. 251, April 1940, and the protracted controversy on color television: FCC docket 8736 and 8975, 9175, 8976, and 10637; 71 S. Ct. 806 (1951).

Historically, Federal regulation of radio communications began with the Wireless Ship Act of 1910.[10] This act forbade any steamer carrying more than 50 persons to leave an American port unless equipped with radio. Enforcement of the act was the responsibility of the Secretary of Commerce and Labor. General regulation of radio became urgent after the United States ratified the first international radio treaty in 1912. Congress therefore acted, establishing the Radio Communications Act of 1912. This statute forbade the operation of radio apparatus without a license from the Secretary of Commerce and Labor. It allocated certain frequencies to the Government, imposed restrictions on station radiation and the transmittal of distress signals.

Public radio broadcasting developed so rapidly and the traffic on the airways became so chaotic that the Secretary, upon advice of National Radio Conference in 1923 and 1924, adopted a policy of assigning specific frequencies to particular broadcast stations. The radio spectrum was divided into bands allocated to various services. For example, within the band of frequencies ranging from 550 to 1500 kilocycles, 96 channels in all, each 10 kilocycles wide, were assigned to standard broadcast stations. There were more stations than channels. Therefore limiting of power and of hours of operation were introduced as controls. This attempt to solve the problem failed. There was an appeal for legislation. The Secretary of Commerce, it had been demonstrated, was legally powerless to enforce the regulations he promulgated. The Secretary therefore forsook efforts to regulate. Instead he pleaded with the broadcast stations to resort to self-regulation. The plea was ignored.

In the period of about 6 months, prior to the enactment of remedial legislation, some 200 broadcast stations went on the air, utilizing the frequencies they desired irrespective of interference. Existing stations resorted independently to new frequencies and powers and hours of operation of their own choice. Conditions became so intolerable that the President in his message of December 1926 appealed to Congress for a comprehensive radio law.[11]

Immune from regulation, free competition had its opportunity to exploit a limited resource in the public domain. The Radio Act of 1927 was aimed at meeting the resultant crisis. There was no tradition or background on which to lean in evolving the new law, in contrast to railroads and public utilities where the legislative and administrative history was replete with experience and precedent. Public interest, convenience, and necessity—plastic terms to be given practical form and substance by the Commissioners—were the touchstone. Here were indefinite criteria indeed by which to determine right and wrong, good and bad.

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[10] Regulation of wire communication had its beginnings with the Post Roads Act in July 1886: "To aid the construction of telegraph lines and to secure to the Government the use of the same for postal, military, and other purposes." This act gave a telegraph company the right "to construct, maintain, and operate lines of telegraph through and over any portion of the public domain of the United States. * * *" Impetus to the radio legislation of 1910 was given by the ramming and sinking of the liner *Republic* by the *Florida* off Nantucket in January 1909. As a result of the S O S (then C Q D) sent by the *Republic's* radio operator, Jack Binns, only 6 lives were lost. This was the first case of the use of radio in a sea disaster.

[11] Cf. *NBC* v. *US*, 63 S. Ct. 997, 1006–1008 (1943).

In the midst of this turmoil, Secretary of Commerce, Herbert Hoover, testifying to the need for more effective radio regulation, observed: [12]

> It is urgent that we have an early and vigorous reorganization of the law in Federal regulation of radio. Not only are there questions of orderly conduct between the multitude of radio activities, in which more authority must be exerted in the interest of every user, whether sender or receiver, but the question of monopoly in radio communication must be squarely met.
>
> It is inconceivable that the American people will allow this newborn system of communication to fall exclusively into the power of any individual, group, or combination. * * * It cannot be thought that any single person or group shall ever have the right to determine what communication may be made to the American people.

According to this doctrine, monopoly takes on a duality. On the one hand, there is monopoly in the form of undue commercial advantage and, on the other, monopoly in the form of undue concentration of control over the character of program material broadcast to the public.

It was in a climate of this philosophy that the Radio Act of 1927 was evolved. The administrative and regulatory history of the Radio Act of 1927 and its successor statute, the Communications Act of 1934, reflect the influence of the socioeconomic doctrine, that monopoly and undue concentration of mediums of mass communications are inimical to the public interest. From this doctrine has stemmed the regulatory precept of diversification.

An early ruling of the Commission set its position as follows: [13]

> The available frequencies in the broadcast band are limited, and the Commission is loath to grant facilities for an additional broadcast station to one who already holds a license for a station in the same community unless it is clearly shown that the public convenience, interest, or necessity would be served thereby. Other things being equal, it would appear that, if there were a need for an additional local broadcast station in a community and if there were a frequency available for this service, the facilities should be granted to someone who does not already hold a broadcast license for an unlimited time station in that community.

It is interesting to contrast this history with the testimony some time ago by the head of one of the great networks: [14]

> There is no question in my mind that broadcasting must be free from Government interference or control if it is to serve its democratic function in our Nation * * *. *Although originally conceived in order to prevent technical interference among radio stations*, the role of the Government has continued to expand with respect to broadcasting until today there are regulations for business practices and, recently, for program contents * * *. There is no doubt today that a free radio is as vital to a free press as the newspapers and magazines * * *. To be as free as the press, radio must be equally free from Government controls of programs and business * * *. I say radio should be as free as the press despite obsolete but lingering theories that radio is a field of scarcity and natural monopoly, while the printed press is unlimited and democratic. [Emphasis supplied.]

In a case [15] shortly thereafter, the owner and operator of a station sought a second station in the locality, as an investment and as an extension of its radio service territory. These two stations, and a

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[12] Minority views on H. R. 9971, p. 11; Rept. No. 464, 69th Cong., 1st sess.
[13] *Application for Construction Permit, WSMB, New Orleans*, 5 FCC 55, 58 (1938).
[14] Mr. Frank Stanton, president, Columbia Broadcasting System, pp. 314–315, hearings on S. 1333, June 1947, to amend the Communications Act of 1934.
[15] *Application for Transfer of Control of WREN, Lawrence, Kans., to the Kansas City Star*, 5 FCC 496, 500 (1938).

third nearby, had been competing on equal terms. The Commission ruled that—

To authorize the transfer of control of station WREN to the proposed transferee would not serve public interest, convenience, and necessity.

It cited the above ruling of a few months before.

Another early precedent in respect to concentration of communication resources was established in the instance of applications for construction permits by the Louisville Times and Louisville Broadcasting Co.[16]

The Louisville Times published morning and evening papers and owned and operated a clear-channel station, WHAS. It was applying for a second station [17]—

for the purpose of broadcasting matters relating to the city of Louisville and of local interest but not appropriate for broadcasting over a 50-kilowatt, clear-channel station, and particularly to provide more frequent broadcasts from Louisville schools, trade organizations, and public-service clubs and associations.

The Commission's conclusion respecting the Louisville Times Co. was that [18]—

The applicant, in this case, has failed to show that, in the operation of two stations, the program service of each would afford the greatest benefit to the community, and, therefore, the public interest, convenience, and necessity will not be served by granting the application—

observing that [19]—

At the present time, stations WHAS and WAVE (operating out of Louisville as a regional station) are in a position to compete for both commercial support and public reception. Granting a local station to WHAS would unbalance this competitive situation, as it would place in the hands of the latter (which also has a monopoly on daily newspaper expression in the community) an outlet for local programs and commercial advertising.

The Commission has heretofore pointed out that the available frequencies in the broadcast band are limited, and the Commission is loath to grant facilities for an additional broadcast station to one who already holds a license for a station in the same community unless it is clearly shown that the public convenience, interest, or necessity would be served thereby. Other things being equal, it would appear that if there were a need for an additional local broadcast station in a community and if there were a frequency available for this service, the facilities should be granted to someone who does not already hold a broadcast license for an unlimited time station in that community. Experience shows that, where a real need exists for radio service in a populous area, applications to establish service are readily forthcoming.

In this period, the Commission was becoming increasingly aware of the monopolistic potentialities of network practices. Its philosophy is expressed in the Chain Broadcasting Report [20] in the following terms:

To the extent that the ownership and control of radio-broadcast stations falls into fewer and fewer hands, whether they be network organizations or other private interests, the free dissemination of ideas and information, upon which our democracy depends, is threatened.

In May 1941, the ownership of stations was limited to three for a given entity, and in the following August the Commission adopted an order barring multiple ownership of stations in the same area. In 1944, a single owner was now permitted 5 stations in place of 3. After

[16] 5 FCC 554 (1938), docket 4222 and 4446, respectively.
[17] Ibid., p. 555.
[18] Ibid., pp. 559, 560.
[19] Ibid., p. 559.
[20] Report on Chain Broadcasting, May 1941, result of Commission Order No. 37, docket 5060, March 18, 1938, pp. 198–199, chain broadcasting investigation.

the war came FM and TV, as a result of which, in 1948, the Commission approved single ownership of 7 AM, 6 FM, and 5 TV outlets. By 1953, the FM-station limit was increased to seven. In 1954, to aid UHF, the limit ownership of TV stations was increased to 7, provided 2 were UHF. Today, the rule is that no single entity may own more than 7 each AM, FM, or TV stations where no more than 5 TV stations may be VHF.

The right of the Commission thus to set the limits of station ownership was challenged by the Storer interests, the contest reaching the Supreme Court,[21] which said:

> We think the multiple-ownership rules, as adopted, are reconcilable with the Communications Act as a whole. An applicant files his application with knowledge of the Commission's attitude toward concentration of control.

It would thus appear that here is a method the Commission may safely use to control monopoly of stations by prescription of numbers. There is, however, the question of whether this arbitrary method is realistic. In terms of degree, one may conclude that control of 5 stations distributed among the top markets is different from 5 stations distributed among insignificant markets. An even more important point might be the potentialities of the stimulation of public service in more sparsely populated areas achievable by a specially alined distribution of stations under a single ownership as a means of incentive to private capital where the return on a single station would not warrant the investment. This, of course, brings into consideration supplemental devices in the form of satellite or other relay possibilities.

Another aspect of monopoly considered here, one which has come under scrutiny and active regulation, is the combination of radio and the press, as joint, complementary elements of one operating entity. These combinations raise proper questions of policy with respect to the control of mass communications mediums.[22] One can gain some idea of the nature and magnitude of this complex problem, also of the confusion, inconsistency, and irreconcilability of Commission policy, by scrutinizing the regulatory history.

The problem is not limited to multiple station ownership but arises also where publishing interests expand their holdings to include broadcasting stations. In its endeavor to delineate the Commission's power to determine what is in the public interest in this category, the court of appeals, in *Stahlman* v. *FCC*,[23] said that the power of determination of the qualifications of an applicant for a radio license so as to operate in the public interest, was—

> * * * not a grant of unlimited power, but only the right to control the range of investigation in ascertaining what, within the compass of the act, is proper to satisfy the requirements. It does not embrace and should not be extended by implication to embrace a ban on newspapers as such, for in that case it would follow that the power to exclude exists also as to schools and churches; and if to these, the interdict might be applied wherever the Commission chose to apply it.

In *Tri-State Broadcasting Co.* v. *FCC* (96 F. 2d 564 (1938), it was held that there is nothing in the act which either prevents or prej-

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[21] 76 S. Ct. 763 (1956).

[22] Diversification and the Public Interest: Administrative Responsibility of the FCC, Yale Law Journal, January 1957, pp. 365–396. See also paper by Heckman: Diversification of the Media of Mass Communication—Policy or Fallacy?, Geo. L. J., vol. 42, 1953–54, p. 378. This tract deals with the newspaper aspect of broadcast station ownership.

[23] *Stahlman* v. *FCC*, 126 F. 2d 124, 127 (1942).

udices the right of a newspaper as such to apply for and receive a broadcast license to operate a station.

On the other end of the scale of judgment, the Court has also said in *Mansfield Jour. Co.* v. *FCC*,[24] that—

> Monopoly in the mass communication of news and advertising is contrary to the public interest, even if not in terms proscribed by the antitrust laws.

Consider the instance where in the general area of Allentown-Easton, Pa., there were four mutually exclusive[25] applications for an unlimited time standard broadcast station. By Commission decision, the Allentown Broadcasting Corp. was the successful applicant. The case involved the comparative consideration of two applicants in each of two communities.

The basis on which the Commission acted was[26]——

> Upon consideration of the size of the two cities, the existing facilities of each and the amount of radio service available to each, we conclude that Allentown is in greater need of another radio station than Easton; that its need for another radio station is greater than Easton's need for extended services from its existing station, WEST; and that the purposes of section 307 (b) of the Communications Act would be better served by a grant to one of the Allentown applicants than by a grant to either of the Easton applicants.

This pertinent section of the act on which the controversy depended, section 307 (b), reads:

> In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

The decision was appealed by Easton.[27] The court of appeals observed:

> We cannot tell from the findings what caused the Commission to say that Allentown's need was greater.

and that—

> It would seem clear that if there were no service in this area except that coming in from the outside to Easton, so that Easton had that service and Allentown had none, Allentown should get the new station. Likewise, it would seem clear that if Allentown had a local station, usable for local expression and local news, and Easton had none, Easton should get the new station.

The case was remanded—

> for findings upon the comparative needs of the two communities for new radio service and the relative abilities of the applicants to serve the greater need.

In the course of the decision, the court drew attention to a decision of the same date in *Johnston Broadcasting Co.* v. *FCC*:[28]

> The Commission cannot ignore material differences between two applicants and make findings in respect to selected characteristics only. Neither can it base its conclusion upon a selection from among its findings. It must take into account all the characteristics which indicate differences, and reach an overall relative determination upon an evaluation of all factors, conflicting in many cases."

The Commission subsequently set aside the prior grant to Allentown and reopened the record for additional hearings. At this point the

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[24] 180 F. 2d 28, 33 (1950).
[25] Although a station of one area would not render service to the other, simultaneous operation would cause mutually destructive interference.
[26] *Easton Pub. Co.* v. *FCC*, 175 F. 2d 344, 347 (1949).
[27] *Easton Pub. Co.* v. *FCC*, 175 F. 2d 344, 348, 351 (1949).
[28] 175 F. 2d 351 (1949).

issue of monopoly and concentration of mass communications mediums was introduced.

The examiner concluded that the evidence showed a greater need for additional service in Allentown. For this reason and because she questioned the reliability of the Easton applicant, her initial decision recommended a grant to the Allentown company.[29]

The Commission reversed the finding of a greater need in Allentown, finding that both applicants proposed well balanced program service and that other differences fairly well canceled out. The decisive factor compelling to the Commission in making the grant to Easton was based on what was termed the "choice of local service" principle. It said:[30]

> Allentown is presently served by 3 standard broadcast stations located in and broadcasting local programs for that city, as well as receiving daytime service from the station located in adjoining Bethlehem, while only 1 standard broadcast station is located in and broadcast [sic] local programs for the Easton community. Thus, the residents of the Allentown community presently are afforded a choice between local standard broadcast programs and stations, a choice which can only be made available to the residents of the Easton community by means of an additional standard broadcast service.

On the basis that the court could find no substantial evidence in the record as a whole to support the premise that the abilities of Easton and Allentown parties (the contest was now reduced to two) were about equal, the court held the Commission's error "fatal" and remanded.

In arriving at its conclusions, the court went into the subject of monopoly and concentration of communications media. The court found the Commission's findings on the subject erroneous and held that[31]—

> the Commission must reevaluate the effect of the Easton Company's news monopoly and its past conduct on the issue of the relative abilities of the two applicants to serve in the public interest. Upon such reevaluation, these factors may well assume a different and perhaps decisive importance.

In a highly cogent dissent, which included certain observations not pertinent here, the view was expressed that in evaluating the three specifications involved the court was "merely substituting its judgment for the judgment of the Commission," which it had no power to do.

The dissent comments on the third specification, that of monopoly and concentration of communications media, as follows:[32]

> There is now only one standard broadcast station in Easton; it is not owned by the present applicant. Allentown has three standard stations. In respect to second standard stations, therefore, the question is whether Easton should have a second station, bringing competition to a present monopoly, or Allentown should have four. Of course, many other considerations enter, all as pointed out in our opinion in the first appeal. For example, Easton has 2 FM stations, 1 of which is owned by appellee, while Allentown has 1 operating and 1 under-consideration FM station. It is agreed that so far as receivers are concerned the FM broadcasters are a minor consideration. The point here is that the "monopoly" feature is not a simple black-and-white problem.
>
> In the next place the permissible amount of concentration of mass communication, involving broadcast stations and newspapers, is peculiarly a problem for the Commission. Here, indeed, is a regulatory problem. Ownership of a sta-

[29] *Allentown Br. Corp.* v. *FCC*, 222 F. 2d 781, 783 (1954).
[30] *Allentown Br. Corp.* v. *FCC*, 222 F. 2d 783, 784 (1954).
[31] Ibid., 787.
[32] *Allentown Br. Corp.* v. *FCC*, 222 F. 2d 781, 793 (1954).

tion by a newspaper can hardly be denounced per se. In the District of Columbia 2 of the 4 radio-television stations are owned by newspapers. In the instant case the Commission weighed many factors in this connection and produced a judgment on the point. I think the court should let it alone.

The Commission petitioned and was granted certiorari.[33] The issue formulated by the Commission was:

when mutually exclusive applicants seek authority to serve different communities, the Commission first determines which community has the greater need for additional services and then determines which applicant can best serve that community's need.

The lower court, inter alia, had taken the position [34]—

(*a*) that the "choice of local service" principle can be applied by the Commission only where the respective abilities of the applicants are about equal;
(*b*) that a hearing examiner's findings based on demeanor of witnesses are reversible by the Commission only upon a very substantial preponderance of the evidence.

The Supreme Court held the lower court in error on both these points, agreeing with the Commission's position. It remanded the case to the court of appeals for reconsideration, freed from the earlier rulings ((*a*) and (*b*) above) declared erroneous.

In this appeal, the issue raised in the court of appeals on the subject of monopoly and concentration of communication mediums was moot.

The court of appeals in a per curiam decision, now affirmed the Commission's decision granting the application of Easton finding "no substantial error in the features of the case remaining open" to its consideration.[35]

The dissenting judge said:

I do not read the Supreme Court's opinion to leave us with only the ministerial duty of reinstating the Commission's decision.

And held that the Supreme Court's mandate implied that—

even though intervenor is the only applicant proposing to serve the Easton Community, it may not automatically receive the grant.[36]

The dissent then called attention to the fact that [37]—

The Commission's decision awarding the grant to intervenor may not stand if made without consideration of a factor significant to the public interest (see *Dem. Prtg. Co.* v. *FCC*, 202 F. 2d 298 (1952)). The Commission found that intervenor to be the publisher of the only newspaper in its community, the permittee of the only television station and the licensee of 1 of 2 FM radio stations. I have examined the Commission's decision with care, but find nothing to show that it gave any consideration to the question whether the public interest would be served by increasing the intervenor's near monopoly of communications mediums and its large portion of the public broadcast domain in its community.

The Commission admits that this issue was squarely presented to it by the appellant. Yet, in its conclusions, the Commission disregarded this issue and confined itself to the questions whether management of the intervenor's radio station and newspaper would be "substantially separate" and whether, in the past, the intervenor had used its near monopoly in a manner contrary to the public interest. Despite considerable evidence that the intervenor had taken advantage of its powerful position to the detriment of the only existing standard broadcast station in Easton, the Commission concluded there was "some indication of a lack of intention to freeze out" that station. And despite testimony that intervenor looked upon a radio station as "a very, very valuable complement to our newspaper activities" and that intervenor's newspaper management handled

[33] *FCC* v. *Allentown Br. Corp.*, 75 S. Ct. 855, 858 (1955).
[34] Cf. 232 F. 2d 57, 58 (1955).
[35] *Allentown Br. Corp.* v. *FCC*, 232 F. 2d 57 (1955).
[36] Ibid., 58.
[37] *Allentown Br. Corp.* v. *FCC*, 232 F. 2d 57, 58–59 (1955).

"accounting and everything like that" for the FM station, the Commission found that the operation of intervenor's newspaper and radio interests "is and will be substantially separate."

Even assuming these conclusions are supported by the evidence, what is here significant is the absence of a more important conclusion relating to the effect upon the public interest of a grant which necessarily increases intervenor's extensive interest in communications mediums in Easton. The policy of competition which the Communications Act expressly favors (*FCC* v. *Sanders Br. R. Sta.* 60 S. Ct. 693 (1940)) is designed to avoid concentration of control of the valuable electronic public domain. Diversification assures the public of more than a "single or monopolistic source for its information about current affairs," and is "an important component of the public interest." (*Clarksburg Publishing Co.* v. *Federal Communications Comm.*, 96 U. F. App. D. C. at p. 218, 225 F. 2d at p. 518). Since concentration is a potential evil, protection of the public interest is not assured merely because an applicant has not yet exploited its monopoly position and promises not to exploit its enhanced monopoly.

Ownership of one station does not necessarily preclude grant of another, for Congress has not made it an automatic disqualification. But ownership of multiple facilities must be carefuly weighed by the Commission before it makes a grant. There may be circumstances in which the Commission could find that factor decisive in denying a grant, even if the result is postponement of service to the community. On the other hand, there may be circumstances in which need for the proposed service is so compelling that the Commission could find it outweighs the factor of multiple ownership. But if that is the basis for the grant, the Commission is, of course, required to say so.

The Commission's function is to weigh all the competing considerations pertinent to the public interest, and the balance it strikes, unless it is arbitrary, may not be disturbed on appeal. The fault I find is that the Commission has neglected to perform its function.

The dissenting judge in this instance had written the earlier decision which the Supreme Court had just remanded. That earlier decision had this to say on the subject of monopoly and concentration of communications media: [38]

The Easton applicant publishes the only newspaper in Easton. It is the licensee of 1 of 2 FM radio stations, and of the only television station in that community. Such concentration of communications media has been viewed by the Commission as contrary to the public interest, and this court has upheld that view. Although recognizing that diversification of news sources is a "public interest" factor, the Commission did not find it controlling here because (*a*) Easton's newspaper and radio operations would be "substantially separate"; and (*b*) there was no evidence that Easton had used its newspaper ownership to attempt to obtain a monopoly over news sources * * *, or otherwise in a manner not in the public interest.

At the hearing the general manager of the proposed Easton station, an employee of the Easton Publishing Co. for 16 years, testified that he was assigned to "this phase of the Easton Publishing Co. activities" because for many years he had thought "that a radio station would be a very very valuable complement to our newspaper activities * * *." He also testified that "accounting and everything like that" for the FM station currently operated by the Easton applicant are handled by the Easton Express. This scarcely portrays a picture of "substantially separate" operation.

There is no dispute that for 12 years, from 1936 to 1948, the Easton Express failed to carry the program logs for station WEST, the city's only standard broadcast station, although during that period it regularly carried the logs of the New York City network stations. While the Commission did not approve this practice, it felt that the change of heart since 1948 was "some indication of the lack of intention to freeze out WEST," and concluded "that the Easton Publishing Co. is not disqualified to be a station licensee solely because of its newspaper ownership and activities."

Such conduct may, of course, be a highly significant factor, particularly when the offending applicant already enjoys a formidable control over communications media in the community. Whether the Commission considered this former practice in weighing the relative abilities of the competing applicants does not

[38] *Allentown Br. Corp.* v. *FCC*, 222 F. 2d 781, 786–787 (1954).

clearly appear from the record. But even if it did, it apparently deemed such conduct inconclusive in light of its findings that (1) the radio and newspaper operations would be "substantially separate," (2) Easton had not equivocated regarding its network affiliation and programing plans, and (3) its witnesses had presented consistent, candid, and straightforward testimony.

a finding which that very court had found erroneous (p. 179). This per curiam decision,[39] the dissent notwithstanding, freed the Commission from what would have been its duty under the earlier decision,[40] i. e., to consider Easton's eligibility in the light of mass communications monopoly, or diversity principle. Some idea of the time consumed in contests of this character may be had from this litigation which spanned some 10 years.

Another case involving the problem of mass media monopoly to which the courts have contributed dicta that the Commission must give critical attention to the subject is that of the *Plains Radio Broadcasting Co.* v. *FCC*:[41]

The third point relates to the weight given, against appellant, to the fact that it owns the only newspaper in the town of Lubbock. In its final Memorandum Opinion and Order, the Commission said:

"The Decesion clearly shows that petitioner was not disqualified because of newspaper ownership, but that this fact along with others going to the comparative qualifications of the applicants was taken into consideration. In this proceeding we determined, in part, only that it would be more in the public interest to provide an additional medium for the dissemination of news and information to the public that would be independent of and afford a degree of competition to other such media in the area."

As the Commission correctly says, this is a comparative consideration. But, so far as we can tell, on this matter of media for the dissemination of news, it gave weight only to the fact that this appellant owned the newspaper in Lubbock. The evidence and the findings indicate that there are facts pertaining to the successful intervenor which bear upon the concentration of media for the dissemination of news. Intervenor is a partnership of three partners, with 43¾, 43¾ and 12½ percent interests, respectively. One partner owns half of a radio station at Brownwood, Tex., and 20 percent of stations at Waco and Austin. The second principal partner owns 90 percent of the newspaper in Brownwood, Tex., has interests in newspapers in Del Rio and Lamesa, Tex., and owns the other half of the Brownwood radio station and another 25 percent of the Waco and Austin stations.

(7) It seems to us that in considering the public interest in the maintenance of competition in the dissemination of news, the Commission cannot select the one fact that one applicant is the owner of the town's only newspaper and ignore the fact that the other applicant is directly related to several newspapers and radio stations in the same general section of the country (although not in this immediate community). A concentration of news dissemination by a chain of stations over an area would seem to us to be a factor in a comparative evaluation from the standpoint of competition in news dissemination. We think that the Commission must weigh pro and con the facts as to each applicant upon the subject which it deems material in a comparative evaluation. It cannot select and assert as material the pertinent characteristics of one applicant and ignore the related features of the others.

The Commission has been continuously encouraged to exercise careful scrutiny in this area of monopoly. On the discretionary choice between applicants, as an example of defining public interest in these terms, the Court has said:[42]

In considering the public interest the Commission is well within the law when, in choosing between two applicants, it attaches significance to the fact that one in contrast to the other, is dissociated from existing media of mass communications in the area affected.

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[39] 232 F. 2d 57 (1955).
[40] 222 F. 2d 781 (1954).
[41] 175 F. 2d 363 (1949).
[42] *Scripps-Howard Radio* v. *FCC*, 189 F. 2d 677, 683 (1951).

The Broadcast Bureau of the Commission has of late often taken a position espousing a strong application of the principle of diversification, witness the following pronouncements:[43]

> In the absence of overriding considerations, preference should be given to the applicant who will bring to the community an added medium of communication having no connection, direct or indirect, with the ownership of other communication media in that community. Since the Commission has, by decision and policy, determined that diversification of control of mass media is desirable, the significant difference between Tampa Times and its competing applicants in this respect is a matter which must be considered. It is evident that grant of an additional medium to Tampa Times can only serve to further the degree of concentration of control of the mass media already existing. *Accordingly, the decision should have concluded on this point in favor of Orange and Tampa TV. We do not believe that the grounds on which Tampa Times was preferred have sufficient force to override this factor of diversification.* [Emphasis supplied.]

Within the last 2 years there have been at least 3 proceedings in which concentration of mass communication media was a salient issue. They are conspicuous illustrations of the Commission's inconsistency in the application of this criterion and in interpreting the public interest.[44]

Clarksburg Publishing Co., of Clarksburg, W. Va., which owns and publishes a paper in Clarksburg, sought to protest the grant of a construction permit to the Ohio Valley Broadcasting Co. for a television station in Clarksburg.[45] The protestant contended this grant by the Commission—

> (*a*) was made within 1 day after the mutually exclusive (competing) application of the Clarksburg Broadcasting Corp. was withdrawn;
> (*b*) was inconsistent with (1) the rule prohibiting multiple ownership and control of television stations and (2) the Commission's policy of diversification of all the mediums of mass communications—

affected by the propriety of a—

> (*c*) payment of $14,390 by Ohio Valley to the Broadcasting Corp. at the time it withdrew.

The Clarksburg Broadcasting Corp. was a separate applicant, unrelated to the Clarksburg Publishing Co.

The protest was denied, the Clarksburg Publishing Co. appealed. The court found this case unusually puzzling for its regulatory contradictions and gyrations. The decision is distinguished for the depth to which it plumbed the surrounding inconsistencies. The court concluded[46]—

> that denial rested on a seriously inadequate record and is, therefore, erroneous. Accordingly we remand the case to the Commission for further hearing upon a reopened record.

The court severely criticized the Commission for its failure to follow the letter and the spirit of the protest section 309 (c) of the act, calling attention to the fact that in appropriate instances the statute contemplates that the Commission's inquiry may extend even beyond matters alleged in a protest.[47]

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[43] Exceptions of Chief, Broadcast Bureau to initial decision FCC Release No. 831, January 25, 1954, p. 3 of memorandum brief.

[44] Two of these cases, *Clarksburg* v. *FCC*, 225 F. 2d 511 (1955), and *McClatchy* v. *FCC*, 239 F. 2d 15 (1956), are discussed as parts of a trenchant analysis by Louis L. Jaffee, Byrne professor of administrative law, Harvard Law School, in the Scandal in TV Licensing, Harpers, September 1957, pp. 77–78. Because of its penetrating nature and its pertinency, this reference is included although except for editorial emendations this ad hoc committee report does not presume to go beyond the spring of 1957.

[45] *Clarksburg Pub. Co.* v. *FCC*, 225 F. 2d 511 (1955).

[46] *Clarksburg Pub. Co.* v. *FCC*, 225 F. 2d 513 (1955).

[47] *Clarksburg Pub. Co.* v. *FCC*, 225 F. 2d 511, 515 (1955).

After an imposing and revealing analysis of the widespread activities of Ohio Valley in the broadcasting and newspaper businesses with the manifold linkages, including the possible implications of community antenna systems, the court said: [48]

> These facts stood admitted for purposes of oral argument. In the face of these admissions, it is difficult to understand how the Commission could have concluded that the grant would not result "in an unlawful concentration of control or in a monopoly of the media for mass communications in the West Virginia area"—

and remarked that—

> Nothing in the present protest record dispels the strong impression that, on the concentration of control issue alone, the grant would not be in the public interest.

Regarding the $14,000 payment to Clarksburg Broadcasting, the opinion observed:

> Withdrawal of the Broadcasting Corporation's application on February 16, 1954—1 day before the grant was made—freed the Ohio Valley application from contest and the rigors of a comparative hearing. No explanation for the withdrawal was offered to the Commission.

The history of this proceeding is fraught with other varied actions which arrested the attention of the court—features of a proceeding of interest to the student of administrative law and its relation to the standards of procedure which often are so in contrast to the acuteness, professional thoroughness and scrupulous adherence to traditional standards which characterize the Federal judiciary.

Ohio Valley's original application remained on file some 2 years without substantial alteration. Almost immediately after the Clarksburg application was filed and the Commission had notified both applicants of a comparative hearing—no date specified—Ohio Valley now amended its application by reducing its effective radiant power from 50.6 kilowatts to 4 kilowatts in order to eliminate the overlap of grade A contours between the proposed Clarksburg station and Wheeling, to avoid the multiple ownership rule which bars two commonly owned stations from serving the same area. Four days later, Clarksburg Broadcasting withdrew its application. On the same date, the $14,340 payment was made to Clarksburg Broadcasting by Ohio Valley, allegedly for expenses. The Commission was so notified on the same day. At the meeting of the Commission the very next day, Ohio Valley's application was granted. According to the court, no formal order reflecting this action appeared in the Commission record.

The court was led to remark: [49]

> We are not informed—and we do not say—whether the Commission's action satisfied the rule's specific requirement for completion of "processing and review." But we point out that neither the Commission's "review" function under the rule nor its licensing function under the statute is performed merely by a determination (set forth earlier in its notice for consolidated hearing) that both applicants were "legally, technically and financially qualified" to receive the grant. The Commission does not stand in the position of a "traffic policeman with power to consider merely the financial and technical qualifications of the applicant."

It went on to remark pungently: [50]

> There may be cases in which the Commission, in one day, can review an application and properly determine that a grant would be in the public interest. Per-

[48] Ibid., 519.
[49] *Clarksburg Pub. Co.* v. *FCC*, 225 F. 2d 511, 521 (1955).
[50] Ibid., p. 522.

haps the present case is among them. But because this record gives no reason to think that it is, we feel that the "full hearing" called for by the protest is essential to permit the Commission to reexamine the propriety of its February 17 action.

In answer to the Commission averment that its policy is to accelerate the inauguration of television service, the court observed:

This court's decision in *Mansfield Journal Co.* v. *Federal Communications Commission*[51] made plain that, unless the Commission is properly assured that its action will serve the public interest, it should not make any grant.

In a second recent case involving diversification of control of the media of mass communication the Commission took a position antithetical to that taken in the Clarksburg case. Here the McClatchy Broadcasting Co. and Sacramento Telecasters, Inc. were involved in a comparative hearing. The McClatchy interest included a number of newspapers in the area and several radio stations. Telecasters had no newspapers and no other broadcasting station.

The examiner found McClatchy superior to Telecasters in all respects except diversification. He determined, on the evidence, that diversification was unimportant because McClatchy's history showed no monopolistic practices. Moreover, there was ample competition in both publishing and broadcasting. The examiner's analysis is lucid and compelling,[52] as attested by the court's encomium:

It is Telecasters' last contention that is of real substance—that it should be preferred because grant to it would result in a greater diversification of the media of mass communication. The Commission has in the past on a number of occasions preferred nonnewspaper applicants over newspaper applicants and newcomers to the field over existing licensees. The rationale of those decisions may be described in capsule form thus: The dissemination of public information involves a process of selection and presentation wherein the human element plays an important role and the end product, both quantitatively and qualitatively, inevitably bears the imprint of the producer. In a society dedicated to the free exchange of ideas it is imperative, that, when avoidable, the public not be placed in a position of dependence upon a single source, or narrow group of sources, for its day-to-day information. Diversification of the ownership of public information media, of course, protects against such monopolistic situations. But diversification is not an end in and of itself and where monopoly, or the threat of monopoly, does not exist such precedents lose force. Neither monopoly nor the threat of monopoly is present here. This record is barren of any evidence that McClatchy has ever engaged in any of those activities frequently associated with monopolistic conduct in the public information field, e. g., cutthroat rate slashes, personnel pirating, violent interference with distribution, or in fact has ever engaged in any concerted action designed to squeeze competitors out of its fields of activity. Further, there is a multiplicity of other mass communication media in the area to be served: 28 non-McClatchy daily newspapers, 8 such Sunday papers and 68 weekly papers circulate in that area. Fifty-one broadcast stations serve various prats of the area. In Sacramento there is 1 other daily newspaper, 5 AM stations, 3 FM stations, construction permits have been issued for 2 UHF television stations and comparative hearing has been held on applications for an additional VHF channel. In light of such facts, it would appear that grant to McClatchy might issue with the knowledge that it does not seek destruction of competitors and that its viewing and listening audience would not be solely dependent upon it as a source of public information.

To this argument of the examiner, the Commission said it[53]—

will incline toward an applicant not associated with the local channels of communication of fact and opinion over an applicant having such association. Such affiliation does not, of course, exclude that applicant from comparative consideration. * * * Although an important factor, it is weighed along with all other

[51] 180 F. 2d 28 (1950).
[52] *McClatchy Broadcasting Co.* v. *FCC*, 239 F. 2d 15, 16 (1956).
[53] *McClatchy Broadcasting Co.* v. *FCC*, 239 F. 2d 15, 18 (1956).

considerations to determine which of the competing applicants will better serve the public interest and, as shown by recent decision, the diversification factor may be counterbalanced by other factors.

The evaluation notwithstanding, the Commission rejected the examiner's recommendation. It agreed that McClatchy had an outstanding record of public service, but after finding no preponderant superiority of either applicant, it considered the control of facilities for the dissemination of fact and opinion to be determinative. On this basis it granted the application of Telecasters.

The court declared that [54]—

We hold the Commission is entitled to consider diversification of control in connection with all other relevant facts and to attach such significance to it as its judgment dictates.

And that—

This does not mean that the owner of a newspaper is disqualified as a licensee. * * * Nor does it mean that the Commission may reject a newspaper's application and grant that of a competing nonnewspaper applicant without also considering and comparing all other relevant factors. But it does mean that the Commission is free to let diversification of control of communications facilities turn the balance, if it reasonably concludes that it is proper to do so.

Finally, the decision held: [55]

* * * the Commission did not act arbitrarily or capriciously in deciding neither deserved preference as to ability to appraise and meet the needs of the area. With ample support in the record, the Commission found Telecasters superior to McClatchy as to local ownership, participation in the civic life of the community, and in the integration of ownership with management.

During the comparative hearing of this case by the presiding examiner, Telecasters, over McClatchy's objection, was permitted to amend its application. The effect of the amendment was to make Telecasters' proposed coverage equivalent to that of McClatchy, removing the coverage issue from the contest.

What did not appear in the record on appeal to the court was the fact that less than 60 days after the construction permit had been issued to Telecasters, and shortly after McClatchy appealed, Telecasters applied for another amendment modifying their construction permit. Within less than 2 weeks and without a hearing, this application for modification was granted. Telecasters therein proposed to change the transmitter site and now to decrease the height of the antenna. These changes would reduce the coverage of Telecasters' station in the McClatchy area. With respect to this proposal, the Commission cavalierly remarked later, in its brief: [56]

This modification would result in somewhat reduced coverage for Telecasters' station—

thus tacitly removing one of the comparative criteria rendering the decision of the court moot.

Public announcement of the modification grant to Telecasters brought a petition to the Commission by McClatchy to stay the modification grant and to open the matter for hearing, contending perpetration of fraud. The Commission denied McClatchy a hearing. Its line of reasoning appears devious and rather extraordinary in view of the gravity of McClatchy's charges.

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[54] Ibid.
[55] *McClatchy Broadcasting Co.* v. *FCC*, 239 F. 2d 15, 19 (1956).
[56] *McClatchy Broadcasting Co.* v. *FCC*, 239 F. 2d 19, 22, footnote (1956), in connection with McClatchy's second appeal.

The court of appeals sensed this gravity and in the rehearing [57] averred:

In these circumstances, it seems clear that the Commission erred in saying that McClatchy had no standing to protest. Particularly is this true in view of the charge that Telecasters had never intended to honor its midhearing proposal to match the coverage proposed by McClatchy, but fraudulently intended merely to gain a competitive advantage in the hearing. If the reduction in coverage had been proposed during the hearing, obviously McClatchy might have had in its superior coverage proposal an additional preference which might have turned the balance in its favor.

The court concluded that: [58]

* * * the Commission erred in holding McClatchy lacked standing to challenge the modification proposal, and in summarily dismissing the protest which it nevertheless considered. The Commission should conduct an evidentiary hearing on the protest and then decide whether to set aside either the modified grant to Telecasters, or the modification and the original grant as well; and in either event to consider what action thereafter would be appropriate.

In censure firmly couched, the court observed: [59]

It would obviously be unseemly for the Commission, without the knowledge or permission of the court, to substitute another grant for that which is being judicially examined on appeal, leaving the court with the time-consuming and difficult task of reaching a decision as to the validity of a construction permit which has long since ceased to exist.

The Commission's conduct of the Clarksburg and the McClatchy cases, aside from the diametrically opposed application of the principle of concentrated control of mediums of mass communications, engenders a lack of confidence in the deliberations of a body which by law is charged with the functions of a tribunal.

The subject of diversification of control over mediums of mass communications and the Commission's handling of the subject on a case-by-case basis with seemingly indifferent if not confused application of judicial principles and precedents, receive additional accent in the very recent Biscayne case. In this consolidated hearing, of four mutually exclusive applications, the Commission declared the Biscayne Television Corp. successful applicant.[60]

Here the Commission found all applicants qualified to operate stations in the public interest. Biscayne was adjudged superior on three comparative criteria: broadcast experience, past broadcast records of its principals, and integration of ownership with management. With respect to diversification of control over mediums of mass communications, however, the other three applicants were given preference over Biscayne after a rather sketchy if not perfunctory skirmish with the facts in which comparison is made between the communications interests of Biscayne and those of McClatchy, discussed above.

After outlining the Biscayne holdings, the Commission opined: [61]

In moderation thereof, our findings show that the Miami News and the Miami Herald are vigorous competitors, as to which no merger is considered. Thus, though Biscayne and the News may be considered together and though Biscayne

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[57] Ibid., 22.
[58] *McClatchy Broadcasting Co.* v. *FCC*, 239 F. 2d 19. 25 (1956).
[59] Ibid., p. 23.
[60] Decision in re Applications of Biscayne, East Coast, South Florida, and Sunbeam Television Corps., docket Nos. 10854, 10856, 10857, 10858, respectively, May 1954. Commissioner Hyde dissenting in the light of McClatchy and other precedents. Commissioner Bartley dissenting.
[61] FCC decision docket Nos. 10854, 10856, 10857, 10858, p. 95.

and the Herald may be considered together also, the News and the Herald may not be considered in combination in light of the evidence adduced at the hearing. We have noted also the civic records of the Miami News and the Miami Herald, as evidenced in part by the Pulitzer prizes awarded them, which to us indicates a disposition on the part of these principals to conduct an operation in the public interest. We have likewise given consideration to the fact that WIOD in the past has had a news staff separate from that of the Daily News; and that WQAM has had a news staff separate from that of the Daily Herald; that there is no evidence of discriminatory treatment in the past on the part of either newspaper in favor of its associated radio facility and against competing radio facilities.

Commissioner Hyde dissented, in view of McClatchy and other precedents. Commissioner Bartley also dissented.

Coming down to diversification as the determining issue, the Commission stated: [62]

The task of evaluation, then, is to determine whether this last factor, coupled with the minor preferences noted against Biscayne on 2 other factors, shall overcome the superiorities achieved by Biscayne in 3 other elements. The Commission is satisfied that the balance is with Biscayne.

The court of appeals took another view.[63] It observed from the record that the president, director, and general manager of Biscayne, Mr. Miles Trammel, also had a consultant contract with National Broadcasting Co., whom he had previously served as president and director, involving a retainer of $25,000 per annum. The Commission had discussed this commitment as having "no adverse effect on the application of Biscayne in this proceeding," and this despite Mr. Trammel's statement, which left no doubt as to his current position:

It was definitely understood that I was to be president and chief executive officer (of Biscayne) and to run the show with such consultation, advice, and help from the other two groups as I might need.

On this subject, the court wryly observed: [64]

The failure to give any adverse effect to Mr. Trammel's association with NBC, in considering the comparative qualifications of Biscayne, was a departure from the Commission's established policy that it is desirable for local television stations and network organizations to be independent of each other, and thus to assure that networks can freely compete for affiliation with local stations, and local stations freely compete for network affiliation. This policy, reflected to a degree in sec. 3.658 (f) of the Commission Rules and Regulations, is found in the Commission's decisions. In *Abilene Broadcasting Co.* (3 Pike & Fischer R. R. 1684), adverse significance was attached to the fact that a substantial stockholder of the applicant was an officer and director of a network, a part of which was in competition with the applicant. In *WJPS, Inc.* (3 Pike & Fischer R. R. 1314), the Commission regarded the fact that a substantial stockholder of the applicant was also vice president of American Broadcasting Co., a network, 'an important consideration in deciding which of two mutually exclusive applications should be preferred.' The Commission in its opinion refers to *Wabash Valley Broadcasting Corp.* (3 Pike & Fischer R. R. 229), where it is stated:

"* * * In the Commission's opinion a serious question is raised concerning the desirability of a network official or stockholder owning any interest in a broadcast licensee, since other stations operating in the same community would be at a competitive disadvantage in attempting to secure a network affiliation with the network in question."

And that: [65]

Mr. Trammel's relationship with NBC is of a character that is not unlikely to affect Biscayne's choice of network affiliation, and NBC's choice of a local outlet in the Miami area.

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[62] Ibid., p. 96.
[63] *Sunbeam Television Corp.* v. *FCC*, 243 F. 2d 26 (1957).
[64] Ibid., p. 28.
[65] Ibid., p. 28.

In a further review of the Commission's judgment, the court went on: [66]

> The Commission held "there can be no question that each of the other three applicants is entitled to a preference over Biscayne on this factor." The importance of this preference given to the appellants over Biscayne is intrinsically obvious. But the importance of Biscayne's own preferences based on the broadcast experience and past records of its principals is not so obvious. In considerable part, these preferences appear to have arisen from Biscayne's concentration of media of mass communications, which is itself an adverse rather than a preferential factor. It thus appears that 2 of Biscayne's 3 preferences arose from conditions which might on reconsideration cause the Commission to accord them less weight than it accords the preferences of appellants.

A case at the forefront of attention today involves the coveted Channel 5 of Boston, Mass. Here, as in the McClatchy case, one of the issues was that of control of media of mass communications. Unlike the outcome of the McClatchy case, where the application was denied on this issue despite his record as a benefactor in the community and the exemplary nonmonopolistic comportment of his interests, the application of the Herald-Traveler Boston interest was granted. A brief history follows.

There were originally seven applicants, including CBS and the Boston Post (newspaper). The Post application was dismissed before the hearing. The CBS application was dismissed with prejudice before the examiner's decision was rendered. In effect, then, five applications were involved in a comparative hearing before the examiner.[67] The initial decision granted the application of Greater Boston Television Co., Inc. (Docket 11070).

In a 104 page decision, [68] each of the five applicants was found legally, technically, and financially qualified. The contest narrowed down to their comparative abilities, involving background and experience, management and operation, and programing service—which applicant gives promise of best serving the interest in the Boston area.

The examiner adjudged the five applicants to be equal or substantially so in—

(1) basic plans and proposals for locally originated programs;
(2) studio facilities and physical equipment.

The examiner's decision eliminated WHDH Inc. (owned by the Boston Herald-Traveler Corp.) because [69]—

(1) its plan did not "contemplate a national network affiliation;"
(2) "its application would not be in keeping with the Commission's policy for diversification of control of mass communications media."

The examiner held that—

> Unquestionably, locally originated television programing is essential for a broadcast facility is primarily an outlet for local expression, but of equal importance to the communities concerned is the national service presently available from the several major networks. Moreover, approval of the WHDH proposal herein would have the effect of placing in the hands of the Herald-Traveler group five instrumentalities for the dissemination of news and views within the area, viz., WHDH-AM, WHDH-FM, The Boston Traveler newspaper, the Herald newspaper, and in addition, the television broacast facility now sought.

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[66] Ibid., p. 29.
[67] Docket Nos. 8739, 11070, 11072, 11073, 11074.
[68] Released January 4, 1956.
[69] P. 100, Initial Decision Docket Nos. 8739, 11070, 11072, 11073, 11074. January 4, 1956.

The Commission's policy in this regard was restated in clear terms in a recent decision involving the television applications of Radio Wisconsin, Inc., and Badger Television Co. (FCC–1217), released December 12, 1955 * * *.

Station WHDH, the examiner said—

is entitled to preference over its adversaries from the standpoint of local broadcast experience, more elaborate facilities for program production, and more extensive program planning.

The matter now came before the Commission. In a 150-page decision retraversing the ground in detail, the Commission reversed the examiner's initial decision which granted the application of Greater Boston and instead made the grant to WHDH Inc., the Herald-Traveler station.[70] The Commission found that:

Upon the local factors of residence, civic participation, diversification of business interests of its principals and integration of ownership with management, its composite showing has been strong.

WHDH received strong preferences over the other applicants except DuMont in relation to the factors of past broadcast record and experience of its principals.

It is the view of the Commission that the difference between DuMont and WHDH in this factor (diversification of control of the media of mass communications) is not sufficient to overcome the more favored position of WHDH in other respects.

and in a rather intriguing syllogistical aside, forsaking judicial reason;

We believe that from the demonstrated superiority of the service to be expected from WHDH, greater public benefit would flow than would come from the application of our diversification policy *in order to effect a grant to one of its competitors.* [Emphasis supplied.]

In these latter proceedings, Commissioner Craven abstained from voting. Commissioners Hyde and Bartley dissented.

Commissioner Hyde was convinced that the public interest, convenience and necessity would be served best by selecting an applicant who would offer a higher degree of diversification. He further observed that:

If the opinion (of the Commission) stated that WHDH could provide the best service of the several applicants because of its access to the resources of its neyspaper background and its ability to operate a television station to advantage in association with newspapers and radio, it would seem more logical.

Commissioner Bartley strongly disagreed with the Commission majority on its two principal findings favoring the Herald-Traveler and their willingness to minimize the importance of diversification. He observed:

the evidence demonstrated that WHDH has operated its AM and FM stations as an "adjunct" to its newspaper operations; that the applicant has used leverage of his newspapers and radio stations in combination to gain competitive advantage; and that it proposes to adapt the programing of the TV station to the best possible promotion of the Boston Herald-Traveler where it is feasible to do so.

Appeals have been entered by two of the parties, Massachusetts Bay Telecasters, Inc., and Greater Boston Television Corp.[71]

It is difficult to discern a thread of consistency in the record of decisions by the Commission in this important area of control of mass mediums of communications. From the standpoint of confusion, Commission caprice, and lack of affirmative policy, this area of regulation ranks with that of economic injury.

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[70] Final decision issued April 25, 1957.

[71] Argued before the Court of Appeals, District of Columbia, December 1957. Case Nos. 13896 and 13899, respectively.

RECAPITULATION

Through the medium of Commission actions and court decisions, classifying interpretations have been given to the all-embracing criteria "public interest, convenience, or necessity," the constitutional right to be heard, the doctrine of relief from arbitrary or capricious action by the Commission, the application of the concept of monopoly, the rights of the broadcaster vis-a-vis the public interest, economic considerations, the constructive balance of competition—that it shall not be of such nature as to lead to monopoly or be destructive to the public interest, or be uncontrolled, that it is emphatically not in itself a governing national policy, that in the grant of a station the gain and the loss must be measured in terms of public interest, that in a limited resource uninhibited competition cannot prevail, that there is no place in the Commission's action for a policy of caveat emptor—local versus national outlets, undue control of mass communications mediums, and finally, the tender question of program control versus censorship.

The attitude of the court of appeals in the instance of the problem of deintermixture comprises another revealing set of commentaries. Since by its nature the problem cannot well be separated from these court decisions, this material is included in the detail discussion of the VHF–UHF dilemma in section I.

Actions of the Commission are subject to review by the courts. This review, however, is limited purely to the correcting errors of law.[72] The courts' recourse then is to remand. The Commission is bound to act on the correction. The Supreme Court has said:[73]

> * * * an *administrative determination* (by the Commission) in which is embedded a legal question open to judicial review does not implicitly foreclose the administrative agency, after its error (of law) has been corrected from enforcing the legislative policy committed to its charge. [Emphasis supplied.]

The Commission, being otherwise immune with respect to administrative judgments, is free to contravene. It would appear, for example, that there are few, if any, cases of comparative hearings for a television facility where after remand the Commission has reversed its original administrative judgment. The record for radio broadcasting appears to correspond.

Excepting for purposes of testing legality, there is no appeal from the judgment of an administrative tribunal. This is at striking variance with the traditional series of reliefs characterizing our judicial system.

The circumstance coupled with the acute dollar-attractiveness, the vast complexity and the limited nature of the commodity over which the Commission sits in judgment, necessarily demands a specialized experience, integrity, and comportment on the part of those entrusted with the administration of this sought-after resource.

Something more than a gesture of law is required to endow a body of men with substantive expertise, whether in jurisprudence, economics, technology, natural or political science. The privileged re-

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[72] Under the Radio Act of 1927 as originally passed, the court of appeals was authorized to "alter or reverse the decision appealed from and enter such judgment as to it may seem just." The court of appeals was in effect a superior revising agency in the same field as that of the Commission. This power was terminated by statutory amendment to the Radio Act of 1927, act of July 1930, ch. 788, 46 Stat. 744. Prior to this amendment, the court of appeal's judgment was not a judicial judgment and was not therefore reviewable by the Supreme Court.

[73] *Ford Motor Co.* v. *Labor Board*, 59 S. Ct. 301.

sponsibility, to sit on the bench of this High Court of administrative law, places a premium on intellectual strength and moral courage. These must indeed be dedicated men. Our Federal judiciary affords a worthy comportment for emulation.

There is a nobility to the work that springs from dedicated minds for it is out of the heart. It is out of the extensions of such work from generation to generation that the fabric of tradition is wrought. Tradition thus wrought becomes a bulwark of great moral strength. When its origins are inspired, it becomes a compelling force to those whose task today is to build into the future the ideals thus inherited.

The words of Elihu Root set the challenge many years ago: [74]

> There is one special field of law development which has manifestly become inevitable. We are entering upon the creation of a body of administrative law quite different in its machinery, its remedies, and its necessary safeguards from the old methods of regulation by specific statutes enforced by the courts. * * * There will be no withdrawal from these experiments. * * * We shall go on; we shall expand them, whether we approve theoretically or not, because such agencies furnish protection to rights and obstacles to wrongdoing which under our new social and industrial conditions cannot be practically accomplished by the old and simple procedure of legislatures and courts as in the last generation. Yet the powers that are committed to these regulating agencies, and which they must have to do their work, carry with them great and dangerous opportunities of oppression and wrong. If we are to continue a Government of limited powers these agencies of regulation must themselves be regulated. The limits of their power over the citizen must be fixed and determined. The rights of the citizen against them must be made plain. A system of administrative law must be developed and that with us is still in its infancy, crude and imperfect.

[74] 41 A. B. A. Rep. 335, 368–369 (1916).

SECTION III

COMMISSION RESPONSIBILITIES

INTRODUCTORY

The Commission, one concludes from the Communications Act of 1934 and the interpretations and interpolations upon it by the courts, becomes a many-sided body with contrasting responsibilities and obligations. It must perform quasi-judicial functions. In this sense it is a tribunal. It makes rules within the limits of the communications statute. In effect these rules when formalized are laws. It is in this light a legislative body. It is an administrative body, with manifold tasks prodigious in magnitude. It grants construction permits, issues and renews station and operation licenses, and polices the radio waves. It must generate and issue technical standards. It participates in propagation studies and is engaged in field engineering activities where specific practical tests must be made. It maintains a laboratory near Laurel, Md., where engineering studies of radio, television, and other related equipment and systems are made. This work includes investigation of interference caused by noncommunications equipment. Samples of commercial radio and television equipment are tested here for FCC type approval.

The technical work of the Commission is summarized in its annual report:[1]

> The Commission's technical research is concerned largely with the study of radio propagation and the development of engineering standards for transmitting and other radiating equipment. Also, under its obligation to promote new uses for radio, the Commission encourages experimentation and, itself, must keep abreast of technical developments in radio and wire communication.
>
> The Commission's laboratory tests certain equipment for type approval prior to its manufacture in order to minimize the possibility of interference when it is put into use.

The Commission must therefore maintain close touch with outside technical interests, commercial and professional, and it must maintain working relation with other countries for purposes of coordination and international telecommunications standardization.

For these manifold purposes it must be a many-sided and supple body. Its task is relatively more difficult because of the great rate at which the electronics art is progressing. As the Supreme Court has observed in commenting on the Communications Act:[2]

> Underlying the whole law is recognition of the rapidly fluctuating factors characteristic of the evolution of broadcasting and of the corresponding requirement that the administrative process possess sufficient flexibility to adjust itself to these factors.

Commission expenditures for 1956 were $7,323,000. For the Commission operation in 1957, $7,828,000 have been appropriated and for

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[1] 22d Annual Report, 1956.
[2] *FCC* v. *Pottsville*, 60 S. Ct. 437, 439 (1940).

fiscal year 1958, a sum of $8,950,000 was included in the President's budget message submitted to Congress. The sum ultimately approved was $8,300,000.

The budget estimate prepared by the Commission for fiscal year 1957 contains the introductory statement:

> The money is needed almost exclusively for personnel to handle promptly the applications of new or expanding electrical communication mediums, as well as the involved and protracted legal issues raised by competitors for facilities, and, basically, to police and protect the Nation's electrical communications systems.

LOAD AND OVERLOAD

It is doubtful, considering the Commission's overload, that more than a negligible percentage of these funds is applied to serious professional studies of the causes and cures of the current allocation difficulties. The reluctance of the Commission to prosecute technical and economic investigations, section 303 (g) of the act, is well illustrated by its policy of dependence on the equipment industry and the broadcasters, a dependence which appears to be virtually complete, witness the history of the VHF–UHF problem.

The overloaded condition of the Commission is recognized nowhere better than within the Commission itself. In a recent address,[3] Commissioner Lee remarked:

> The examination of the more crowded spectrum below 890 megacycles presents an extremely difficult administrative problem. While this should be no excuse (for the examination), I hope that all will appreciate the limitations of our overburdened staff which, as a practical matter, must be given great weight.

According to the Commission's 1956 annual report, there are over a million and a half radio authorizations extant under its jurisdiction. For every broadcasting station there are 85 other fixed radio stations. The nonbroadcast services include around 1.2 million fixed and movable transmitters. Additional control responsibilities include the telephone industry with its $17.5 billion gross investment, 1 telephone for every 3 persons, or over 56 million telephones. There is also the Western Union, with a gross investment of over $300 million and again the 4 transoceanic cable and 6 overseas radio organizations furnishing telegraph and telephone service to other countries.

The annual report states that in addition to the 496 commercial television broadcast stations on the air there were 2,896 AM and 530 commercial FM stations on the air. There were 609 TV authorizations and 128 applications pending, 3,020 AM authorizations and 389 applications pending, 546 FM authorizations and 10 applications pending. There was an increase of 45 TV stations on the air in 1956. Over 200 AM stations went on the air in 1956. There were 1,056 AM stations in 1945. Here is an increase by a factor of 3. There were 536 FM stations on the air a year ago. As of this time 20 noncommercial educational television broadcast stations were on the air (41 authorizations, 11 applications pending action). Noncommercial FM educational stations aggregated 126 operating, 126 authorized.

[3] Special Industrial Radio Service Association Convention, January 1957.

QUASI-JUDICIAL FUNCTION

As a quasi-judicial body the Commission must sit in judgment and make decisions under the law. In this function it is empowered to go further than the courts. Unlike the courts, it is not limited to the evidence placed before it by the pleading party. It is empowered, indeed obligated, to make its own investigations and thus in effect make its own supplemental evidentiary record. On this basis there is no excuse for not searching out all the facts available for a decision in the public interest—not just those presented by parties of interest. This power was given the Commission to insure full consideration of the public interest.

This quasi-judicial function, together with the overwhelming administrative responsibility already outlined, presents a strange if not irreconcilable dichotomy particularly, considering the highly technical and fast-moving art over which the Commission must exercise foresighted control.

It is germane to have in current vernacular the view of an important official in this field, Commission Chairman Doerfer. In a recent address [4] he put it bluntly that there are two schools of thought on the place of the Government in the operation of administrative agencies:

> The 1 school regards administrative agencies as a headless fourth branch of the Government which does violence to the basic American concept of the 3 major branches of Government. The other school holds that administrative agencies were created because practical men were seeking answers to immediate problems in a highly complex economic society.
>
> Although the original Communications Act indicated that the broadcasting industry was to develop within the framework of our free-enterprise system, there are today serious suggestions that the guiding fingers of governmental regulation point out more specific directions.

His summary query was:

> Shall the officers who administer these agencies be judges or shall they be practically minded men trying to find practical solutions to the development of the various regulated industries in our modern economic society.

He posed the question:

> As a member of the public you will have to determine whether or not quasi-judicial, quasi-legislative, or quasi-executive is a legal fiction or whether or not 1 person can be all 3 characters at the same time.

Earlier, testifying on a Senate bill,[5] he defined the Commission's function as follows:

> The Federal Communications Commission as an administrative agency is essentially an arm of the legislative branch of Government. It does that which, except for the burdens of detail and lack of time, Congress could do itself.
>
> Administrative agencies were not intended to function as courts of law. Elimination of delay and implementation of the legislative policy fairly and promptly are the main reasons for their creation and existence.

COMMISSION AN EXPERT BODY

The Commission, by fiat, must assume the role of an expert body. In the communications field this carries with it the requirement of a high order of comprehension of a highly technical field.

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[4] Address, Washington luncheon of NAB State association presidents, February 19, 1958. See Broadcasting-Telecasting, February 24, 1958, p. 48; also TV Digest, February 22, 1958, p. 6.

[5] P. 50, hearings, S. 1648, amendment to the Communications Act, July 7, 1955.

Repeatedly the courts have imputed to the Commission this quality of the professional mind. In the Pottsville case,[6] in referring to the criteria of public interest, convenience, or necessity, the Supreme Court said:

> While this criterion is as concrete as the complicated factors for judgment in such a field of delegated authority permit, it serves as a supple instrument for the exercise of discretion by the expert body which Congress has charged to carry out its legislative policy.

In another instance this Court observed:[7]

> It is our responsibility to say whether the Commission has been guided by proper considerations in bringing the deposit of its experience, the disciplined feel of the expert, to bear on applications for licenses in the public interest.

The Court presupposes the special qualifications of the Commission:[8]

> Under such provisions we have repeatedly emphasized the scope that must be allowed to the discretion and informed judgment of an expert administrative body.

In the Coastal Bend case the Court recognized that the Commission had refused to impose a freeze of VHF grants pending the outcome of deintermixture proceedings. It noted the Commission's conclusion that the new VHF stations would bring added television service to a greater number of people. It was, however, clear to the Court that there would be a public loss if VHF competition should kill existing UHF stations before remedial rulemaking proceedings could secure the future of UHF television. Having this contingency in mind, the Court observed:[9]

> But whether one factor should outweigh the other is precisely the sort of question which Congress, by employing the broad language of section 303, wished to commit to the discretion of an expert administrative agency, not the courts.

In the instance of the contest on color precipitated by the Commission in 1950 favoring adoption of the incompatible system proposed by CBS over what was held to be the lesser developed compatible system of RCA, Mr. Justice Frankfurter said in his dissent:

> Surely what constitutes the public interest on an issue like this is not one of those expert matters as to which courts should properly bow to the Commission's expertness.[10]

As a further mandate the Commission shall have the expertness essential to its task. Under the general powers of the Commission in the Communications Act of 1934, is the enjoinder, section 303 (g) that it shall—

> Study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest.

PARAMOUNT RESPONSIBILITY

The Commission, pressing before the courts its rights to promulgate chain broadcasting regulations, attributed to section 303 (g) a context which did not limit this paragraph to the consideration of technical

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[6] *FCC* v. *Pottsville*, 60 Sup. Ct. 437, 439 (1940).
[7] *FCC* v. *RCAC*, 73 Sup. Ct. 998, 1002 (1953).
[8] 63 Sup. Ct. 589, 595 (1943).
[9] *Coastal Bend Television Co.* v. *FCC*, 234 F. 2d 686, 690 (June 1956).
[10] *RCA et al.* v. *U. S. Ct. et al.*, 71 S. Ct. 806 (1951).

factors alone. The protesting network interests took the position that section 303 (g) was limited to technical considerations.

The Supreme Court observed [11]—

> For the cramping construction of the act pressed upon us, support cannot be found in its legislative history. The principal argument is that paragraph 303 (i), empowering the Commission "to make special regulations applicable to radio stations engaged in chain broadcasting," *intended to restrict the scope of the Commission's powers to the technical and engineering aspects of chain broadcasting.* [Emphasis supplied.]

Witness the significant latitude the Court has imputed to section 303 (g) of the act quoted above:

> These provisions, individually and in the aggregate, *preclude the notion that the Commission is empowered to deal only with the electrical and engineering impediments of* the "larger and more effective use of radio in the public interest." [Emphasis supplied.]

In this same case, the Court expatiated on the breadth and flexibility of the expertise implied by the act, quoting in affirmation: [12]

> The Communications Act is not designed primarily as a new code for the adjustment of conflicting private rights through adjudication. Rather it expresses a desire on the part of Congress to maintain through appropriate administrative control, a grip on the dynamic aspects of radio transmission * * * Underlying the whole law is recognition of the evolution of broadcasting and of the corresponding requirement that administrative process possess sufficient flexibility to adjust itself to these factors.

In another instance the court of appeals observed: [13]

> In performing its functions under the act the Commission is given a broad discretion. The statute contemplates that the Commission will take the lead in exploring the possibilities of radio, and we think it unlikely that Congress had in mind a particular method to this end.

Here, therefore, is a momentous responsibility, in fact a legal mandate, which it is hard to believe the Commission can be expected to discharge in a highly professional manner, in every particular, if limited to talent solely within its organizational domain. Witness the record.

This significant charge demands not only virtuosity but oracular endowment. Nor is it in the public interest for the Commission to augment its internal strength by the device of depending solely on that added information and analysis which flows from the hearings of interested parties and from outside committees themselves often charged with membership bound by company allegiance.

There is no substitute for paid expert professional help. Commission recourse to the use of this device to bolster temporarily its staff in particular instances, so as to handle a special problem more effectively, can only add to its stature. The public has a right to such consideration of its interest and should demand it for its own protection. Surely the Commission is not surrendering a prerogative when it seeks outside help. This procedure is a common, well-recognized practice in everyday business. It is nothing to be ashamed of or to fear.

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[11] Decision sustaining the Commission's right to enact its rules regulating chain broadcasting (*NBC* v. *US*, 63 S. Ct. 997, 1010, 1011 (1943)).

[12] *FCC* v. *Pottsville*, 60 S. Ct. 437, 439 (1940).

[13] *ABC* v. *FCC*, 191 F. 2d 492, 498 (1951), referring to *Crosley Corp.* v. *FCC*, 106, F. 2d 833, 836.

This right and obligation the Commission, in the main, has honored passively or in the breach, failing to avail itself of this particularly powerful opportunity. Ordinarily, for instance in allocations proceedings, the Commission obtains its information through testimony of parties having personal interests to advance and to protect. The Commission is the custodian of the public interest and in theory it is empowered to make active, independent explorations in the execution of this trust.

The facts it has at hand from its hearings procedure are generally valuable but often there is a cant of interest and more often an inadequacy which the Commission should be able to evaluate and counteract, where necessary, through study by an independent, expert, disinterested, professional agency. Often what is needed is simply the insurance or verification that results from an assay of the asserted facts by a disinterested agency.

There is nothing in the law to bar the Commission from seeking outside assistance from professional sources in order that it may possess in fact the quality of expertship imputed to it in theory by the courts. This affirmation of a broad interpretation by adjudication of section 303 (g) of the Communications Act affords the Commission an unusual opportunity by which it can do a better job.

Investigation in the sense used by Government agencies is useful and has its place. It is, however, not a substitute for commissioned, concentrated, full-time study of technical and economic questions by experienced professionals, paid for this express purpose.

On the record, at least, it does not appear that this investigatory power has been used in its broadest sense for the purpose of securing professional information of economic and technological value in its own right so as to encourage or even underwrite research or engineering programs where this extra impetus would be in the public interest and where such a program would in fact give the Commission "the disciplined feel of the expert."

INVESTIGATORY CANT

Unfortunately, the investigatory power of the Commission, despite the basis of the legislative and adjudicatory enjoinders, appears to have been used in the main to uncover, delineate, and take action with respect to practices of commercial communications interests adjudged inimical to the public interest, or simply as means to search for such evidence.

The Commission's power and its qualifications to investigate, and the general character of its investigations, are eminently demonstrated in such undertakings as the investigation of the telephone industry, of chain broadcasting and, immediately, of networks.

The telephone investigation was initiated in the spring of 1935 when the President approved a joint resolution of the Congress authorizing the FCC to proceed.[14]

The purpose of the resolution was to secure information on the telephone industry, "in" particularly the American Telephone & Telegraph Co., "in aid of legislation by the Congress and for the use of governmental agencies, includ-

[14] Report of the FCC on the Investigation of the Telephone Industry in the United States made pursuant to Public Res. No. 8, 74th Cong. (1939). Here is an investigator's critical view of a large organization of great value to the scholar.

ing State regulatory commissions, for the information of the general public, as an aid in providing more effective rate regulation, and for other purposes in the public interest."

The resolution appropriated $750,000 to carry out the task. By 1937 this fund was increased by two further appropriations, the first $400,000 and the second $350,000, or a total of $1,500,000 for the entire investigation.

The investigation devoted itself almost entirely to the current practices of the Bell System and the justification of existing tariffs. One misses any critical judgment of exactly how the public might have been given a more efficient type of service or in what way the Bell organization could, by introducing prescribed innovations in its technology or its management, give the public notably better service in the future. There was no brilliant guiding deduction as to the long range implications of telephony or preferred trends to be followed as precepts. There was no conclusion which would help the telephone business do a better technical job. The object seems to have been to look for abuse in business procedures.

CHAIN BROADCASTING INVESTIGATION

On March 18, 1938, the Commission began a comprehensive investigation[15] "to determine what special regulations applicable to radio stations engaged in chain or other broadcasting are required in the public interest, convenience, or necessity." This project was carried out without special funds. Chain broadcasting is defined in paragraph 3 (p) of the order as "the broadcasting of an identical program by two or more connected stations."

The scope of the investigation,[16] omnibus in character, included:

> The contractual rights and obligations of stations engaged in chain broadcasting; duplication of network programs in the same area; exclusive contracts restricting stations to 1 chain service and chain services to 1 station in a given area; the extent to which single chains have exclusive coverage in particular areas; the policies of networks with respect to character of programs, diversification, and accommodation to the requirements of areas served; the number of stations licensed to or affiliated with each network and the amount of station time controlled and used by networks; rights and obligations of stations in relation to advertisers having network contracts; the nature of the service rendered by stations licensed to networks; competitive practices of stations engaged in chain broadcasting; the effect of chain broadcasting upon stations not engaged in chain broadcasting; practices or agreements in restraint of trade or in furtherance of monopoly in connection with chain broadcasting; and the extent and effect of concentration of control of stations locally, regionally, or nationally, through contracts, common ownership, or by other means.

A report[17] followed the hearings. The majority view of the Commission was that freedom of communication was threatened:

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[15] FCC Order No. 37, docket No. 5060, March 18, 1938.

[16] Order No. 37 under which the investigation was carried out included the question of ownership of more than one station by an individual or corporation and the problem presented by stock ownership by aliens of broadcast stations whose stock is listed on the exchange.

[17] Report on Chain Broadcasting, FCC Order No. 37, docket No. 5060, May 1941. Some idea of the magnitude of this undertaking can be had from the fact that there were 73 days of hearings, including 96 witnesses. The transcript covered 8,000 pages, embracing 27 volumes. The majority comprised Chairman Fly and Commissioners Walker, Payne, Thompson, and Wakefield. Dissenting Commissioners, Case and Craven, disagreed with the measures adopted by the majority for securing improvements. The dissent is a carefully drawn, thoughtful, meaty document. One of its observations was that "the present policy of the Commission is to encourage competition regardless of adverse economic effects."

The inescapable conclusion is that National and Columbia, directed by a few men, hold a powerful influence over the public domain of the air and measurably control radio communications to the people of the United States. If freedom of communications is one of the precious possessions of the American people, such a condition is not thought by the committee to be in the public interest and presents "inherent dangers to the welfare of the country where democratic processes prevail."

It was the majority opinion that there were currently eight specific network abuses [18] adversely affecting the ability of licensees to operate in the public interest. All of these abuses were adjudged amenable to correction by Commission regulation.

Actions were initiated by the CBS and NBC networks testing the Commission's right to enforce the resulting chain broadcating regulations. The litigation reach the Supreme Court [19] which observed that it was being—

called upon to determine whether Congress has authorized the Commission to exercise the power asserted by the chain broadcasting regulations, and if it has, whether the Constitution forbids the exercise of such authority.

The Court said:

We conclude therefore that the Communications Act of 1934 authorized the Commission to promulgate regulations designed to correct abuses disclosed by its recent investigation of chain broadcasting.

To make certain there would be no misinterpretation, however, the Court perspicaciously added:

It is not for us to say that the public interest will be furthered or retarded by the chain broadcasting regulations.

NETWORK STUDY

The study of radio and television network broadcasting [20] begun in the fall of 1955 was carried on under a special appropriation. For the fiscal year 1956, Congress appropriated $80,000 and for the current fiscal year, an additional $144,000.

The director of the study has stated that: [21]

The basic objective of the study is to determine whether the present operation of television and radio networks and their relationships with their affiliates and with other components in the industry tend to foster or impede the growth and maintenance of a nationwide competitive television and radio broadcasting system.

In this statement Dean Barrow commented as follows on the chain broadcasting rules of the report of 1941:

The chain broadcasting rules were intended to free stations from undue control by networks, to provide opportunity for local programing and to encourage competition between stations for network affiliation and between networks for station affiliates. The expansion of radio and the rapid growth of television since these rules were adopted in 1943, 13 years ago, renders it essential that the Commission reappraise the efficacy of the rules in achieving their objectives.

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[18] These, much abbreviated, embraced: Exclusive affiliation of station, territorial exclusivity, term of affiliation, option time, right to reject programs, network ownership of stations, dual network operation, and control by networks of station rates. At the time NBC operated two radio networks known as the Red and Blue. As a result of the investigation, it was ordered that the Blue network be sold. This network in new hands became the American Broadcasting Co. or ABC.

[19] *NBC* v. *U. S.*, 63 S. Ct. 997, 1013 (1944).

[20] Study of radio and television network broadcasting pursuant to delegation order No. 10 dated July 20, 1955. Network Study Committee Order No. 1 of November 22, 1955. The substance of this order is quoted on p. 112, sec. 1.

[21] Statement of Roscoe L. Barrow to the House Judiciary Antitrust Subcommittee, June 27, 1956.

This observation together with a statement of "Plans of study for fiscal year 1957," set forth earlier in this brief would seem to indicate that this project is of a character and intent resembling the chain broadcasting investigation of 1938–41. It may well be that the Barrow project will leave to the Commission the task of drawing conclusions as to the solutions to the issue derived from the monumental mass of data his group will have collected. The VHF–UHF allocations problem and its vital relationship to network systems, not being mentioned, and the professional studies therein indicated, will presumably be left unprobed.[22] The target date for completion is given as June 30, 1957.[23]

REFERENCE TO ECONOMICS

An exceedingly thoughtful summary statement on the nature of commercial broadcasting appears in the Report on Chain Broadcasting[24] under the caption "The Economics of Broadcasting." The observations apply to television equally as well as to radio. They have lost none of their sapiency though pronounced over 15 years ago:

> Broadcasting stations are supported primarily by advertisers desiring to utilize these media as a means of promoting the sale of commodities or services to the public.
>
> Each broadcaster, whether the licensee of a large station or of a small one, each network and each program production agency, receives compensation in proportion to the value of the services rendered by each such organization. This value is affected directly by the degree to which the broadcast licensee, the network, or the program production agency satisfies the public. In other words, the greater the public interest in the radio service being rendered, the greater the value of radio to all concerned. Thus, the closer radio broadcasting service attains the objective of satisfying the public, the greater the rewards to the members, both large and small, of the industry. This is as it should be. Any attempt to circumvent this basic economic law, by Government fiat or otherwise, is certain to result in economic instability with its inevitable adverse effects upon sound American business enterprise as well as upon good program service to the public.
>
> Advertisers are interested in "circulation" within a market. The "circulation" obtained by any radio station is dependent upon the number of listeners in the area covered by the station. The number of listeners depends upon the character of the program service rendered by the station, the licensed power of the station, its hours of operation, and the number of competitive stations in the same market area.
>
> Good markets are of primary interest to an advertiser because in an area where the purchasing power is large, the advertiser may reasonably expect a fair return on the moneys expended for advertising, provided, of course, the public becomes interested in the product being distributed. On the other hand, if the purchasing power of the public in any given market is insufficient to justify the cost of advertising, the manufacturer or the wholesaler or the retailer may not desire to expend advertising funds in such a poor market (pp. 132–133).

In another cogent observation, it said:

> *Naturally, the Commission should be just as much concerned with the economic situation as it is with the encouraging progress toward desired social objectives.* However, it should recognize that its authority is not absolute and that it is not charged with the responsibility of directing the economic activi-

[22] In the statement already referred to, Dr. Barrow said, "The study must be a comprehensive one. While it is called a 'network' study, it is, in fact, a study of the entire broadcasting industry."

[23] Addendum: This study was submitted October 3, 1957. It is available as Network Broadcasting Report of the Committee on Interstate and Foreign Commerce, H. Rept. No. 1297, January 27, 1958.

[24] FCC Report on Chain Broadcasting, FCC order No. 37, docket 5060, May 1941.

ties of its licensees. There is the positive duty to make certain that Commission policies do not detract from the economic stability of the industry, but there is no justification for the adoption of radical measures which would revolutionize the entire economic foundation without any certain knowledge that real improvements can be obtained (p. 129). [Emphasis supplied.]

Followed by a perspicacious terminal paragraph:

Finally, it has been implied that there is something harmful or wicked about the earnings of some broadcasting licensees. Congress did not intend this Commission to penalize profits. Congress does now and will continue to tax the earnings of all broadcasters, as an examination of the financial statements of any of the leading companies in the field will show. If there be undue or unjust enrichment, the Federal tax policy is the remedy; not an extension of regulation.

Many careless words have been written on the concept of unlimited competition (unfortunately a misconstruction as applied to broadcasting). This approach appears in many documents even of the Commission, as if here was the universal antidote to the poisons of overbearing private enterprise in broadcasting. The very existence of a table of assignments limiting the numbers of stations is on its face a graphic refutation of this sophistry. A little thought makes it clear that there cannot be free entry with a limited resource, the available channels. On this subject again the Chain Broadcasting Report makes a point, facing the issue squarely—

* * * the greater the number of stations in any community, the broader the opportunity for all desiring to use such facilities. However, as the number of stations in a community of any given purchasing power increases, the revenues available are diluted. If there are too many stations the quality of service rendered by each may be affected adversely. At least some will be forced to render inferior service because of inadequate income. Thus we are faced again with a choice between opposite trends. The present policy of the Commission is to encourage competition regardless of adverse economic effects. This general concept of the law is at variance with the natural laws which force a limited market.

Unfortunately, efforts to apply a concept of unlimited competition in the teeth of a technical limitation in the availability of channels encourages concentration of facilities in larger communities at the expense of smaller communities. This trend is augmented by the economic tendency to concentrate facilities in large centers of population where there is greater purchasing power to support profitable stations. The desirable social objective to render radio service to all listeners, both rural and urban, at times conflicts with the pressure to make multiple transmission facilities available in all of the metropolitan centers of the Nation. These factors unless controlled cause inequitable distribution of facilities to the various States and communities, contrary to the requirements of the Communications Act of 1934. Thus, a policy of unlimited competition is in conflict with the legal mandate to distribute facilities fairly, efficiently, and equitably throughout the Nation. This dilemma becomes even more difficult to resolve because allocation of facilities to any area is dependent upon voluntary applications. It is obvious that unlimited competition among stations in any community is impractical when the total number of facilities available for the entire Nation is limited. Emphasis, therefore, should be placed upon an equitable distribution of facilities to the various communities of the Nation, rather than upon an impractical objective of unlimited competition which can never be wholly achieved because of the physical facts (pp. 19–20).

Finally, the report contains comments even on social aspects of the broadcasting art of the time—not discernably different from what it is today:

Some criticisms of broadcasting are erroneously attributed to the fact that most of the licensees are businessmen. It is claimed that as such, their judgment as to social philosophies is similar. Thus, as a group they are said to reject social and economic philosophies advocated in recent years by some of our more

"advanced thinkers." Therefore, it is claimed that the broadcasting licensees as a group are rendering to the people of the United States the character of broadcasting which tends to favor one social philosophy as contrasted to all others and that as a result the existing broadcasting service is not useful in accomplishing desired social improvements. The undisputed facts are that radio broadcasting has been utilized as an open forum. *Furthermore, under the American system, the objective has been to render to the public the radio service the public desires rather than to force upon the public the type of service which individuals think the public should have.* [Emphasis supplied.]

ECONOMIC CONSIDERATIONS

Underlying almost every action by the Commission, implicitly if not explicitly, lurk important economic considerations. Technical considerations seem more obvious and therefore tend to have fixed if not exclusive consideration.[25]

Senator Schoeppel, at the termination of the Potter hearings, observed penetratingly:[26]

Television broadcasting in general and the UHF stations in particular need some broad and sound new economic answers to basic problems, not just a stopgap shuffling of old answers and old mistakes.

I believe it is worth remembering at this time that the original goal of these hearings was to find some practical answers to the acute economic problems of UHF television stations.

It is hard to understand how the Commission could determine the term of its licenses on a rational basis without consideration of economic factors. Originally the term of license was 6 months. It was extended to 1 year in 1939 and to 3 years in 1953. The Chairman of the Commission has recently indicated in public utterance that he favors a longer term. Past decisions to extend the term surely were predicated on something more than arbitrary considerations; so must future changes be predicated on study and analysis.

Multiple-station ownership in a given community was outlawed in 1943. This policy is based on the theory that a monopoly of communications by which the public might be denied untrammeled information has been frowned upon long since. The number of stations permitted a single interest was raised from 3 to 5 in 1944. In 1953, 7 AM, 7 FM, and 5 TV were the limit to 1 owner. In 1954, ownership of 7 TV stations was permitted, provided 2 of these were UHF. This step was taken to encourage UHF and for this reason it may justify more serious consideration.

The Storer Broadcasting Co. has for some time recently sought to have the arbitrary TV station limit rule invalidated by the court. The appellate court ruled that the FCC does not have the power generally and arbitrarily to limit the ownership of stations to a fixed limit. The Supreme Court[27] reversed this finding by holding the Commission does have the rulemaking authority to limit the number of stations held by a single owner. The case was remanded to the lower court which only recently has heard arguments of Storer and the Commission. Here is an issue bound to receive attention by business and the Congress, and one requiring penetrating analysis.

[25] The act, sec. 4 (f), mentions "officers, engineers, accountants, attorneys, inspectors, examiners, and other employees as are necessary in the exercise of its functions."
[26] Record, p. 1176.
[27] *U. S.* v. *Storer Broadcasting Co.*, 76 S. Ct. 763 (1956).

The Bricker report contains a proposal to—

eliminate the Commission-dictated limit upon stations which may be owned or controlled by any one person and substitute therefor a more realistic population criterion, thereby opening the door to the establishing of competing network organizations and additional sources of vital program material to small-market stations.

This proposition warrants very careful professional study lest it turn out to be visionary or contain hidden dangers. There arises not only the question of monopolistic control of what the public may be permitted to hear but also the opportunity for station brokerage as an objective as opposed to public service as an ideal.

Tax relief in the sale of broadcast stations is currently under review. The provision was inserted in the tax laws in 1941 at the time FCC promulgated its rules on multiple ownership. The object was to give some relief to station owners forced to sell where they had more than one outlet in a given area. The Commission, aware of the incongruity, has tightened the condition for issuance of tax-relief certificates. As of October 15, 1956, it will now issue relief only when a station sale is compelled by a change in Commission regulation.

THE NATIONAL TELEVISION OBJECTIVES

The objectives of the Commission, in behalf of the public interest, which led to the formulation of the policy and the table of assignments set forth in the sixth report and order, are expressed by Chairman McConnaughey in a report to the Senate Interstate and Foreign Commerce Committee:[28]

The Commission * * * was seeking to promote several different objectives designed to provide television service and facilities to the Nation. It gave first precedence to making available at least one service to all areas of the country; second priority to making a local facility available to as many communities as possible; third and fourth priorities to making second services and second local facilities available wherever possible; and allocated the remainder of the channels so as to achieve a fair, efficient, and equitable distribution of television service and facilities throughout the Nation.

The Plotkin report[29] refers to the television problem before the Nation paternalistically—

how to provide for the maximum number of television stations so that all the people of the United States may enjoy television service and so that the various communities will have an opportunity of having their own television stations to serve as media of local self-expression; and (2) how to insure that public taste and opinion may be molded by being exposed to a multitude of programs and viewpoints coming to it from many stations owned by as many different groups as possible, each one bringing its own individualistic approach to the task of programing stations in the public interest.

And the Commission as—

* * * enjoined by dictates of public interest to provide as many outlets per community as is technically possible in order to promote competition and diversification of viewpoint (p. 32).

A concise definition was given indirectly by CBS President Stanton in the Potter hearings.[30] Editorializing to the chairman, he testified:

[28] Record, Television Inquiry, p. 261.
[29] P. 43, Television Network Regulation and the UHF Problem, memorandum prepared for the Committee on Interstate and Foreign Commerce (1955).
[30] Record, p. 971.

It is your duty to see that as much of the public as possible has the widest possible choice of television services.

Senator Pastore, in the Television Inquiry, put the point this way: [31]

We want all the people possible to have all the chances possible.

Further on in his testimony,[32] Mr. Stanton declared that—

* * * it is not established that the UHF (without VHF) provides sufficient space fully to accommodate the number of stations which are necessary to achieve the objective of getting as close as possible to a nationwide, multiple-service, competitive television system.

Later he asserted that television must be considered not from a national point of view or from a local point of view but from the listener's point of view—that is, the public—wherever he may be.[33]

With so many differing views as to what is the public interest, it could be useful for the Commission to determine by public poll just what the public's wishes are. This polling technique is used by the broadcasters themselves to obtain firsthand data on the relative degree of public interest in their various programs. It is also their way of measuring competition—and a most direct one.

We have already noted that Senators Wofford and Daniel, in their joint views in the interim report of the Television Inquiry (p. 18), were impressed with the fact that in the entire proceedings there was not 1 witness among the 145 (appearing) who presented the "grass-roots opinion of the public."

This same interim report gives the Senate committee's view of the responsibility of the Commission:

It is for the benefit of the public, and the preservation of our American way of life, that the Congress properly insists that our radio and television broadcasting be nationwide, competitive, and responsible to local needs.

And goes on to state that:

We need a system which can provide service to as high a percentage of our people as possible, with local service in many more communities than at present, and with multiple services wherever they can be supported.

Whatever the character of these objectives and ideals, to be valid they must conform to the Communications Act and to be effective they must become the accepted doctrine of the Commission and, thus, must be consonant with the table of assignments of the sixth report and order, expressing the ideals of the Commission. *These ideals, innocent on their face, involve social, political, economic, and technical considerations of great moment. These forces, inexorable in nature, cannot be ignored.*

Just how far the ideals have materialized through the vicissitudes involving the mechanisms the Commission devised for their materialization and conflict with the complex technical, economic, social, and political forces, the record has for some time made abundantly clear. Because of a strongly divided Commission, it is as if there had been no guiding hand, but simply an abiding hope that, somehow, the problems would sooner or later solve themselves.

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[31] Transcript, p. 34.
[32] Record, p. 976.
[33] Transcript, p. 3131.

COMMISSION'S VIEWS ON ECONOMICS

Chairman Hyde, at the time of the Potter hearings, testified as to the Commission's objectives for the country's television system: [34]

> We mean by a nationwide competitive service operating assignments available in every community in sufficient number so that there can be more than one choice of service, both from the listener standpoint and those interested in broadcasting service.
> * * * *we have to take into consideration the economic realities, the distribution of population, and we have to take into consideration the economic possibilities of the stations.* [Emphasis supplied.]

Senator Schoeppel asked Chairman Hyde if the approach taken considered the geographical or economic aspects, averring that the Commission had started previously with geography. The reply was:

> Yes, Senator, but, actually, you have to take into consideration both elements * * *. The Commission had to take into consideration the size of the markets and the number of stations which it would be prudent to contemplate, and you also had to take into consideration the geographical element in order to get some distribution of service.
> As is set out in the sixth report, which I hope the Senators will give further consideration to, you will find that the Commission undertook to provide as many services as supply of channels would permit, having due regard for the market potential. Our problem was to meet the needs of the public and the operating realities in a way that would conduce to the overall pleasure and benefit of the public.

In the wholesale failure of UHF stations, surely, economic considerations inseparably associated with public interest, convenience, or necessity were involved. If not, then the philosophy which prompted the specific construction of the table of assignments of the sixth report and order is void of any foundation under the act.

In the sixth report, paragraph 77, it is stated that:

> The Commission is of the view that healthy economic competition in the television field will exist within the framework of the assignment table adopted herein.

The report goes on to emphasize the importance of UHF in satisfying the criteria of public interest, convenience, or necessity:

> 197. Because television is in a stage of early development, and the additional consideration that the limited number of VHF channels will prevent a nationwide competitive television service from developing wholly within the VHF band, we are convinced that the UHF band will be fully utilized and that UHF stations will eventually compete on a favorable basis with stations in the VHF. The UHF is not faced, as was FM, with a fully matured, competing service. In many cases UHF will carry the complete burden of providing television service, while in other areas it will be essential for providing competitive service. In view of these circumstances, we are convinced that stations in the UHF band will constitute an integral part of a single, nationwide television service.
> 198. With respect to the propagation characteristics of the UHF band, as compared to the VHF, we believe that such differences as exist will prove analogous to those formerly existing between the higher and lower portions of the VHF television band. We are persuaded that the differences in propagation characteristics will not prevent UHF stations from becoming an integral part of a single service.
> 199. It is alleged that equipment for employing higher power in the UHF band is not available, and that it is not known when such equipment will be available. This contention is not supported by the record. There is evidence that it will be possible to operate stations in the UHF band with 400-kilowatt radiated power by the time that authorizations are issued for such stations.

[34] Record, pp. 125–128.

Further, there is no reason to believe that American science will not produce the equipment necessary for the fullest development of the UHF.

200. In any event, it is clear that, in formulating an assignment table which will be the basis for the overall development of television broadcasting in this country, the public interest requires the Commission to take a long-range view of the future of television. Present equipment and economic problems may temporarily handicap operations in the new UHF band and place certain communities at a disadvantage. *Such immediate considerations, however, cannot be allowed to obscure the long-range goal of a nationwide, competitive television service, in which stations in both the UHF and VHF bands will constitute integral parts.* We find that one overall table of assignments for the television service is best calculated to achieve that goal. [Emphasis supplied.]

A dissent in the report [35] shows apprehension and an understanding of the inconsistency of its table of assignments as to intermixture:

The primary aim of this allocations proceeding must be the *maximum utilization of all television channels.* Certainly, a system comprising only a few hundred VHF stations, each with the greatest possible coverage, would be most efficient from the point of view of these individual stations. This would not, however, even approximate a nationwide system, and it would be most unfortunate if the medium were to develop in such a manner, depriving scores of cities of their sole opportunity for local self-expression in television.

Another dissenting note observes that:

The purpose of the allocation plan now being adopted by the Commission is to create a nationwide, competitive television system, but the *effect* of the plan is to deny local television to cities not included in the table. Once the table is established and construction permits are granted, followed by licenses and operation on channels assigned in this table, the Commission will not be able to dislocate such licenses to make another plan more efficient without litigation ensuing between such licensees and the Commission.

There is, at least, a hint that economic considerations were a factor in generating the table of assignments:

* * * no single mechanical formula was utilized in the construction of the table of assignments. With the above priorities in mind, it was necessary to recognize that geographic, economic, and population conditions vary from area to area, and even within the boundary of a single State; * * *

Again the Commission had in mind the economic capacity of communities in carrying out a social ideal it conceived to be paramount in the interest of the public where in the report it opined;

In the Commission's view, as many communities as possible should have the opportunity of enjoying the advantages that derive from having local outlets that will be responsive to local needs. We believe, with respect to the economic ability of the smaller communities to support television stations, that it is not unreasonable to assume that enterprising individuals will come forward in such communities who will find the means of financing a television operation.

Another Commission document [36] contains the observation:

If the Commission's policy had been one of protection of the "pioneers" from competition from newly established stations, instead of one which encouraged competition in all aspects such a vigorous growth could not have occurred.

It could be argued that by not facing economic factors which in the instance of UHF were matters relating vitally to its survival, the Commission has, by inadvertency at least, protected the "pioneers" from competition, even though this be ultimate. And it must be the ultimate interest of the public with which we are concerned, witness the Commission's position in paragraph 200 quoted above.

[35] P. 204.
[36] Supplemental brief, Docket No. 11411 (1956), p. 31.

It is hard to understand how a quantitative table of assignments, which presumed to allocate a given number of channels in prescribed numbers to selected cities and communities, could completely ignore economic considerations in determining these limits unless the procedure followed was completely arbitrary.

UNSUPPORTED ASSERTION

There have been many proposals as to how to engender a greater number of television stations. In the absence of a considered, systematic analysis, each new solution merely adds to the pandemonium. What is needed is a solution from within the Commission based on a responsible study on neutral professional grounds. Manifestly the Commission has neither adequate talent nor time to give this problem the professional attention it must have.

Senator Bricker, in his report,[37] makes a proposal which is characteristic. If it has merit, it should withstand critical analysis. To accept it on its face, like many other proposals, it could conceivably serve to make matters worse by bringing into being other problems even more complex:

> If free competition were allowed to exist, through the reduction in service areas and restoration of small-market integrity, it is obvious that the economic laws of supply and demand will operate to adjust station time rates to reasonable proportions in the large cities, and that the advertisers will then be able to purchase time on as many stations as they desire.

NEED FOR ANALYSIS

Granting the nobility of the long-range ideal of the sixth report and order, which looks toward the establishment of small community local television outlets and the wisdom of constructing a national assignment plan embracing over 1,800 commercial stations whereby over 1,200 communities are assured the opportunity to avail themselves of such a service, one must nevertheless recognize that the growth of commercial television broadcasting will be determined by the normal economic forces which govern incentives to capital in an environment where television is but one of many areas of opportunity.

There is disappointment by many who subscribed to the ideology of the sixth report because a greater proportion of the assignments in the table have not been picked up by private interests to be put on the air as commercial stations. Particularly there is consternation over the relative failure thus far of the concept of community television by those who fostered this ideal. It is well, therefore, that there should be a rational study to see just what can be expected in this stage of commercial television broadcasting evolution, some 15 years since its inception.

Chairman McConnaughey has fittingly expressed the question:[38]

> Basically at issue is how widespread a service can television become.

Although the Commission can maximize the opportunity open to the television broadcasting entrepreneur, it otherwise has no control of

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[37] Bricker report, p. 10 (1956).
[38] Address, Poor Richard Club, Philadelphia, December 6, 1955: The Dynamics of a Dynamic Industry.

the flow of venture capital into this field. In this respect it has no more control than of the programs and the stations to which a viewer shall tune.

An assessment of the immediate status of television broadcasting and its extrapolation in the estimating of future growth potentiality gives one cause to look carefully at the facts and to face them realistically so as not to be beguiled into thinking that deintermixture or that an all-UHF mandate will greatly expand the number of television outlets in the country for the immediate future.

Irrespective of the effects of a composite allocation plan involving the conflicts of intermixture, it is significant that there is no clear idea of the economic significance of the fact that there were recently 490 commercial stations on the air, 13 more authorized, and 128 additional applied for. What is the immediate ceiling as to what our national economy can support? Does this ultimate figure represent oversaturation for the immediate future? Here are questions worthy of exacting analysis, if there is to be realistic planning and regulation.

At the Television Inquiry a witness for CBS testified: [39]

> We estimate that the 100 leading television markets, which have been assigned 263 competitive commercial channels, could actually support at least 400 stations. True, in these markets there are enough channels for 400 stations, but many are unused because they are not competitive * * *

AN ILLUSTRATIVE ATTACK

A rational approach to the problem of how many program-originating television stations this country can currently support has been made in a study by an economist introduced into the document Proposals and Comments of Columbia Broadcasting System, Inc.[40] The number comes out to be around 600, which is consistent with another estimate made independently and on a different basis.[41] The author observes that the—

> number can, apparently, be substantially increased only if a new situation should develop in which small communities can support stations even though they lie in the coverage area of stations in larger markets.

The figure is based on the assumptions that all channels are of VHF character and that they have equally good programing. In the study the breakdown of stations is:

4-or-more-station markets	78
3-station markets	30
2-station markets	57
1-station markets	52

The study observes that over 86 percent of the United States families live in markets estimated able to support 3 or more stations, and that 95 percent of the families live in areas that can be economically served by television stations without the aid of satellites. By means of satellites this figure could approach 100 percent. In the author's own words:

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[39] W. B. Lodge, vice president, engineering—CBS Television (transcript, p. 1779).

[40] In the Matter of Docket No. 11532, December 14, 1955: How Many Television Stations Can the United States Support Economically? Exhibit V, dated October 5, 1955. This work was done by Dr. Sidney S. Alexander, economic adviser to CBS at the time, now professor of industrial management, Massachusetts Institute of Technology.

[41] Peter R. Levin, Broadcasting-Telecasting, April 27, 1953, pp. 102–107.

Thus, we see that the maximum number of stations that can be supported in the country is something of the order of 600, based on the assumption that station coverage is in the general range of a 50-mile to 75-mile radius. Larger or smaller radii of coverage would lead to fewer economically supportable stations. Larger radii permit fewer stations to cover a given area, and shorter radii reduce the number of market centers that can support a station. That is, many market centers which can support a station with a 50-mile radius of coverage can no longer support one with a 25-mile radius of coverage. It may, accordingly, be concluded that the number of 600 stations stands as an upper limit of the number of stations the country can support economically irrespective of changes in the power or the frequencies allowed to stations. If the power is to be reduced, or UHF to be generally adopted, while more stations would be needed to cover the country, fewer could be supported economically.

The study, making use of FCC reports on station operations, concludes that on the average an annual revenue of at least $200,000 is required to support a program originating station in a marginal 1-station market. For a 2-station market, the corresponding figure is taken as $300,000; for a 3-station, $400,000; and for a 4-station market, $500,000. Lower revenues would, of course, be associated with a satellite station.

The analysis goes on to examine the revenues per family and the total number of families required to constitute a practical television market, making the assumption of 90 percent set saturation. The conclusions are: a minimum of 22,000 homes in a 1-station market; 50,000 for a 2-station market; 83,000 for a 3-station market; and 139,000 for a 4-station market. The argument sets forth that for satellites with annual operating costs of from $25,000 to $50,000, higher figures if film programs are used solely by the satellites, smaller numbers could now be served practically.

COMMENTARY

It is interesting to compare these estimates with the thinking of the Television Committee of 1939 of the FCC, as expressed in its first report [42] covering standards. Translating the figures on homes in the preceding paragraph into population, a 1-station market implies around 75,000; 2-station, 172,000; 3-station, 285,000; and 4-station, 478,000 inhabitants.

The committee pointed out that only 7 channels were now developed from a technical standpoint, and these will probably be utilized in cities having large populations and areas; that the remaining 12 channels are not yet developed technically but will be useful for the smaller communities as well as larger cities. Considering high operation costs, the committee stated that cities of less than 100,000 might have difficulty in supporting one station, and cities of less than 1,000,000 might have difficulty in supporting two stations "if reliance for financial support must be placed upon advertising as the only source of income." It therefore urged that the "industry be encouraged to undertake further practical research leading toward the development of methods which will permit more stations to be accommodated in the limited space in the radio frequency spectrum as well facilitating lower costs in the production of good quality program service to the public."

One must bear in mind that this analysis is made by an interested party. One must also recognize that there is in general a constitutional tendency to depreciate facts when they go contrary to what one likes to believe, and these deductions go contrary to the wishful think-

[42] Commissioners Craven Case, Brown. P. 7, Mimeo, 34168, May 22, 1939.

ing of many. The questions they raise, whether one agrees or disagrees, are those which deal qualitatively and not emotionally with the practical issues of public interest and cannot be ignored. Regardless of significance, studies of this origin can hardly be accepted by the Commission without the benefit of an evaluation by an authoritative source independent of any direct (financial) interest in the business. It is imperative to the public interest that independent studies of this character be underwritten by the Commission in the interest of rational, safeguarded, long-range planning.

This type of study analysis, done for the Commission by a neutral agency of national repute, would give it a sound basis for decision and one it could defend. There would be no more commendable a policy than to seek outside professional aid on such matters, no better way of engendering confidence in Commission actions.

There is dire need for specific, numerical factual material on issues the Commission must face at this time, particularly where tough, critical, far-sighted decisions must be made and not postponed as in the past, if the public is ultimately to enjoy the real benefits of the ideals set forth in 1952 in the priorities of the sixth report and order.

A study of the cost of shifting all television to UHF is included in this same CBS document. The index is service lost to present VHF listeners and dollars of cost to broadcasters and to the public.

Where is there a problem needing greater analysis than that which contemplates a move from the current VHF–UHF system to all UHF? Assuming that analysis indicates an ultimate end of this character, what would be the most reasonable rate to replace revolution by considered evolution?

There is no invasion of prerogative where the right kind of consultative and research assistance is sought. The only net result of a task well executed is an increased stature of the Commission, a greater feeling of security on the part of the public.

EXCISE TAX

A current proposal on which the broadcasters, the manufacturing interests, the Federal Communications Commission and the Interstate and Foreign Commerce Committee are in substantial agreement is the repeal of the excise tax[43] on all-channel television receivers. Superficially this device is attractive. This attractiveness may prove to be illusory. The proposal should be submitted to careful scrutiny lest this beguiling solution of the UHF problem turn out to be specious, cause delay and leave the problem once more at the door of the Commission where real responsibility already rests, however uncomfortably.

The scheme is appealing to the Commission since the proposal calls for no assumption of responsibility on its part, or necessarily a critical study of the pros and cons of the problem. Economics is not its dish. It is attractive to the industry since in the long term here is promise of relief in overall cost to the manufacturer and to the vendor. It does not take into account what happens if at the end of a fiscal period

[43] The 10 percent tax levied on television and radio sets is based on secs. 4, 141, and 4, 142 of the 1954 Tax Code.

there is not the expected demand for UHF reception and inventories pile up. The manufacturer's natural course is to sell to meet a market. If there is an extra demand for VHF sets, it is a serious question whether all-channel sets would be made nevertheless for applications where they are neither necessary nor wanted. At least it is not at all clear how this artifice would remove or ameliorate the underlying cause of the problem.

Thus far, the Treasury Department has remained adamant against pressure. Treasury Secretary Humphrey, in a letter to Chairman Magnuson, has opined that, "It may be that at some time the whole field (of excise taxation) should be restudied." No one has come up with a finding which would offset the loss of revenue which would result from the loss of the excise dollars from televison.

The revenue from this tax on television, radio, and phonographs was $161,098,000 for the fiscal year ending June 30, 1956, 17.5 percent over the previous year. The Treasury income from television sets alone for this period may be as much as $100 million. In fiscal 1957, ending June 30, the Federal Government received $149,192,000 from excise taxes [44] on radio sets, television sets, phonographs, and related components, a decline of some $161,000 from fiscal 1956.

Convincing evidence that the removal of excise tax from all-channel sets will cure the crippled condition of UHF has not yet been forthcoming. What has been offered in the main is unstudied and wishful opinion. A view expressed in one quarter [45] has been to repeal the excise tax on all-channel color receivers only, a proposal to be scrutinized most carefully. At the present time color sets are a luxury item not to be confused with the ordinary black-and-white set, cheaper in first cost and in maintenance.

Elimination of excise tax on all-channel sets does not get at the core of the problem. One should not expect this to act as an inducement to industry where there is no demand for all-channel sets, as, for example, where the customer can get all the programs he wants on VHF. In contrast, color television has been promoted aggressively by some segments of the industry, independent of the fact that the set is a luxury item in comparison with the cost of black-and-white sets and subject to full excise tax. If one wants to receive in color, there is no alternative. Not so in most cases of VHF versus UHF.

In this complex problem it at least can be argued without study that a market is about to exist before a manufacturer will be induced to enter. The mere removal of the excise tax on all-channel sets in no wise implies that ipso facto the answer to the UHF problem has been found. If, in order to reach the potential customer, the advertiser has no choice but to place his program on the UHF station, and if a UHF station is the medium through which the customer must receive the program he wants, he will seek a set to give him this satisfaction, one is prompted to opine, whether or not the excise tax is levied. Beguiling the manufacturer to make the set by the inducement of tax removal as the alternative does not look like a sound argument.

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[44] Overall excise tax collections for fiscal 1957 were $10.6 billion compared to $10 billion for fiscal 1956.

[45] Television Inquiry, NBC Vice President Heffernan (transcript, p. 1912).

Removal of the excise tax on all-channel receivers does not appreciably alter the existing conditions engendered by the consequences of promiscuous intermixture of the sixth report. The problem is worthy of serious preliminary study and consideration as one of the factors which has contributed to cripple UHF and thus to undermine the basic ideology of the sixth report which sought to bring to fulfillment the broad concept of nationwide television, including community outlets.

It would seem reasonable to conclude that a problem which lies at the door of the Commission, a problem of its creation unwittingly, cannot be solved by appeal to the Treasury and to the industry. Although outside help of this character can ameliorate, it cannot substitute for Commission wisdom and determination to face issues directly.

Television began in the low VHF band. When the high band was added, sets became incrementally more expensive if one desired to receive all bands, yet there was no belief that the abatement of the tax on the all-VHF-channel set was at the root of the then VHF-problem. In a sense the problem is no different today. The public will be willing to pay more for an all-channel set if it is satisfied it can get a service it very much wants and which it could not otherwise get. Were it not so, how could VHF television have prospered, how could the customer be induced to pay the very much higher price for a color set of today?

As Chairman McConnaughey thoughtfully observed at the recent hearing before the Ways and Means Subcommittee:

> In fairness to this committee it should be stated that *the question of receiving sets is not the only factor in our television problems or even the only obstacle to stimulating the use of new channels and additional service to the public.* In the considered judgment of our Commission, however, the fact that so few people have all-channel receiving sets is an important element bearing on the matters under our jurisdiction and one which merits careful consideration and the best efforts of all of us in finding a solution. [Emphasis supplied.]

At the time Chairman McConnaughey testified at the television inquiry, January 1956, he stated that of the 152 UHF stations that had gone on the air, only 99 remained in operation.[46] By August this number had dropped to 91, the figure of early January 1957. As of February 1957, there had been approximately 340 UHF grants, only one-half of which had gone on the air. Of over 1,300 UHF channel assignments, less than 7 percent were operating. One must be cautious at this point for if the CBS analysis just outlined is even approximately true, there is a current saturation figure for commercial stations of the order of 600.

If, indeed, subsidy is indicated, might it not be better to underwrite research on critical items by which to bring UHF techniques to a peak of performance to maximize its comparative capabilities. Section 303 (g) as basis should enable the Commission, with support of Congress, to act directly.

A more appropriate course would be to make use of tax techniques to raise the necessary funds for UHF research to push the technique ahead. For growth let us nurture the UHF plant at its roots. However, even research, expertly planned and executed, and accelerated

[46] Transcript, p. 16.

by subsidy, is to no avail unless the Commission faces up to the imperative complementary issue before it, the matter of reallocation.

The VHF–UHF problem is a challenging one, where piecemeal, or potshot solutions will only complicate things. Careful study is required to determine just what steps will have the highest probability of insuring the public interest. Here is a vital and tender subject affecting great business interests whose parts must naturally and necessarily be played as partisans. Here is a dire need for independent investigation where the object is not to evaluate rates or business practices and ethics, but social, economic, and technical problems. The end object must be the public interest, an interest which accrues inevitably to the benefit of private interest when soundly cultivated and protected.

In conclusion, entirely aside from the illusory panacea of tax immunity on all-channel receivers which has been proposed, there is the truly substantive issue of Government support for research in the public interest. There is vital research to be done for which there is justifiably no incentive in the radio and television industry. Studies which treat long-range planning, economic and legislative and legal aspects of radio generally, are needed to enable the Commission to do a more enlightened and effective job in the exercise of its expertise-by-law. Full consideration should be given to enabling means by which to carry out this responsibility. Imposition of a license fee offers a fruitful means toward this end.

A further discussion of this subject comparing subsidies and excise taxes redounding to the support of aviation is given on pages 282 through 287.

COMMISSION TECHNIQUES AND POLICY

The Federal Communications Commission per se comprises a body of seven men. This administrative tribunal was created by congressional act. The law imputes to it expertise in the complex field of electrical communications, wire and radio. On the one hand, it is expected to serve as a highest tribunal adjudicating ex parte and interparty proceedings in the field of private communications, and on the other, to manage the routine of an $8 million communications establishment. Within the bounds of its charter, the Communications Act, the Commission proper is also a quasi-legislative unit and as such is empowered through rulemaking and adjudicatory process to make law.

The Commission reports directly to Congress. Commissioners are appointed by the President with the advice and consent of the Senate.

The history of this body leads to the conclusion that the appointees are not necessarily qualified for their inordinately difficult task, nor are they uniformly distinguished professionally for their expertise in the highly complex field of electrical communications, in the law, or in the political and social sciences. Aside from the requirement of citizenship and renunciation of financial interest in communications organizations, there appears to be no affirmative qualification whatsoever. On the surface, at any rate, there does not appear to be the prerequisite that a candidate qualify for military clearance for confidential material.

Despite their responsibilities, there is required of prospective Commissioners no qualifications of experience and character comparable to that of candidates for the Federal judiciary.

An examination of Commission procedure when this body cloaks itself with tribunal robes reveals that it is almost uniformly isolated from its expertise: the heads of its four chief bureaus, the General Counsel, the Chief Engineer and the bureau economists. Each Commissioner is entitled to a legal assistant, an engineering assistant, and a secretary, employed independently of civil-service laws.

According to section 5 (c) of the act, there is the mandate that:

> The Commission shall establish a special staff of employees, hereinafter in this Act referred to as the "review staff," which shall consist of such legal, engineering, accounting, and other personnel as the Commission deems necessary. The review staff shall be directly responsible to the Commission and shall not be made a part of any bureau or divisional organization of the Commission. Its work shall not be supervised or directed by any employee of the Commission other than a member of the review staff whom the Commission may designate as the head of such staff. The review staff shall perform no duties or functions other than to assist the Commission, in cases of adjudication (as defined in the Administrative Procedure Act) which have been designated for hearing, by preparing a summary of the evidence presented at any such hearing, by preparing, after an initial decision but prior to oral argument, a compilation of the facts material to the exceptions and replies therein filed by the parties, and by preparing for the Commission or any member or members thereof, without recommendations and in accordance with specific directions from the Commission or such member or members, memoranda, opinions, decisions, and orders.

Nevertheless, the law imputes to this body an expertise and all courts are, ipso facto, bound by law to predicate their decisions on this tenuous premise.

In the words of Chief Justice Hughes: [47]

> Dealing with activities admittedly within its regulatory powers, the Congress established the Commission as its instrumentality *to provide continuous and expert supervision* and to exercise the *administrative judgment* essential in applying legislative standards to a host of instances. [Emphasis supplied.]

Although the Commission as a whole makes all policy determinations, the chairman is responsible to the members for general administration of the internal affairs of the Commission. For the conduct of these affairs, the Commission has associated with it a staff which is described in the 22d annual report, as follows:

> Pursuant to a 1952 amendment to the Communications Act, the Commission staff is organized into integrated bureaus on the basis of the principal workload operations, and other offices essential to its functioning.
>
> In consequence, the four chief bureaus are self-contained operating units with their own engineers, lawyers, accountants, and other necessary personnel. These are the Common Carrier Bureau, which supervises telephone and telegraph matters; the Safety and Special Radio Services Bureau, which administers the nonbroadcast and noncommon carrier radio services (except for common carrier aspects of marine services); the Broadcast Bureau, which superintends the AM, FM, TV, and other broadcast services; and the Field Engineering and Monitoring Bureau, which is responsible for field engineering work, including radio station inspections, monitoring, operator examinations, technical studies, and certain enforcement activities.
>
> In addition there are seven offices; namely:
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> Office of the General Counsel, whose functions as chief legal adviser to the Commission cover matters involving litigation, legislation, rulemaking, and administrative practices presenting legal problems.

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[47] *FRC* v. *Nelson Bros.*, 53 S. Ct. 627, 632 (1933).

Office of the Chief Engineer, whose duties deal with the technical aspects of frequency allocations, radio rules and standards, research and experimentation, and problems of interference.

Office of the Secretary, who has charge of official records, processing of correspondence and official documents, and certain functions relating to the internal management of the Commission.

Office of Administration, under the direction of the chairman, reviews the programs and procedures of the Commission and handles its budget, personnel, and administrative services.

Office of Hearing Examiners, which conducts hearings and prepares and issues initial decisions.

Office of Opinions and Review, which assists the Commission in the preparation of decisions in cases of adjudication pursuant to Commission instructions, and

Office of Reports and Information, which is the central point for issuing public releases and information.

The Commission has delegated authority to its operating bureaus and certain other offices to take routine actions which are largely automatic under the rules and do not involve policy considerations. This has relieved the Commissioners of considerable paperwork.

There was formerly an Office of Chief Accountant, but this was abolished as of October 31, 1955, and its accounting functions integrated into the operating bureaus. The Accounting Systems Division and the Economics Division of that office were, accordingly, transferred to the Common Carrier Bureau and the Broadcast Bureau, respectively (pp. 13, 14).

The hearing procedures are prescribed by the Communications Act and in certain respects, not in conflict therewith, further and more exacting provisions are delineated by the Administrative Procedure Act. Some of the strictures prescribed in the Communications Act with respect to hearings follow:

SEC. 409 (c) (1). In any case of adjudication (as defined in the Administrative Procedure Act) which has been designated for a hearing by the Commission, no examiner conducting or participating in the conduct of such hearing shall, except to the extent required for the disposition of ex parte matters as authorized by law, consult any person (except another examiner participating in the conduct of such hearing) on any fact or question of law in issue, unless upon notice and opportunity for all parties to participate. In the performance of his duties, no such examiner shall be responsible to or subject to the supervision or direction of any person engaged in the performance of investigative, prosecutory, or other functions for the Commission or any other agency of the Government. No examiner conducting or participating in the conduct of any such hearing shall advise or consult with the Commission or any member or employee of the Commission (except another examiner participating in the conduct of such hearing) with respect to the initial decision in the case or with respect to exceptions taken to the findings, rulings, or recommendations made in such case.

(2) In any case of adjudication (as defined in the Administrative Procedure Act) which has been designated for a hearing by the Commission, no person who has participated in the presentation or preparation for presentation of such case before an examiner or examiners or the Commission, and no member of the Office of the General Counsel, the Office of the Chief Engineer, or the Office of the Chief Accountant shall (except to the extent required for the disposition of ex parte matters as authorized by law) directly or indirectly make any additional presentation respecting such case, unless upon notice and opportunity for all parties to participate (p. 67).

Hearing examiners report to the Civil Service Commission and not to the Federal Communications Commissioners. The examiners' decisions, in the absence of objection, are adopted by the Commission as final.

Where two or more applications are competitive, a hearing is mandatory.[48] The responsibility of the hearing examiner is to review

[48] *Ashbacker* v. *FCC*, 66 S. Ct. 148, 151 (1945).

all testimony and exhibits, after which he issues an "initial decision." Any party to this hearing may take exceptions and answer exceptions taken by the other parties where the alleged basis is the public interest. Any party can ask for and will be given the opportunity for an oral argument before the Commission. At this juncture the Broadcast Bureau may, in the public interest, file exceptions to the initial decision. There may now be a petition for rehearing. Following these reliefs, before the Commission proper, there is recourse to the courts—but only on points of law. By inverse token, the courts can pass only on points of law and not on the Commission's expertise, judgment or administrative wisdom unless there is an error of law.

In pungent vein, the Supreme Court has said: [49]

> Courts should not overrule administrative decisions merely because they disagree with its wisdom.

The act proposes, among other things, to maintain control by the United States over all the channels of interstate and foreign radio transmission. This it does through the medium of a license without which it is unlawful to emit radio waves for purposes of communications.

Insofar as the act deals with broadcasting, it is pervaded with the spirit expressed by the Supreme Court in reference to the first amendment,[50] namely, that—

> The widest possible dissemination of information from divers and antagonistic sources—

is essential to public welfare.

In a complementary manner, Chief Justice Hughes observed: [51]

> The Commission has been set up as the licensing authority and invested with broad powers of distribution in order to secure a reasonable equality of opportunity in radio transmission and reception.

The Radio Act of 1927 was generated in at least a partial vacuum to cover a crisis. The pursuant Communications Act of 1934 differed mainly in that it pulled together the loose administrative ends into one agency. There was no tradition to lend moral strength or precedent to engender specific measures. Thus it was that the most specific gages that could be devised were public interest, convenience and necessity.

It is in order to review in outline the current criteria bearing on the granting of applications. With respect to sole applications, here is one interpretation of the Supreme Court's position: [52]

> Under the Supreme Court's view of the statute (in Sanders) if there be only one applicant for a given frequency in a given area, the community need for a new station and the relative ability above the minimum requirements of the applicant to render service are immaterial.

On the other hand, according to the act as recently amended, an application shall be granted only if the Commission finds that public interest, convenience, and necessity are served thereby—subject to hearing.[53] Where more than one applicant for a given facility is in-

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[49] *NBC* v. *U. S.*, 71 S. Ct. 806 (1951).
[50] *Associated Press* v. *U. S.*, 65 S. Ct. 1416.
[51] *Federal Radio Commission* v. *Nelson Bros.*, 53 S. Ct. 627, 634 (1933).
[52] 175 F. 2d 344, 346 (1949).
[53] 48 Stat. 1085 (1934), as amended, 47 U. S. C. par. 309 (a), (b) (1952).

volved, outlets of local voice, generally speaking, receive primary consideration, as former Commission Chairman Denny testified: [54]

> But we feel that persons who are residents of the community should have the advantage over people who are nonresidents.

Again in *Johnston Broadcasting Co.* v. *FCC* [55]—

> local residence may not be essential to qualification. But as between two applicants otherwise equally able, local residence might be a decisive factor.

In the case of the Pottsville Broadcasting Co., for example, the Commission denied its application on the grounds that it did not sufficiently represent local interests in the community which the proposed station was to serve.[56]

The Senate Committee on Interstate and Foreign Commerce has expressed itself in its Interim Report on the Television Inquiry (p. iv):

> Radio and television stations should be owned and operated by people who know the communities where they are located, who have a very real and close feeling for them, and who have a strong, primary concern for the interests of their communities. * * * the Commission should seek to encourage local, integrated ownership and operation by people interested in long-range service to their communities as a part of those communities.

No formula is suggested as to how the Commission is to achieve this objective.

Again, in the sense of checks and balances it has been held that: [57]

> If the requirements of the public interest are to be satisfied, the Commission must consider not only the public benefit from the operation of the new station, but also any public loss which it might occasion. Only by such a balancing can the Commission reach a legally valid conclusion on the ultimate question of the public interest.

The choice of local service principle is another formalized rule, here.[58]

> When mutually exclusive applicants seek authority to serve different communities, the Commission first determines which community has the greater need for additional services and then determines which applicant can best serve that community's need.

These illustrations give but a glimpse of the spectrum of principles and rulings governing the action on sole and multiple applications.

The mass of precedents had led to formalization by the Commission of criteria for evaluation of relative fitness in comparative hearings of mutually exclusive applications.

In a comparative hearing, the Commission excludes any applicant who does not meet the minimal standards of competency and financial capability or who is disqualified by the multiple ownership rule. After this screening, it is presumed that the grant to any one of the remaining contestants will serve the public interest.

The final task is to determine which of the remaining contestants promises to serve the public interest best. This is done by the rather arbitrary application of general criteria. Usually these are (*a*) local ownership, (*b*) integration of ownership and management, (*c*) past performance, (*d*) broadcast experience, (*e*) proposed programing policies (plans and proposals), and (*f*) diversity of control of mediums

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[54] P. 35, hearings on S. 1333, 1957.
[55] 175 F. 2d 351, 356 (1949).
[56] See *FCC* v. *Pottsville Br. Co.*, 60 S. Ct. 437 (1940).
[57] *Democrat Prtg. Co.* v. *FCC*, 202 F. 2d 298, 301 (1952).
[58] *FCC* v. *Allentown Br. Corp.*, 75 S. Ct. 855, 858 (1955).

of mass communications. Such factors as character, local residence, civic activities, operating policies, legal, technical and financial qualifications, staffing, studios and transmitting equipment, all may come in for comparative consideration.[59] There may also be included past performance, studios, transmitting equipment and staffing. There appears to be no affirmative rule as to how these various factors are weighed nor does it appear mandatory that each and every one must explicitly be considered. A specific compulsion has been expressed by the Supreme Court which said that:[60]

> A finding without substantial evidence to support it—an arbitrary and capricious finding—does violence to the law.

The court of appeals, in remanding a case for lack of convincing comparative analysis to support the Commission's findings said:[61]

> We cannot tell from the findings what caused the Commission to say that Allentown's need was greater.

On the subject of comparative findings, the court of appeals, in another case,[62] observed:

> * * * (1) The bases or reasons for the final conclusion must be clearly stated. (2) That conclusion must be a rational result from the findings of ultimate facts, and those findings must be sufficient in number and substance to support the conclusion. (3) The ultimate facts as found must appear as rational inferences from the findings of basic facts. (4) The findings of the basic facts must be supported by substantial evidence. (5) Findings must be made in respect to every difference, except those which are frivolous or wholly unsubstantial, between the applicants indicated by the evidence and advanced by one of the parties as effective. (6) The final conclusion must be upon a composite consideration of the findings as to the several differences, pro and con each applicant.

The qualitative nature of these criteria, the freedom at the disposal of the Commission in electing emphasis of one or another of these arbitrary factors, and the fact that none is affirmative make for a randomness of decision disconcerting for the seeming lack of judicial precision and systematic determination.

One need only consider the insidious potentialities of such a criterion as broadcast experience. Conceivably this requirement could rule out a newcomer where an existing station, applying for the same new outlet in addition to what he has, has done an enviably good job. Certainly this would be in the direction of reducing competition. This criterion sometimes becomes a formidable tool (if one takes the Southeastern Enterprises white paper, p. 14, par. 46, as the policy).

Perhaps no aspect better illustrates the point than the history of instances involving diversification of media of mass communication. (See p. 170 ff.) A recent impressive study of the record[63] over the years makes the point that where diversity has not been emphasized by one of the contestants it has not been stressed by the Commission, that diversity has not been held determinative except when the contestants have been adjudged equal in all other criteria, and avers that in many instances the need for new, independent sources of dissemi-

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[59] Cf. *Scripps-Howard Radio* v. *FCC*, 189 F. 2d 677 (1951).
[60] *FRC* v. *Nelson Bros.*, 53 S. Ct. 627, 633 (1933).
[61] *Easton Publishing Co.* v. *FCC*, 175 F. 2d 344, 348 (1949).
[62] *Johnston Broadcasting Co.* v. *FCC*, 175 F. 2d 357 (1949).
[63] Diversification and the Public Interest: Administrative Responsibility of the FCC, Comment, Yale Law Jour., vol. 66, January 1957, p. 365. The study undertakes to demonstrate that the multiple ownership rules are an inadequate safeguard, that the Commission has given little weight to diversification in renewals and modifications grants, that in the instance of sole applications, this criterion has been given no force at all. The pernicious practice of "payoffs" and the Commission's failure to apply sanctions is discussed.

nation has been subordinated to the criterion of greater broadcast experience. Here is an enlightening commentary on the failure of Commission policy through lack of thorough examination of the ramifications of this beguiling area of exploitation.

The paper sententiously observes: [64]

> When faced with the choice between (broadcast) experience and diversification, the Commission should note that while lack of experience is cured with time, lack of diversification is not.

STATION EQUITY

It is worth quoting the Yale Journal Comment with respect to the vested equity the Commission appears to identify with a going station [65]—

> * * * in view of the equities which the Commission feels favor the renewal applicant, diversification objectives will be forever impaired unless an affirmative policy is effected at the *licensing* stage, prior to the outlay of investment and the establishment of operations.

The Commission record with respect to station deletions and license renewal denials would appear to belie the expression of the act to the effect that the license—the sole medium of statutory control—shall not be construed to create any right beyond the period of the license.

With apparently one exception, the denials have been based on failure to comply with legal requisites. In the generation of the allocation table of the sixth report, for instance, despite its purporting to be a reallocation plan based on avowed ideology demanding an overhauling of tht past allocation structure, not a single VHF station was moved or replaced by a UHF facility. Regardless of the idealistic pronouncement of the statute, once a franchise is granted, with good (legal) behavior, it is as if ownership were for perpetuity. This is a practical fact to be reckoned with.

Apparently the unique instance of a station deletion in the public interest, where the denial of license renewal was not predicated on any failure to comply with the law, was in the case of Nelson Brothers: [66]

> To accomplish its purpose, the statute authorized the Commission to effect the desired adjustment "by granting or refusing licenses or renewals of licenses, by changing periods of time for operation, and by increasing or decreasing station power." *This broad authority plainly extended to the deletion of existing stations if that course was found to be necessary to produce an equitable result.* The context, as already observed, shows clearly that the Congress did not authorize the Commission to act arbitrarily or capriciously in making a redistribution, but only in a reasonable manner to attain a legitimate end. That the Congress had the power to give this authority to delete stations, in view of the limited radio facilities available and the confusion that would result from interferences, is not open to question. Those who operated broadcasting stations had no right superior to the exercise of this power of regulation. They necessarily made their investments and their contracts in the light of, and subject to, this paramount authority. This court has had frequent occasion to observe that the power of Congress in the regulation of interstate commerce is not fettered by the necessity of maintaining existing arrangements which would conflict with

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[64] P. 377.

[65] The article goes on to say that, "Certainly, under a 'public interest' standard based on compliance with minimum screening requirements, a license will be a virtually perpetual franchise."

[66] *FRC* v. *Nelson Bros.*, 53 S. Ct. 627, 635 (1933).

the execution of its policy, as such a restriction would place the regulation in the hands of private individuals and withdraw from the control of Congress so much of the field as they might choose by prophetic discernment to bring within the range of their enterprises.

* * * * * * *

In granting licenses the Commission is required to act "as public convenience, interest, or necessity requires." This criterion is not to be interpreted as setting up a standard so indefinite as to confer an unlimited power. * * * The requirement is to be interpreted by its context, by the nature of radio transmission and reception, by the scope, character, and quality of services, and, where an equitable adjustment between States is in view, by the relative advantages in service which will be enjoyed by the public through the distribution of facilities. In making such an adjustment the equities of existing stations undoubtedly demand consideration. They are not to be the victims of official favoritism. But the weight of the evidence as to these equities and all other pertinent facts is for the determination of the Commission in exercising its authority to make a "fair and equitable allocation."

In the instant case the Commission was entitled to consider the advantages enjoyed by the people of Illinois under the assignments to that State, the services rendered by the respective stations, the reasonable demands of the people of Indiana, and the special requirements of radio service at Gary. The Commission's findings show that all these matters were considered. Respondents say that there had been no material change in conditions since the general reallocation of 1928. *But the Commission was not bound to maintain that allocation if it appeared that a fair and equitable distribution made a change necessary.* [Emphasis supplied.]

The investment of the broadcaster has been given consideration elsewhere, the following citation being but an illustration: [67]

That private as well as public interests are recognized by the act is not to be doubted. While a station license does not under the act confer an unlimited or indefeasible property right * * * nevertheless the right under a license for a definite term to conduct a broadcasting business requiring—as it does—a substantial investment is more than a mere privilege or gratuity.

Public convenience, interest or necessity has been interpreted as bearing on the nature of a broadcaster's source of programs. Here [68] is an instance where the Commission denied an application because of the absence of local programing to offset network support:

The application of WADC thus raises squarely the issue of whether the public interest, convenience, and necessity would be served by a station which during by far the largest and most important part of the broadcast day, "plugs" into the network line and, thereafter, acts as a mere relay station of program material piped in from outside the community. We are of the opinion that such a program policy which makes no effort whatsoever to tailor the programs offered by the national network organization to the particular needs of the community served by the radio station does not meet the public service responsibilities of a radio broadcast licensee. * * * A national network affiliation can be of great assistance to a particular station's service to its listeners as the source of a quantity of high-caliber programs of general interest not otherwise available locally, to supplement, rather than to supersede, the locally originated programs of the station. It is not equipped, however, to take over the entire programing of any station; even the stations which are wholly owned by the national networks maintain extensive local program staffs which integrate the network's service into a daily program best calculated to serve local interests. And the same considerations of public policy which led us, in our chain broadcast regulations, upheld by the Supreme Court in *National Broadcasting Company* v. *United States* (319 U. S. 190 (63 S. Ct. 997, 87 L. Ed. 1344), to make it impossible for a network to restrict the opportunity of one of its affiliates to substitute programs of local interest and derivation whenever the station determined that such programs would best serve the interests of its particular audience, lead us to conclude, here, that the voluntary adoption of a similar policy by

[67] *Wilson* v. *FCC*, 170 F. 2d 793, 798 (1948).
[68] *Simmons* v. *FCC*, 169 F. 2d 670, 671 (1948).

a licensee cannot serve the public interest. In either case the local interests of the listening community are needlessly sacrificed * * *.

The Commission's views, and its denial of license, were affirmed by the court of appeals. A concurrence would have had the license denied for other reasons, i. e., because it was being sought for a frequency already in use. His view was that the Commission's basis for denial constituted censorship. It was his judgment that:

To uphold the Commission's order because the applicant expressed an intention to make extensive use of Columbia's programs is to grant to the Commission the power of censorship, which is expressly forbidden by the act. "Such a power is so abhorrent to our traditions that a purpose to grant it should not be easily inferred." Certainly the power of censorship should not be granted by a court when it has been withheld by Congress.

Freedom of speech as a constitutional right is often an issue in broadcasting. It was one of the allegations by the network petitioners testing the legality of the chain broadcasting regulations promulgated by the Commission in 1941: [69]

We come, finally, to an appeal to the first amendment. The regulations, even if valid in all other respects, must fall because they abridge, say the appellants, their right of free speech. If that be so, it would follow that every person whose application for a license to operate a station is denied by the Commission is thereby denied his constitutional right of free speech. Freedom of utterance is abridged to many who wish to use the limited facilities of radio. Unlike other modes of expression, radio inherently is not available to all. That is its unique characteristic, and that is why, unlike other modes of expression, it is subject to governmental regulation. Because it cannot be used by all, some who wish to use it must be denied.

* * * * * * *

The right of free speech does not include, however, the right to use the facilities of radio without a license. The licensing system established by Congress in the Communications Act of 1934 was a proper exercise of its power over commerce. The standard it provided for the licensing of stations was the "public interest, convenience, or necessity." Denial of a station license on that ground, if valid under the act, is not a denial of free speech.

There is a special committee report [70] which comments on the subject of censorship, a significant observation on the nature of broadcast stations in our economic matrix:

* * * But governmental authority should not be extended to more matters of station management, not affecting service or creating interference, nor should it under any circumstances enter the forbidden field of censorship. That authority should exist to limit the number of stations in any community had already been determined by this conference, which has likewise recommended that benefit to the listener must be the basis for the broadcasting privilege. With these determinations, your committee is of course in hearty accord. We would, however, point out that recognition of the principle of public benefit does not bring the broadcasting stations into the category of recognized public utilities. The owners of broadcasting stations have not dedicated them to public use in a legal sense, and such matters as regulation of rates and other similar features of supervision exercised by governmental bodies over public utilities generally, should still, in the judgment of your committee, remain under the exclusive control of the station owner * * *

The interference referred to in the first paragraph was already a vexing unmanageable problem. It affected not only station spacing but permissible channel frequencies of stations in a given area.

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[69] 63 S. Ct. 997, p. 1014 (1943).
[70] Report of special committee, S. B. Davis, chairman, hearings, Senate Interstate and Foreign Commerce Committee, 69th Cong. (1945).

COMPETITION AND MONOPOLY

The criterion of public interest as a measure of acceptability is perhaps best defined by what is proscribed in the Communications Act. Under the heading of "Preservation of Competition in Commerce," section 314, the act declares as unlawful that communications operation in which —

* * * the purpose is and/or the effect thereof may be to substantially lessen competition or restrain (interstate) commerce * * *.

There is so much looseness in the use of the term competition and confusion of meaning in its economic and legislational context that it is in order to have recourse to original sources for its definition.

There are some interesting and enlightened observations by the court of appeals in a decision respecting the Yankee Network:[71]

The Commission attempts to support its position by arguing that "one of the chief concerns of Congress, as evidenced by the reports and debates, was to guard against monopolies and to preserve competition." It is difficult to understand how this result could be achieved by deliberately or carelessly licensing so many new competing stations as to destroy already existing ones, and possibly the newly created ones as well. While it is true that it was the intention of Congress to preserve competition in broadcasting, and while it is true that such intention was written into section 314 of the Communications Act, it certainly does not follow therefrom that Congress intended the Commission to grant or deny an application in any case, other than in the interest of the public. Just as a monopoly—which may result from the action of the Commission in licensing too few stations—may be detrimental to the public interest, so may destructive competition, effected by the granting of too many licenses. The test is not whether there is a monopoly, on the one hand, or an overabundance of competition on the other, but whether the granting or denying of the application will best serve the interest of the public.

In order to attain the purposes of the act, the Commission must assume the full responsibility cast upon it by Congress with respect to each applicant and each protesting licensee. In order to insure full assumption of that responsibility and full performance of its duty, in situations such as exist in the present case, Congress made the Commission's action subject to judicial review. In the absence of such possibility of review the Commission—while admitting its duty—could arbitrarily avoid it; thus indulging in an abusive exercise of its administrative discretion. While the Commission was largely occupied, in its earlier years, with finding qualified licensees and controlling electrical interference, now a new problem has developed, which is just as important as electrical interference and which the Commission must meet and solve. The rapidly increasing number of stations and the resulting competition for advertising as well as program "talent" has just as dangerous possibilities as electrical interference. The public interest requires not merely that a maximum quantity of minimum quality service shall be given. If competition is permitted to develop to that extent, then "the larger and more effective use of radio in the public interest" cannot be achieved.

The method of uncontrolled competition argued for by the Commission in the present case is, in fact, one way of creating monopolies. If it were allowed to go on unrestrained, according to its theory of nonreviewable arbitrary power, none but a financial monopoly could safely exist and operate in the radio broadcasting field. The Commission justifies its action in the present case, and justifies its contention in theory, by assuming that if a chain, operating several broadcasting stations, or a company which owns both newspapers and broadcasting stations, is able to carry one of them financially, even though the latter station is not able to support itself, then the latter cannot protest against destructive competition. The result of this policy might well be to destroy or frighten from the radio broadcasting industry any independent station attempting to operate on its own resources, and to leave in the field only monopolies which were sufficiently supported, financially, to withstand the destructive competition which might result from arbitrary, careless action upon the part of the Commission

[71] *Yankee Network* v. *Federal Communications Commission*, 107 F. 2d 212, 223 (1939).

in the granting of new station licenses. It was, undoubtedly, with just such considerations of possible arbitrary administrative action in mind that Congress provided for judicial review under the Communications Act on behalf of any person aggrieved or whose interests are adversely affected, as it likewise did under the Transportation Act. In each instance, the remedy is statutory in character, and in each instance designed to protect rights and equities also deriving from statutes in derogation of the common law.

The concept of lawful competition as inherent in the act has had to be interpreted many times and its bounds reaffirmed by the Supreme Court. Supreme Court Justice Frankfurter, in his dissent in the color dispute between RCA and CBS,[72] observed:

The assumption underlying our system of regulation is that the national interest will be furthered by the fullest use of competition. At some point, of course, the Commission must fix standards limiting competition.

Another commentary on the subject of competition, expressed in enlightening fashion, comes from another decision [73] of that Court:

The very fact that Congress has seen fit to enter into the comprehensive regulation of communications embodied in the Federal Communications Act of 1934 contradicts the notion that national policy unqualifiedly favors competition in communications. The act, by its terms, prohibits competition by those whose entry does not satisfy the "public interest" standard.

And that:

It is only in a blunt, undiscriminating sense that we speak of competition as an ultimate good. Certainly, even in those areas of economic activity where the play of private forces has been subjected only to the negative prohibitions of the Sherman law, * * * this Court has not held that competition is an absolute.

It averred that:

In this case, the court of appeals has ruled that the Commission was guided by a misinterpretation of national policy, in that it thought that the maintenance of competition is, in itself, a sufficient goal of Federal communications policy so as to make it in the public interest to authorize a license merely because competition, i. e., duplication of existing facilities, was "reasonably feasible."

And that:

It is our responsibility to say whether the Commission has been guided by proper considerations in bringing the deposit of its experience, the disciplined feel of the expert, to bear on applications for licenses in the public interest.

It held that:

The Commission has not, in this case, clearly indicated even that its own experience, entirely apart from the tangible demonstration of benefit for which RCAC contends, leads it to conclude that competition is here desirable. It seems to have relied almost entirely on its interpretation of national policy. Since the Commission professed to dispose of the case merely upon its view of a principle which it derived from the statute, and did not base its conclusion on matters within its own special competence, it is for us to determine what the governing principle is.

The Court was disturbed by the Commission's implied philosophy in this instance that competition, of itself, was a national policy:

Our difficulty arises from the fact that, while the Commission recites that competition may have beneficial effects, it does so in an abstract, sterile way. Its opinion relies in this case not on its independent conclusion, from the impact upon it of the trends and needs of this industry, that competition is desirable but, primarily, on its reading of national policy, a reading too loose and too much calculated to mislead in the exercise of the discretion entrusted to it.

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[72] *RCA et al* v. *U. S., FCC, and CBS*, 71 S. Ct. 806, 1951.
[73] *FCC* v. *RCA Communications*, 73 S. Ct. 998 (1953).

In other words:

Here, however, the conclusion was not based on the Commission's own judgment but, rather, on the unjustified assumption that it was Congress' judgment, that such authorizations are desirable.

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In reaching a conclusion that duplicating authorizations are in the public interest wherever competition is reasonably feasible, the Commission is not required to make specific findings of tangible benefit. It is not required to grant authorizations only if there is a demonstration of facts indicating immediate benefit to the public. To restrict the Commission's action to cases in which tangible evidence appropriate for judicial determination is available would disregard a major reason for the creation of administrative agencies, better equipped as they are for weighing intangibles "by specialization, by insight gained through experience, and by more flexible procedure."

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Merely to assume that competition is bound to be of advantage, in an industry so regulated and so largely closed as is this one, is not enough.

On the subject of competition and the antitrust laws, the Supreme Court has set the contour of the Commission's responsibility:

This Commission, although not charged with the duty of enforcing that law (Sherman Act), should administer its regulatory powers with respect to broadcasting in the light of the purposes which the Sherman Act was designed to achieve.[74]

Some years ago, in a commonsense dissent in the Jenny Wren case, Associate Justice Groner gave a lucid exposition of competition and its relation to public interest. Since he is quoted on page 170–33, his views will not be repeated here.

The Commission's conception of its responsibility in the area of antitrust activities in the field of broadcasting is expressed in the chain broadcasting regulations:[75]

The prohibitions of the Sherman Act apply to broadcasting. This Commission, although not charged with the duty of enforcing that law, should administer its regulatory powers with respect to broadcasting in the light of the purposes which the Sherman Act was designed to achieve * * *. While many of the network practices raise serious questions under the antitrust laws, our jurisdiction does not depend on a showing that they do, in fact, constitute a violation of the antitrust laws. It is not our function to apply the antitrust laws, as such. It is our duty, however, to refuse licenses or renewals to any person who engages or proposes to engage in practices which will prevent either himself or other licensees or both from making the fullest use of radio facilities. This is the standard of public interest, convenience, or necessity which we must apply to all applications for licenses and renewals. * * * We do not predicate our jurisdiction to issue the regulations on the ground that the network practices violate the antitrust laws. We are issuing these regulations because we have found that the network practices prevent the maximum utilization of radio facilities in the public interest.

On these regulations, the Supreme Court passed:[76]

We conclude, therefore, that the Communications Act of 1934 authorized the Commission to promulgate regulations designed to correct the abuses disclosed by its investigation of chain broadcasting. There remains for consideration the claim that the Commission's exercise of such authority was unlawful.

Recently the report of the Antitrust Subcommittee of the Committee on the Judiciary[77] on the television broadcasting industry observed:

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[74] *N. B. C.* v. *U. S.*, 63 S. Ct. 997, 1013 (1943).
[75] Report on Chain Broadcasting, pp. 46, 83 (1942). The Supreme Court, in the case footnoted immediately above, cited this recorded policy with approval (decision, p. 1012).
[76] *NBC* v. *U. S.*, 63 S. Ct. 997, 1013 (1943).
[77] The Television Broadcasting Industry, March 13, 1957, p. 2 (H. Res. 107).

The Attorney General and the Federal Trade Commission have statutory responsibility to enforce the antitrust laws within their respective jurisdictions. The Federal Communications Commission, on the other hand, has no antitrust responsibility, except with respect to mergers of common carriers engaged in radio or wire communications.

The court of appeals has held that: [78]

Monopoly in the mass communication of news and advertising is contrary to the public interest, even if not in terms proscribed by the antitrust laws.

A new cant on the responsibility of the Commission and the ultimate implications of its actions in this area is given in a recent decision in a complaint of the Government against RCA and NBC arising out of the exchange of an NBC broadcast station in Cleveland for those of Westinghouse in Philadelphia.[79] The court had this to say:

The FCC requested and obtained from the parties all of the information which the Government now has and on which it bases this suit. The FCC was under a duty to pass upon the issues presented by this evidence. The parties have stipulated that the FCC decided all issues relating to the exchange which it could lawfully decide. There is no doubt that, in finding that the exchange was in the public interest, it necessarily decided (whether it now agrees that it did or not) that the exchange did not involve a violation of a law which declares and implements a basic economic policy of the United States. Later statements by its Chairman, as well as the statements contained in an opinion of one of the Commissioners in granting the license, which may be construed to mean that the FCC did not consider that the Government would be precluded from prosecuting, by its decision, cannot affect the outcome.

In no sense does such a decision operate to oust the courts of jurisdiction, nor is any remedy taken away. The Government had a complete remedy by appeal if it deemed the action of the Commission improper. The Antitrust Division was at all times fully apprised of the proceedings and of the facts upon which the Commission acted. The Government did not appeal, and waited for approximately 1 year before it began the present suit which, admittedly, is based upon nothing which the Commission did not have before it. *Under these circumstances, the orderly administration of law requires that this court dismiss the action, whatever might be proper in other cases where facts are not known to the Commission or where the parties engage in unlawful conduct after the granting of the license.* [Emphasis supplied.]

The reasoning of the court was premised on—

* * * the basic policy of supporting the rulings of administrative agencies against court review otherwise than as provided in the statutes creating the agencies, and of protecting the parties involved against "this type of double jeopardy * * * for the same allegations before two different tribunals" (conference report on amendments to the Communications Act).

And the fact that—

* * * the parties presented the Commission with full information, received permission for the transfer in a proceeding which covered 6 months, and consummated the transaction a month thereafter. It may be noted that the Commission's approval was not granted until over 4 months after the Antitrust Division had been officially notified of the proposed transaction and alerted for possible antitrust features.

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[78] *Mansfield Journal Co.* v. *FCC*, 180 F. 2d 28, 33 (1950).
[79] *U. S.* v. *R. C. A. and N. B. C.*, U. S. D. C., E. D. Pa. (January 10, 1958).

SECTION III

INDUSTRIAL AND PROFESSIONAL COMMITTEES

COMMENTARY

The cooperation of the Federal Communications Commission with industry and with the professional society most closely allied to the field of television, the Institute of Radio Engineers (IRE), in seeking guidance on purely technical matters, has been notable. The strongest and most appropriate contributions have been through delineation of the state of the art for Commission guidance, and corollary to it, aid in standardization.

Since for the most part the television allocations problem has been treated as essentially technical, the Commission abjuring the economic aspects as not within its purview, these bodies have also contributed through default of the Commission in this field, as a gratuitous extracurricular indulgence.

On the allocations problem, the matter of advice becomes particularly difficult. The replies from the broadcasting industry on matters of rulemaking and petitioning, although they contain a wealth of solid material, are at once partisan and must be so considered. Here commercial, and therefore competitive, interests are at play. These forces the Commission must take into consideration.

The Commission is at a serious disadvantage in making objective judgments in the public interest. It must predicate its decisions, for the most part, on the tracts introduced by the petitioners and contestants. The Commission should have recourse to specialized resources to give it in effect a well studied independent background of analysis against which to measure the material placed before it by interested parties. Many times that which is left unsaid or without analysis may be most significant. Hence the right given to the Commission by the Communications Act to investigate independently.

What internal resources the Commission has for study of professional questions, as for instance in the fields of economics, engineering, and fundamental physics, are meager and overloaded by the mass of routine work which must be processed. Judging from the record, these resources appear to be woefully inadequate for the type of supporting study just described.

The commercial interests have the right to intervene, even in the business of giving the Commission technical advice on the purely technical aspects of the art. The subject of standardization for the commercial broadcasting of color television turned into a contest between competing interests. This particular contest grew contentious as between rival interests striving for supremacy. Hearings degenerated into the nature of a commercial feud. The period of the "freeze," instigated for another purpose, was unnecessarily prolonged at serious harm to the allocation resolution and thus to the public.

In its color report of September 1950,[1] the Commission had this to say:

The Commission is aware that of necessity it must rely to a great extent upon industry experts for data and expert opinion in arriving at decisions in the field of standards; our own facilities are too limited to gather much of the data. However, the responsibility for decision is that of the Commission, and we cannot feel bound to accept recommendations and expert opinion when we find from a study of the record that the record supports different conclusions.

RMA COOPERATION

As early as 1929 the Radio Manufacturers Association[2] (RMA) maintained a television standards committee. It was customary for staff members of the Federal Radio Commission, the predecessor of the Federal Communications Commission, to participate in deliberations of the RMA committee.

In the fall of 1931, as an example of its operation, the RMA committee recommended to the Commission that in addition to the 5 channels between 2000 and 3000 kilocycles the band from 35 to 80 megacycles[3] be allocated to television.

In 1936 the Commission's chief engineer T. A. M. Craven urged the RMA to submit standards on "visual broadcasting."

ALLOCATIONS ASSISTANCE

The Commission, in announcing Hearings on General Allocations Proceedings[4] set for June 1936, enunciated a policy to—

encourage standardization of visual broadcast transmission performance by authorizing the Engineering Department to cooperate with the Radio Manufacturers Association and licensees of experimental television stations in forming a committee of the industry to endeavor to arrive at a recommendation with respect to ultimate standardization.

It was at these hearings that the RMA presented what it termed a 5-point plan, a recommendation setting forth both technical and social ideals, necessarily involving economic considerations:

1. One single set of television standards for the United States, so that all receivers can receive the signals of all transmitters within range.
2. A high-definition picture approaching ultimately the definition obtainable on home movies.
3. A service giving as near nationwide coverage as possible.
4. A selection of programs, that is, simultaneous broadcasting of more than one television program in as many localities as possible.
5. The lowest possible receiver cost and the easiest possible tuning, both of which are best achieved by allocating for television as nearly a continuous band in the radio spectrum as possible.

And recommended the allocation of a television band from 40 to 90 megacycles.[5]

The RMA committee made the significant point that—

Much more power is required at 90 megacycles than at 42 megacycles. Moreover, poor reception areas, in the so-called shadows produced by tall buildings, increase greatly as the frequency increases.

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[1] P. 139.
[2] Now evolved into the Radio Electronics & Television Manufacturers Association (RETMA).
[3] Excepting the amateur band, 46 to 60 megacycles.
[4] Docket 3929.
[5] Exclusive of the amateur band, 54 to 60 megacycles.

Further immediate intensive work was done by RMA which enabled this body, spokesman of industry, to make recommendations to the Commission in September 1938 that its standards be adopted for promulgation.

COMMISSION TELEVISION COMMITTEE

The Commission responded receptively. It appointed a Television Committee made up of Commissioners Craven, Case, and Brown to make a critical examination of these recommendations. The substance of the report of this internal Committee [6] was in principle that the Commission should neither approve nor disapprove the standards proposed by RMA. A second report [7] by the same Committee pronounced television still in the experimental stage (only three stations were broadcasting a television program service) and observed that—

> The Committee is of the opinion that at present the claimed advantages of removing the restrictions against commercialization of television do not outweigh the potential disadvantages. Today there is no circulation to attract any sponsor to television * * * there is no convincing argument that removal at this time of the ban on commercialization will affect the development of television in any positive manner.

The Committee's report goes on to say that the RMA's allocation report of October 16, 1939, contains formula for the calculation of field intensity and some propagation curves. Presumably these techniques and data were immediately drawn upon, for the report then states that—

> The Commission's engineering department has prepared an allocation table based on the RMA data, which is attached as appendix 2 and the Committee recommends it be utilized as a guide for allocating television stations licensed to render regularly scheduled program service to the public.

Hearings based on the RMA standards were held in January 1940.

In adjourning these hearings, Commission Chairman Fly referred to the suggestion that had been made to establish a small committee of manufacturers who might review the standards which had been brought into question, implying a lack of expertness on the Commission's part:

> The Commission has not taken any definite action on that idea, but before we part we thought it best to raise the point again, and perhaps a bit more seriously, and of course the Commission cannot delegate to any committee, or even for that matter, to its staff committee, the fixing of standards on its own behalf, or agree to follow any recommendation. At the same time, you know the Commission is under something of a handicap in regard to these transmission standards, when we find the industry in disagreement, and we may consider it desirable to request of the leading manufacturers the appointment of a single representative to meet with the group, and to endeavor to give the Commission some recommendations.

In February of 1939 the Commission's report issued covering "visual broadcast service" and permitting limited commercial operations.

NTSC EFFORT

In the summer of 1941, the National Television Systems Committee was organized, after further hearings, because of anxiety on the part of the Commission that some of the promotional activities might ad-

[6] May 22, 1939.
[7] November 15, 1939.

ventitiously set specifications inimical to the art. The genesis of this new form of committee is summed up by the Commission in a press release: [8]

NATIONAL TELEVISION SYSTEMS COMMITTEE TO SPEED DEVELOPMENT OF UNIFORM STANDARDS

In following through its promise of May 28 that it stands ready to confer with the television industry and otherwise assist in working out television's remaining problems, the Federal Communications Commission is cooperating in the organization of a National Television Systems Committee to function under the auspices of the Radio Manufacturers Association. Such a committee, it feels, should be of value in the advancement of television to a satisfactory level of performance that will insure a general and widespread public service.

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And hopefully that:

This project, though sponsored by the Radio Manufacturers Association, will operate independently and represent the majority opinion of the industry.

At the initiating meeting there were words from RMA President Knowlson and Commission Chairman Fly, also words of wisdom if not of admonition from Chief Engineer Jett:

*** * * it must be understood that the cooperative efforts on the part of the Commission will be on the basis that the standards ultimately decided upon shall truly reflect the representative opinion of the industry.**

Here indeed was an extraordinary performance. Some 169 panel members, 60 meetings, 20 tests and demonstrations, and 5,000 devoted hours of application. The Committee report recommended transmission standards for commercial television broadcasting and recommended further tests of color and the ultimate admittance of color on a commercial basis coexistent with monochromatic transmission and under monochrome standards (6-megacycle band width) except as to lines, frame, and field frequencies.

On the basis of the work of the NTSC on standardization, further hearings were set for March 1941. In the Commission report of May 3, 1941, commercial standards for monochrome television proposed by the NTSC were adopted, with a high tribute by the Commission:

The 11 volumes constituting the proceedings of the Committee and its subcommittees stand as evidence of the great volume of work done. The Commission acknowledges its appreciation to the RMA and NTSC for their cooperation in performing this worthwhile work.

RADIO TECHNICAL PLANNING BOARD

The postwar resurgence of television began with the Commission's report on proposed allocations from 25,000 kilocycles to 30,000,000 kilocycles, issued in January 1945. This report recalls the formation of the Radio Technical Planning Board in September 1943, and its functions expressed at that time. Note the restrictions to technical considerations, with no indication that the Commission sees the need for help in other professional fields or indeed an awareness that additional advice is needed:

The objectives of the RTPB shall be to formulate sound engineering principles and to organize technical facts which will assist in the development in accordance with the public interest, of the radio industry and radio services of

[8] Mimeo. 42158, July 17, 1940.

the Nation, and to advise government, industry, and the people of its determinations. Such activities shall be restricted to engineering considerations.

This body, a composite of RMA and IRE, had worked throughout 1943 and 1944. It presented recommendations on allocations and on many technical factors which furnished much of the substance discussed in the allocation hearings in the fall of 1944.

TELEVISION BROADCASTERS ASSOCIATION

The Television Broadcasters Association, TBA, now came to the fore in a capacity corresponding to the move of the equipment manufacturers through the RMA. In the brief filed on the subject of the Commission's reallocation plan, the TBA presented a nationwide allocation plan. Here again was a form of volunteer, no-cost assistance to the Commission, going quite far in offering a solution to one of the television public's most vital problems. The TBA nationwide plan called for seven stations in New York City, Chicago, and Los Angeles.

The response of the Commission to advice in the sensitive area of allocations was in this instance significant. In its report [9] of November 1945, in commenting on the TBA proposal, the Commission agreed that it was desirable to have seven stations in New York City if it could be—

* * * done without depriving other important communities of the opportunity of having any television station.

The table of assignments the Commission presently put forward was in effect a compromise of its own proposal following closely that of the TBA; New York, Chicago, and Los Angeles were each assigned seven stations.

The Commission has devised a plan which meets the objectives of the TBA proposal but does not involve the use of directional antennas. Under this plan it will be possible to have seven television stations in New York City and to have as many television stations in the other cities throughout the country as was proposed in the TBA plan.

RMA ENGINEERING COMMITTEE

In January 1947, the RMA, keenly aware of the urgency of the problem, through a meeting of nine industrial companies, established an engineering committee to plan a study of the "practical engineering considerations pertinent to the [color] issues of the current television hearing." There was extensive testimony before the Commission by this committee.

The end result of the testimony in total, which included that of interested parties, was for the Commission to deny a petition by CBS that commercial broadcasting in color be approved.

The acuteness of the color problem in terms of technical conflicts was recognized by the industry. The Commission, predisposed to limit itself to technical considerations as a matter of policy, accepted the color problem as so limited.

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[9] Mimeograph No. 86536.

JOINT TECHNICAL ADVISORY COMMITTEE

In an effort to resolve the conflict, involving as it did interested parties, even established committees, a move was now made in which the industry and the IRE would join hands in the hope of a fresh contribution. In June of 1948 the Joint Technical Advisory Committee, JTAC, was thus formed to—

> * * * obtain and evaluate information of a technical or engineering nature relating to the radio art for the purpose of advising Government bodies and other professional and industrial groups.

According to its charter, its members [10] were to be—

> * * * chosen on the basis of professional standing, integrity and competence to deal with the problems to be considered.

The JTAC's first contribution, at the request of Commission Chairman Coy, was to the 1948 UHF television hearings.[11] In this they were assisted by the RMA Television System Committee and by the IRE Television System Committee. JTAC's report [12] was both comprehensive and comprehending. One significant finding was that:

> No commercial equipment for transmission or reception of television on the ultrahigh frequencies is available at the present time. It is estimated that a period of from 1 to 3 years, possibly longer, will be required for the industry to design such equipments and produce them for the public and the broadcasters.

And that:

> The JTAC is of the opinion, based on evidence submitted to it by various subcommittees of the RMA and IRE, that it is impracticable to set up commercial standards for color television in the present state of the art.

Despite this excellent contribution of JTAC, the air was by no means cleared. Other committees were to be convened.

AD HOC COMMITTEE ON ENGINEERING

The Commission, at the hearings on the utilization of a portion of the UHF band, June–July 1948, was brought face to face with a new problem—interference attributable to unexpected tropospheric effects on FM and TV radio waves. An industry conference was convened by the Commission where Chairman Coy urged that an engineering conference should be held to discuss methods of measuring tropospheric effects. An ad hoc committee on propagation was subsequently formed under the chairmanship of E. W. Allen.[13]

In June of 1949 this committee submitted its report to the Commission [14] and the report was made public. The policy governing this conscientious serviceable piece of work is described by one of the committee members: [15]

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[10] Some idea of the outstanding character and competence of this body is had from the initial roster of membership: Philip Siling, chairman; Donald G. Fink, vice chairman; Ralph Brown, Melville Eastham, John V. L. Hogan, E. K. Jett, Haraden Pratt, David B. Smith.

[11] Order of May 5, 1948 (FCC 48, 1570).

[12] Utilization of Ultrahigh Frequencies for Television, exhibit 1 in FCC Docket No. 8976. This report became vol. I of a series of some 13 reports.

[13] Now Chief Engineer of the Commission. The comittee consisted of representatives from the FCC, the Central Radio Propagation Laboratory of the Bureau of Standards, and the industry.

[14] FCC 49—773.

[15] Talk delivered by Stuart L. Bailey, Jansky & Bailey, Washington, D. C., president of the Institute of Radio Engineers before the Kansas City section of the IRE on December 13, 1949.

* * * the ad hoc committee attempted to limit its activities to the determination of engineering factors necessary to the prediction of service and interference from very high frequency stations. It made no attempt to determine how far apart stations should be placed on the same and adjacent channels because it was felt that this involved policy decisions which would have to be made by the Commission. The Commission did, in fact, use the ad hoc committee report in preparing its next proposal for television allocations.

The subsequent demonstration [16] of color television on a 6-megacycle band width by CBS was a factor in stirring further the boiling caldron of color television, the vaporings of which now reached the Senate Committee on Interstate and Foreign Commerce.

SENATE ADVISORY COMMITTEE ON COLOR

The Senate committee itself, through its chairman, Senator Edwin C. Johnson, now set up an Advisory Committee on Color Television.[17] This committee reported [18] to Senator Johnson in February of 1950.

A careful review was made of the technical aspects of color television supported by some analysis and tests. A summary from the report is worth noting:

In summary, the Committee bases this report on the following basic conclusion:

1. A 6-megacycle radio-frequency channel is adequate for color-television service and represents a proper compromise between quality and quantity of service.
2. The three systems of color television herein described comprise all of the basic systems of color television which need be considered for a 6-megacycle channel.
3. The three systems are mutually exclusive. One, and only one, of these systems must be chosen in advance of the inauguration of a public color television service (p. 5).

On the basis of consideration of three systems:

The RCA system is a dot system, since the color is assigned to successive picture elements, or dots, of the image. In the CTI system, a line system, the color is assigned to successive lines of the image. The CBS system is a field system, the color values being assigned to successive fields of the image. Other color systems (notably the simultaneous system developed in 1946 by RCA but discontinued in favor of the dot system) are known, but they are difficult, if not impossible, to adapt to a 6-megacycle channel.

If, therefore, only 6-megacycle systems are to be considered, the committee concludes that the color television system ultimately adopted must be either a dot-sequential system, a line-sequential system, or a field-sequential system. No other methods need be considered, in the light of present or foreseeable technical developments (p. 4).

NTSC RESURRECTION

The industry, in the meantime, was busy through the Radio Television Manufacturers Association in establishing a successor to the prewar original NTSC. The color controversy was holding up allocations and all new television station construction permits. The color hearings of 1949–50 had left much confusion and consternation if not

[16] Closed circuit laboratory demonstration—line sequential system, October 22, 1948.
[17] Committee established May 20, 1949. Membership: Edward U. Condon, chairman, Stuart Bailey, William L. Everitt, Donald G. Fink, Newbern, Smith.
[18] The Present Status of Color Television, U. S. Government Printing Office, Washington, 1950. Annex B to this report contains a statement by this Senate Advisory Committee delineating what it conceives to be its problem. At the same time, it recognizes but proscribes the critical problem of VHF–UHF allocation, explaining with consummate understanding that the VHF–UHF problem transcends the technical in character and requires additional judgments no technical committee alone could undertake.

bitterness. In February 1950 the resurrected NTSC got underway, charged with assembling data on—

1. The allocation of channels in the ultra-high-frequency band.
2. Procedures which will enable the Federal Communications Commission to life the "freeze" on very-high-frequency allocations.
3. Basic standards for the development of a commercially practicable system of color television and to undertake such additional work as may be in the interest of providing more adequate television service to the American public.[19]

In the fall of 1950, the chairman of the NTSC appointed an ad hoc committee to make an up-to-date appraisal of the state of the color television art. This ad hoc group, in rough outline, recommended that—

* * * color be added to the existing broadcast service by utilizing the present black-and-white standards to transmit all the necessary information concerning brightness * * *.[20]

The NTSC chairman observed that the work of this ad hoc committee outlined—

* * * the broad framework of a new composite system of color television achieved by combining the best elements of the furthest advances in existing systems. Within this framework can be developed by individual coordinated effort on the part of our industry, a system, a set of recommended standards, and apparatus proved-in by field testing, which can then be submitted to the FCC.[20]

The NTSC was constituted in June 1951 to achieve this monumental task. Its job was to provide and prove in the specifications of a practical compatible color television system, in terms of the committee's own definition of compatibility, i. e.:

The nature of the color television systems which permits substantially normal monochrome reception of the transmission by typical unaltered monochrome receivers designed for standard monochrome.[21]

The end result of the study was virtually a treatise, some 16 volumes and a petition [22] to the FCC, recommending the adoption of its technical transmission standards for commercial television broadcasting.

JTAC ATTACK

Early in 1951, as a part of its assumed responsibility to evaluate uses of the radio spectrum, JTAC began a second task which provided a distinguished tract entitled "Radio Spectrum Conservation." [23] The introduction of this commentary and guide quotes a worthy ideal of former Commissioner Sterling:

If we could devise a mechanism for taking a long-range view of the radio spectrum * * * in an atmosphere which gave full weight to the fact that the intensive use of radio as it exists today in 1951 is based upon only a half century of piecemeal development, I feel frankly confident that we could render a real service to those who will follow us in the next hundred years. The need for consideration to be given to this matter is apparent. It seems to me that all that remains is for us to find a way to give the matter the serious attention it deserves and to breathe life into it (pp. 1, 2).

This report advances the wisdom of applying rational methods to the problem of frequency selection for a given service, recognizing the

[19] NTSC Report, pp. 6, 7, vol. I, 1953.
[20] Ibid., p. 8.
[21] Ibid., p. 23.
[22] Petition of National Television System Committee for Adoption of Transmission Standards for Color Television, July 21, 1953.
[23] McGraw-Hill Book Co., Inc., 1952.

economic conflicts where established services are affected. Reference is made to the fact that in ordinary AM radio broadcasting:

The new broadcast service was not free to select frequencies that then seemed best suited for it, because these (300 to 550 kilocycles) had already been preempted by the 24-year-old ship-to-shore service. Without the benefit of any carefully considered long-range planning, the new industry became established in what seemed the next best area, the band roughly 550 to 1500 kilocycles. This selection was dictated partly by expediency, as technical difficulties and costs were less in this region than at frequencies below the ship-to-shore service (p. 10).

Again with reference to aural broadcasting, some light is thrown on the relation of frequency to coverage in the low-frequency band:

* * * the frequency band in which aural broadcast transmitters operate is important. It should be selected to provide high signal level over large areas, and the transmission should be as stable as can be attained. To meet these requirements groundwave transmission, because of its stability, should be used to provide service to the majority of receiving locations. For the coverage of large areas, frequencies from 200 to approximately 1000 kilocycles are well suited. These frequencies, however, are not ideal because they are subject to sky-wave interference, particularly at night, if the channels are duplicated within a region (p. 135).

And:

In centers of concentrated population, where several different programs should be available, VHF sound broadcast stations can provide high field intensity and stable transmission conditions. If the frequency is above 50 megacycles, sky-wave interference over long distances does not occur for any appreciable percentage of the time. Other intermittent types of interference can be reduced by sufficient geographical spacing (p. 135).

It is this band of the spectrum where FM aural broadcasting has been fixed, 88 to 108 megacycles.

With respect to television allocations:

Television broadcasting has worldwide allocations, varying somewhat in the several regions, as follows: 54 to 72 megacycles, 76 to 88 megacycles, 174 to 216 megacycles, 470 to 960 megacycles. In the United States the allocations are 54 to 72 megacycles, 76 to 88 megacycles, 174 to 216 megacycles, 470 to 890 megacycles (p. 168).

Television unfortunately cannot use that part of the frequency spectrum which made it easy for sound broadcasting to serve both short and long distances with one station, because its channel-width requirement is too great. Television must operate in the VHF region or higher, with resulting limitation in range and area which each station can serve. Consequently it appears that special attention must be given to the problem of certain areas having sparse population, insufficient to justify erection and operation of television stations, which cannot have television broadcast service except perhaps by some special arrangements such as community distribution by wire or relay transmitters (pp. 168–169).

The present allocation, extending from 54 to 960 megacycles, covers the tremendous range of 906 megacycles, yet only 572 of this space is allocated to television. The maximum and minimum frequencies are in the ratio of over 16 to 1, a serious handicap in the design and performance of apparatus (p. 169).

The present situation resulted from an insufficient allocation made at a time when knowledge was limited as to the eventual needs of the service and when knowledge of propagation characteristics was meager (pp. 169–170).

TASO

Commission Chairman McConnaughey, in the spring of 1956, addressed the National Association of Radio and Television Broadcasters in this vein: [24]

> * * * I urge the members of your association to give serious consideration to the following suggestion as a long-range plan, regardless of what the Commission may do in the present allocation study.
>
> Why would it not be a good idea to begin a crash research development program on UHF immediately? Industry could set up, quickly a private nonprofit educational research development corporation which could qualify to receive tax-free education grants. All segments of the television industry, I feel sure, would want to contribute to this enterprise. There are also other foundations and educational institutions which have funds and facilities to devote to this cause. I believe they would contribute to the solution of the UHF problem in the public interest. I am sure that such a private nonprofit organization would receive the full cooperation of the Commission.
>
> A concentrated research program in which all knowledge is pooled has never been directed to the specific subject of UHF only. A twofold approach should be made, concentrating on both the UHF receiver and the UHF transmitter. A genuine UHF receiver could perhaps be developed with an improved detector for increased sensitivity and range, and a more practical tuning device to be used with a newly designed antenna.
>
> Once this development program has been completed, the Commission and the industry will have a sound technical basis for making a long-term decision on the merits of UHF.

The Commission was in this instance in effect adhering to its traditional policy of leaning on the industry for its technical guidance rather than gaining the needed facts through its own independent efforts.

In its report and order of June 1956, the Commission said it would [25]—

> cooperate fully with all interested groups in organizing the orderly conduct of the foregoing research and development program.

History leads one to interpret this as indicating not a determination to participate actively in a program but simply grateful, passive assent.

The industry has responded. The Commission Chairman invited the Association of Maximum Service Telecasters, Joint Committee on Educational Television, Committee for Competitve Television, the National Association of Radio and Television Broadcasters, and the Radio Electronics and Television Manufacturers to meet with the Commission on September 19, 1956.

Hurdling detail, a TV Allocation Study Organization, TASO, was set up by industry. The monitoring board unanimously agreed to the objective: To search out technical facts and stay away from economic controversy. By the middle of January 1957, a director was found, Dr. George R. Town.[26]

An important point was raised on the subject of immunity from antitrust prosecution were the industry, as interested parties, to pool infor-

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[24] The FCC and the Broadcast Industry's Growing Pains, 34th Annual Convention of the National Association of Radio & Television Broadcasters, Chicago, April 17, 1956.

[25] P. 8, docket No. 11532, June 25, 1956.

[26] On leave of absence for 1 year from Engineering Experimental Station, Iowa State College, where he is professor of electrical engineering. The post is understood to carry a $25,000 salary. The study of UHF potentialities appears to be underwritten to the extent of $50,000.

mation and through its effect influence Commission action in making allocations.[27]

As of early February 1957, TASO had appointed the leaders and deputies of five panels. These panels cover transmitting equipment, receiving equipment, field tests, propagation, analysis, and theory.

This operation, if it can be adequately funded and staffed by full-time talented leaders with a record of accomplishment and competent supporting engineers, should turn out results of great value to the Commission.

Chairman McConnaughey, in presenting the objectives of TASO, also revealed the limits of its potentialities: [28]

> The objectives of the organization shall be to develop full, detailed, and reliable technical information and engineering principles based thereon, concerning present and potential UHF and VHF television service. These principles, plus full supporting technical data, shall be made available to the Federal Communications Commission so that the Commission may be able to determine the soundest approach to television-channel allocation. TASO's functions shall be limited to technical studies, fact finding and investigations, and interpretation of technical data. TASO's functions are to supply technical facts and data to the Commission. This statement of objectives has been endorsed by the Federal Communications Commission.[29]

The tenuousness of this type of help in which the Commission abdicates its responsibility, subjecting itself to alms, and the nebulousness of Chairman McConnaughey's understanding, is indicated by his testimony in the Television Inquiry,[30]

> Senator BRICKER. Do you expect there will be information from the technical study, has it goe far enough yet to indicate whether there will be a constructive suggestion to the UHF and VHF situation?
>
> Mr. MCCONNAUGHEY. It has not gone far enough.
>
> Senator BRICKER. You would expect the best information that can be ascertained?
>
> Mr. MCCONNAUGHEY. I think it will be the finest in the country.
>
> Mr. COX. Isn't it true the information they are seeking is confined largely to existing facilities and equipment, and not to the development of new equipment?
>
> Mr. MCCONNAUGHEY. It is basically engineering.
>
> Mr. COX. But it is concerned with a study of the existing situation, rather than the promotion of improvements?
>
> Mr. MCCONNAUGHEY. I can't answer that. I don't know all their objectives, sir.
>
> Mr. BAKER. TASO has already adopted what its basic purpose is. The question of whether this will result in development of equipment by this as an organization is a matter which, of course, depends on a lot of things, and one of them is whether they will run afoul of the antitrust law.
>
> The existing thought is that initially they have to obtain information. Some of the development is expected to go on by individual members and manufacturers. Whether there is ever a concerted development may well depend upon whether or not they come to the conclusion that they can do so and still be free of antitrust action.
>
> I don't think anyone at this moment can answer whether it will ultimately result in group development, or whether it must necessarily be confined to indi-

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[27] See Television Digest, September 22, 1956, p. 2. Question was raised by Dr. E. W. Engstrom, senior executive vice president of RCA, a RETMA representative at the Commission meeting. Commissioner Craven indicated he saw no problem here.

[28] Television Inquiry, transcript, March 5, 1957, vol. I, p. 43.

[29] See statement of policies and operations of the Television Allocations Study Organization, June 9, 1957, which has a slightly amplified text. It is understood that this statesent was prepared by the National Association of Radio & Television Broadcasters (NARTB), in collaboration with the Association of Maximum Service Telecasters (AMST), to be given to the director of TASO when taking office. The AMST was formed in mid-1956 (TV Digest, June 2, 1956). It comprises mostly VHF stations and appears to be administered principally by those with VHF interests to protect.

[30] Television Inquiry, transcript, March 14, 1957, pp. 165–172.

vidual research and development by manufacturers on their own, in their own laboratories.

Senator BRICKER. Let me ask this question. Is this group of engineers, primarily, authorized to go into the question of whether say the Government should want and need for defense purposes more of the VHF spectrum, then utilizing and creating a band at the lower end of the UHF, on the upper end of the VHF that would be available in all sets?

Mr. MCCONNAUGHEY. That is not set forth.

Senator BRICKER. That is not a part of their program?

Mr. MCCONNAUGHEY. No, Senator Bricker. That would have to be a Government operation.

* * * * * * *

Senator POTTER. Mr. Chairman, could I ask a question at this point?

As I understand your response to counsel's question, your research group now is primarily an engineering study of what now exists, rather than a projected study of what might possibly be done in the engineering and technical field, thinking now of transmitters and receivers for the UHF band?

Mr. MCCONNAUGHEY. Yes, and measurements. Of course, I can't tell you everything they are doing, because they are an industry group, but you understand that when they make these measurements, and these results come forward, they will point the way to many future potentialities of the usage.

Senator POTTER. Then I assume we would be in a position where it would be up to the industry, then, to carry out the research to develop the receivers and transmitters?

Mr. MCCONNAUGHEY. That is correct. * * *

Senator POTTER. The purpose of my question was this: to find out whether you thought that the industry would carry out and follow up on research as recommended by this Commission or Committee, or whether it might be necessary to have, as you did with many items in defense, *a special research grant* to work in the field, possibly carrying out some of the opinions and recommendations of this committee, a research grant by the Federal Government in the field of transmitters and receivers, so as to bring in the UHF and make it as efficient as possible. Has that been considered? [Emphasis supplied.]

Mr. MCCONNAUGHEY. Senator, I do not know, and I am not in a position to make a statement on that at this time, because I do not know.

* * * * * * *

Senator POTTER. Could I ask Commissioner Craven to comment on that, if he would?

Mr. CRAVEN. Yes, sir. I look upon this TASO group as limited somewhat by the antitrust statutes. Insofar as their immediate studies are concerned, I think they are limited to those matters which will be of assistance to the Commission in getting an allocation out.

I don't think they will be able to go into the research that you are thinking of with respects to the end product, the receiver. They will be able to give us information as to the potentialities of that, but going to the other phase of your question, it may be possible that if the manufacturing industry does not respond to forward-going research, *it may be necessary to have a Government-sponsored project.* [Emphasis supplied.]

Senator POTTER. Have the Government sponsor a research grant?

Mr. CRAVEN. Yes.

Mr. COX. Wasn't it the purpose of the Commission's call for a research program in its report and order of last June that there actually be a concentrated stepped-up effort on the part of the industry to develop more powerful transmitters and receivers for UHF?

Mr. MCCONNAUGHEY. It certainly was, Mr. Cox, it certainly was.

Mr. COX. As I understand it from the statement of objectives of TASO, they have indicated that their purpose is—and I am quoting from their published statement of purposes: "To develop full, detailed, and reliable information on engineering principles based thereon concerning present and potential UHF and VHF television service"—and again, at a subsequent point, "Its function shall be limited solely to technical study, factfinding and investigation and interpretation of technical data."

Now, that is not directed to producing the same thing that you sought in your report and order; is it?

Mr. MCCONNAUGHEY. That is not going as far as we hoped the industry could go.

Mr. Cox. Has the Commission given any thought to trying to develop other stimuli to the industry, other ways in which they can encourage or assist the industry in the project of actually developing more efficient UHF equipment?

Mr. McConnaughey. I think the Commission can talk, and they have talked, and I know Commissioner Craven has talked to these people, being a life-long experienced engineer in this field, probably one of the outstanding ones in the country.

We can't make them do it, and I will say over and over again that the way to get it off the ground is for Congress to take ahold of the thing and pass a bill on the excise tax. I think that is the only way—not the only way, but I think that is the best way to get the thing off the ground. We can't force the industry to do it. We have no jurisdiction over them at all.

Mr. Cox. With respect to TASO, as I understand it, the Commission encouraged the creation of this agency, and discussed with them at the outset what they might do.

Does the Commission retain any control over the activities of TASO? [Emphasis supplied.]

Mr. McConnaughey. *None whatsoever.* [Emphasis supplied.]

RECAPITULATION

It is thus seen that the opportunities for industry and professional societies to aid the Commission are many. The Commission has solicited their help. Whereas the opportunity is large, the frustrations are great. At best a committee can only give advice. Since it has not and should not have authority, it can only speculate on whether its labors will have been worth while.

The principal service of committees to the Commission thus far has been the collection and collation of data to simplify the Commission's own problems and to assist it by arriving at conclusions on standardization through consensuses of industrial opinion. In this latter function industrial committees can be of greatest value.

There has ordinarily been a serious narrowness in the nature of the support the Commission has had from without, in that the committee resource has been mainly technical in nature, whereas some of the most important problems before the Commission have been economic and social and political in character.

There lurks in the existing techniques the danger to the Commission of an exhibition of its own weakness through lack of professional investigation on its own part, either by its own staff (now grossly inadequate for the purpose judging from performance) or by outside resources independent of commercial connection with the business. This weakness lays the foundation for criticism and opens the way to public investigation. In those instances where the Commission is itself not equipped with ample professional background, guidance, or innate wisdom from within to cope with a particular problem, it appears to depend blindly on gratuitous advice from without, often based on self-interest or mere opinion. This sort of material is not convincing, unassailable evidence.

The TBA allocation plan setting seven (VHF) stations in New York, Chicago, and Los Angeles is a case in point. The subsequent report [31] by the Commission followed this recommendation, apparently without taking into account the ultimate implications. Unless it had the courage to delete and move stations, it was thus destined perforce to construct its sixth report allocation plan around this pat-

[31] Report by the Commission, November 21, 1945, docket No. 6780.

tern as a point of departure. Certainly, as it turned out, this acceptance of the recommendations of interested parties worked to the detriment of the general public and was inconsistent with the ideals later expressed in the priority concept of the July 1949 notice of proposed rulemaking and the sixth report and order which followed in April 1952.

In allocations planning the Commission is the custodian of the public's interest. Problems of VHF versus UHF and of national network requirements are inseparable elements of allocations planning. As vital partners before the public, the manufacturing industry and the broadcasting interests should be heard and should be depended on to offer data and advice. The Commission's rules and regulations provide ready access to those interests.

The problems before the Commission cannot, however, be solved to the best interest of the public without unbiased, well-informed adjudication by the Commission. To fulfill this broad responsibility the Commission requires a source of complementary assistance which must come independently through its own specialized staff or through chartered assistance from professional sources of unquestioned standing before the public. It needs the services of independent professional research and analysis to provide authoritative, comprehensive data against which the Commission can measure the briefs of those who appear before it with their own interests to promote and protect. To measure one brief against another is not enough.

The Commission is bound by the public trust reposed within it to avail itself of study by the most competent, independent resources, that it may judge well in the public interest, that it may protect the interest of all parties concerned, heard and not heard, that it may set most intelligently the policies which are to determine the future of this great national asset, commercial television broadcasting.

This responsibility is not simply imputed to the law, it is explicitly interpreted by the Supreme Court of the United States, which has said that: [32]

The Communications Act is not designed primarily as a new code for the adjustment of conflicting private rights through adjudications. Rather it expresses a desire on the part of Congress to maintain, through appropriate administrative control, a grip on the dynamic aspects of radio transmission.

and furthermore, in referring to modern administrative tribunals as the response to the feeling of need for Government supervision over economic enterprise, that [33]—

Perhaps the most striking characteristic of this movement has been the investitute of administrative agencies with power far exceeding and different from the conventional judicial modes for adjusting conflicting claims—modes whereby interested litigants define the scope of the inquiry and determine the data on which the judicial judgment is ultimately based. Administrative agencies have power themselves to initiate inquiry or, when their authority is invoked, to control the range of investigation in ascertaining what is to satisfy the requirements of the public interest in relation to the needs of vast regions and sometimes the whole nation in the enjoyment of facilities for transportation, communication and other essential public services.

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[32] *FCC* v. *Pottsville*, 60 S. Ct. 44, 439 (1940).
[33] Ibid., p. 441.

In this same decision the Commission is referred to as the "expert body" charged with carrying out legislative policy. Another decision [34] of this Court attributes to the Commission the "disciplined feel of the expert."

As the high administrative tribunal for civil electrical communications and as the expert ministerial delegate of the Congress, the Commission has a heavy and profound responsibility to the public. Its acts must constantly withstand the test of innate understanding and a courage to face up to the decisions which must be made with assurance. Securing the long-range interest of the public is its first obligation. The Commission is not an object of charity. It must have means at its disposal to make sure that in its search for enlightenment every step of the way is suffused with the light of independent understanding of such breadth that there can be no shadow of doubt that it is neither the victim of free advice nor at the mercy of its advisers.

Senator Monroney, at the very outset of the Television Inquiry, brought into the open a question [35] that must have occurred to many:

> Is there any way that you could be given money, through the Congress, on appropriation, to do independent work on a low-priced converter to use? The point I am getting at is that the geniuses who make these television sets can't build one at a reasonable price. Is there any chance that it could be brought in through some experimentation and development within the FCC, and then made available to these companies, on a free licensing?
>
> * * * * * * *
>
> There is no legal prohibition against the Congress appropriating money for research or development.
>
> * * * * * * *
>
> Mr. ALLEN. I don't think it would be practical for the Commission to undertake a program of research on television receivers, principally because it is a problem involving the development of vacuum tubes. It is a very specialized type of research. It takes a lot of equipment and resources to do it. There are several laboratories in the country who are very diligently working on this problem, and quite recently one of them has come out with a new type which gives great promise of permitting the development of tuners for UHF.
>
> I am sure the rest of the engineers in the industry are looking forward with great expectation to the development from that source.
>
> Undoubtedly, the other laboratories will meet this challenge and will produce similar tubes in the near future. I don't think it is a problem that we can assist in very much. Once the tube is developed we can assist in the circuitry, but in the tube development I don't think we can be adequately equipped to do that.

This is but another illustration of the Commission's willingness to relinquish the initiative.

The Communications Act of 1934 contains a mandate worth repeating here:

> Except as otherwise provided in this Act, the Commission from time to time, as public convenience, interest, or necessity requires shall * * * (g) Study new uses for radio, provide for experimental uses of frequencies, and generally encourage the larger and more effective use of radio in the public interest.

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[34] *FCC* v. *RCA Communications*, 73 S. Ct. 998 (1953).
[35] Television Inquiry, transcript, February 7, 1956, vol. 2, pp. 198–200.

Earlier in this section of the brief the construction by the Supreme Court of this enjoinder of the act was given. Because of its importance here, it will be repeated.[36]

> These provisions (sec. 3) individually and in the aggregate, preclude the notion that the Commission is empowered to deal only with the electrical and engineering impediments of the "larger and more effective use of radio in the public interest."

There is no indication that the Commission has plans to make an independent study of its own, nor how the study, however it is done, will go beyond the technical. There is above all no decisive action evident by which the Commission is responding to its responsibility as set forth in the law and interpreted by the highest Court of the land.

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[36] 63 S. Ct. 997, 1011 (1943).

TECHNICAL CONSIDERATIONS

HISTORY

The portion of the UHF band from 480–920 megacycles was set aside tentatively in 1945 for television broadcasting. The use of UHF for commercial television broadcasting was first formalized by the sixth report and order, isued April 14, 1952. By this time, particularly because of the 4-year freeze, VHF had a circulation of 21 million receivers.

Commercial television broadcasting in the VHF band was formally approved by the Commission as of July 1, 1941. Thus, aside from vast differences and relative stages of technological development, VHF broadcasting had the advantage of 11 years of operating experience and of this period for consolidation and entrenchment of the business aspects of VHF broadcasting.

In this trend toward the use of higher frequencies, transmitting and receiving tubes had to be developed. Progress in the realization of improved instrumentalities of this character has been imperative. It can prove to be a critical factor limiting the application of UHF. Much progres has been made through refinement of existing types of tubes of conventional types, the evolution of which has its greatest impetus through the Nation's defense requirements.

Because of the limited character of UHF transmitter power (tubes) for UHF broadcasting, the practice has been to conserve the radiated energy by concentrating it in a horizontal plane. Directional antennas have been in process of refinement for this purpose. Through this artifice, signal strength in terms of effective radiated power (erp) may now be multiplied by a factor of as much as 50 over what it would be were a conventional vertical dipole antenna utilized. Recourse to this in extremis device to multiply power is no substitute for a more powerful transmitter and less antenna directivity. For example, the beam may be made so thin as literally to project over an area, yielding insufficient signal strength locally in so doing.

Experimental television broadcasting on UHF was conducted by RCA in Bridgeport, Conn., as early as December 1945.[1] The first work was done on 529 megacycles, later a second transmitter was operated at 850 megacycles. The first commercial station (KPTV) was put on the air in Portland, Oreg., in September 1952.[2]

The President of RETMA testified [3] at the Television Inquiry that through February 24, 1956, 4,500,000 all-channel television receivers had been produced since the establishment of UHF by the sixth report and order. This number represents about 15 percent of the 28,236,000 sets manufactured in this period. It was stated that 4

[1] Television Inquiry, transcript, p. 1434.
[2] Station KPTV, Television Inquiry, transcript, p. 1435.
[3] Television Inquiry, transcript, p. 1498.

million VHF receivers, new and old, were converted outside the factory. This would aggregate some 8,500,000 UHF–VHF receivers sold. It was stated that 65.57 percent of the color sets manufactured in January and February 1956 were all-channel receivers but that only an estimated 10.6 percent of the sets for the remainder of the year would be all channel.

In 1953, 19.6 percent of the total year's production of black and white sets were all-channel, in 1954 the figure 19.9 percent; the 1955 figure was 15.2 percent. As of March 1956, the General Electric Co. was currently shipping 18 percent of its production as all-channel sets. This figure had been as low as 15 percent.[4]

The experience with UHF broadcasting has been documented in earlier sections of this report. Perspective is given to the problem by examining the testimony of the manufacturing industry. Here is an observation of Mr. Paul Chamberlain, of the General Electric Co.[5]

To those of us who have developed, manufactured, installed and checked-out UHF transmitter and antenna systems, it is of vital concern that if UHF is to be abandoned, it is not—

(1) given up under the mistaken impression that it is incapable of giving an adequate service.

(2) lost by default—through failure to recognize that without positive prompt action to help UHF now, it may soon become economically impossible for UHF to continue as a television service.

If UHF is to be abandoned, we urge that such a drastic, irretrievable step be taken only with a full awareness of the consequences, based on a thorough examination of all the critical facts.

In our judgment, based on an intimate day-to-day association with many UHF and VHF stations through our capacity as a supplier of equipment, all that has been established by television operations from the FCC's sixth report and order to date is that UHF stations have generally not survived competition with VHF stations in the same markets.

It would seem reasonable under these circumstances for a major effort to be directed toward developing and strengthening the use of the 70 channels available in the UHF part of the spectrum. However, to our deep concern, the trend for the past few months has disclosed an amazing preoccupation with the infinitely more limited VHF channels or compromises based on the use of VHF.

The real purpose of our comments before the Commission was to urge that any consideration of the issues in that rule making proceeding should start with a thorough objective inquiry into the possibilities of the more effective use of the UHF frequencies as a condition precedent to achieving an adequate nationwide television service.

We suggest that although such a study appears to be both the obvious and the logical first step, it has never been the subject of any intensive inquiry and therefore it may well be that no one is today properly qualified to state whether UHF can or cannot give an adequate television service.

Effective utilization of the UHF channels—

(1) offers the solution most likely to produce the fewest continuing conflicts in the constant struggle for space in the spectrum;

(2) would enable equipment manufacturers to concentrate on accelerating the development and production of advanced design of UHF transmitters and UHF/VHF receivers;

(3) would provide a fundamental long-term solution to the overall allocation problem;

(4) would provide room for one or more additional networks:

(5) would facilitate long-range expansion.

Assuming there is no overall controlling reason for avoiding use of the ultra high frequencies, it is our conviction that a thorough objective study of the

[4] Television Inquiry, transcript, p. 1498.

[5] General manager, Broadcast Equipment, Television Inquiry, transcript, pp. 1221–1222, March 1956.

performance characteristics of UHF equipment would bring into existence for the first time sufficient evidence to permit a conclusion to be drawn on the technical ability of such equipment to give an adequate television service.

The study we propose of the technical capabilities of UHF would be designed not to compare it with VHF, but to determine whether despite some disparities in that comparative respect, UHF still has an absolute capacity for adequate service which justifies the FCC in taking the steps necessary to retain the effective use of the UHF channels for the television service, however radical these steps may initially appear to be.

TRANSMITTER POWER

In his testimony, Dr. Engstrom, of the Radio Corporation of America, made these observations: [6]

The Commission has proposed for consideration an increase in power from 1,000 kilowatts to 5,000 kilowatts of effective radiated power. I concur in that proposal.

I think at a later time, when economic factors are better known, the Commission might again be well advised to consider an increase even in that power to something of the order of 10,000 kilowatts or more.

But I think the first step is clear, that it should go from 1,000 to 5,000 kilowatts of effective radiated power.

Authorization by the FCC of the use of directional antennas by UHF stations.

Authorization by the FCC of the use of booster and translator type stations.

Action by the FCC to deintermix on a sufficiently broad basis to create a nucleus of predominantly UHF service areas from which UHF may grow and expand.

Encourage multiple owners and others with resources and know-how to undertake the operation of UHF stations.

Repeal by Congress of the excise tax on all-channel color television receivers.

As set forth in the sixth report, the maximum effective radiated power permitted by the FCC rules had been 100 kilowatts for the low VHF band (2 to 6), 316 kilowatts for the high VHF band (7 to 13) and 1,000 kilowatts for the UHF band (14 to 83). The Commission, in a notice [7] of June 24, 1955, proposed to amend its rules to increase its maximum permissible effective radiated power for UHF stations to 5,000 kilowatts.[8] This power ceiling of 5,000 kilowatts was made official by the concluding report and order in Docket 11532 of June 25, 1956.

Comparative results of coverage of VHF and UHF transmitters as a function of power are given by GE in the testimony.[9] These results apply to channels 7 to 13 for VHF and channels 14 to 83 for UHF and a 500-foot antenna.

In order to get grade A coverage for a radius of 10 miles we needed 1.6 kilowatts effective radiated power for VHF and 5 kilowatts effective radiated power for UHF. For a grade A coverage of 24 miles we needed 60 kilowatts effective radiated power on VHF, high channel, and 250 kilowatts on UHF. For 32-mile grade A coverage, 200 kilowatts for VHF and 1,000 kilowatts for UHF.

Now, the ratios in power, effective radiated power as compared between a U and a V vary on these three distances from three to one in the case of the shorter range coverage, to 5 to 1 in the case of the longer range coverage.

There should be one thing pointed out, and that is that you can achieve economically much higher gain, as we term it, in a UHF antenna than you can

[6] Formerly head of the Princeton Laboratory of RCA and now senior vice president of the company. Television Inquiry, transcript, p. 1451.

[7] Originally Docket 11433, then a part of docket No. 11532.

[8] RCA testimony indicated the achievement in its laboratory of experimental powers of 8,000 kilowatts, utilizing an antenna gain of 46. Television Inquiry, transcript, 1439, March 1956.

[9] Television Inquiry, transcript, pp. 1228–1230.

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in a VHF antenna. Gains of 50 are entirely practical on a UHF antenna. Gains much in excess of 12 are very expensive and difficult to get on VHF, in an economically sound structure, so the disparity between transmitter powers is not as great as the disparity in effective radiated power.

* * * * * * *

Interference will be the governing factor rather than the ability of the transmitter to lay down a signal at a distance. I submit that you can get the same effect any time by examining the AM spectrum. We have had broadcasters using 250 watts on AM who can see their tower lights farther at night than they can hear their stations without interference.

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You will have deeper shadow areas if you are on the shadow side of a mountain or something of that sort. It takes more power to fill in satisfactorily.

I hasten to point out, though, that as Senator Bible said earlier, that translaters, repeaters, satellites, whatever you want to call them, furnish a very economical means of filling in such areas, and probably can be behind the license to be operated unattended.

It can be said in general that the higher the power of the transmitter (tube) and the lower the antenna gain for the same effective radiated power, the better the coverage. There is such a thing as having the sharp beam so concentrate the power that it literally passes over relatively nearby regions without giving them a good signal.

It is, however, possible to design radiators of high horizontal gain with supplementary provision for filling in local areas. While it is true that, other things being equal, transmitters with high final stage power but correspondingly low antenna gain give better coverage, nevertheless the use of adroitly designed high gain antennas can give satisfactory coverage with resulting economies in transmitter power. It is, after all, pointless to radiate large amounts of power at angles far above the horizon.

Progress in the development of power tubes for UHF transmitters has been steady. Here are typical figures. The first commercial UHF transmitters were limited to transmitter (tube) outputs of the order of 1 kilowatt. These units were associated with antenna systems capable of gains of the order of 20. Next came tubes of the order of 12 kilowatts which, when associated with antennas of appropriate gains, led to overall effective radiated powers of 250 kilowatts. Two of these tubes combined with an antenna gain of 50 led to 1,000 kilowatts effective radiated power by December 1954. By early 1956, RCA had available a 25 kilowatt transmitter yielding a 1,000 kilowatt UHF transmitter with improved efficiency of coverage because of the lower antenna gain necessary.[10]

The General Electric Co. similarly has been working on the transmitter problem. The company was delivering its first 12 kilowatt UHF transmitter less than 6 months after the issuance of the first UHF construction permit by the Commisison. This company supplied the transmitter of WILK, Channel 34, Wilkes-Barre, which went on the air with 1,000 kilowatts of effective radiated power in January 1955. As of the time of the television hearings, March 1956, this company was installing the 2,000 kilowatt equipment of WGBI, Channel 22, Scranton. As of the spring of 1956, it was testified,[11] the General Electric Co. had developed a 60 kilowatt UHF tube which, with an antenna gain of 50, would yield an effective radiated power of

[10] For RCA work in the transmitter field, see Television Inquiry, transcript, vol. 10, testimony of Dr. Engstrom.

[11] Television Inquiry, transcript, vol. 8, p. 1214, testimony of Mr. Chamberlain.

3,000 kilowatts, or with a lower antenna gain, less radiated power but more efficient coverage.

ANTENNA

Coverage, ignoring the effects of interference, is a function of the power radiated, the sensitivity of the receiver and the effects of the intervening medium, free space and terrain. At the frequencies used in television broadcasting, the waves behave in a quasi-optical fashion and are thus impeded by physical obstacles such as buildings and hills. The higher the antenna, the longer the line-of-sight distance and, in general, the greater the station coverage for a given transmitter power. There is a premium on tower height. Witness the role of the Empire State Building in New York City, carrying even the Newark station (13) antenna, and of Mount Wilson towering above Los Angeles.

The potentialities of high antenna location are just beginning to be understood. Not only is there the benefit which accrues from increased area of coverage but there is the fact that for the same power, the effective area of local interference is decreased with substantially no change in the interference to adjacent cochannel stations. Here is an effective means for decreasing the interference in a station area by raising the antenna and cutting back the power.

The application of directional antennas—directional in the horizontal plane—has been frowned upon by the Commission. Here is a field demanding far more analysis and better understanding in order that the art may take full advantage of the opportunities it has to offer.

TRANSLATORS, BOOSTERS, SATELLITES

In July 1956 the Commission legalized a technique of adding incremental coverage by the use of translator stations.[12] These stations must operate in the 70–83 channel UHF band, are limited to 100 watts effective radiated power, may be operated by remote control and may pick up and rebroadcast programs of VHF and UHF stations. They must not interfere with existing television service. The translator station may not originate programs.

Here is a method of bringing television service to remote areas. One of the first two grants was for the purpose of rebroadcasting channel 4 of San Francisco to Hawthorne, Nev., 230 miles away. More than 10 such translator stations are now operating.

In his testimony at the Television Inquiry[13] last spring, Mr. DeWitt expressed himself on translators thusly:

> Since it is not prudent from an economic point of view for a UHF station to operate in a smaller community and go through the expensive process of building up circulation, some other method must be found. My suggested solution is that VHF stations be permitted to install translators in smaller communities operating on UHF frequencies, thereby providing the public within the range of the translator stations with programing which will create the incentive to purchase all-channel receiving sets. We have almost an exact analogy in our experience with standard broadcasting. Clear channel stations operating in the larger cities of the country deliver the only receivable radio signals to many small towns and rural areas. These signals provided the incentive to people

[12] Television Digest in its issue of January 26, 1957, estimates 40,000 to 50,000 people to have been placed within range by the 11 translators known to be operating in 9 towns. The same note states that there are 15 construction permits outstanding and 35 applications pending.

[13] Transcript, p. 1350.

residing in these areas to purchase receiving sets. As the number of sets increased, it became economically feasible for radio stations to operate in many of these smaller towns, since they already had a readymade audience. A review of the history of the development of radio stations will confirm this.

Another category of relay station, the booster, rebroadcasts on low power the program of the originating station on the same frequency. The retransmitting station depends on the directional pattern of its antenna not to feed back through its receiving antenna which in turn is directed toward the originating station. This technique is one applicable as a fill-in to take care of shadowed areas of either V or U originating stations. In the Television Inquiry and in the Potter hearings an early investigation of this device was described.[14] In this instance, UHF signals from Jackson, Miss., were not reaching Vicksburg 35 miles away. It was demonstrated that a booster location could be found which improved coverage of Vicksburg. Boosters for commercial operation have not yet been approved by the Commission.

In the interest of community television, in 1954 the Commission decided to accept applications for satellite television stations on regular channels. Satellite stations do not originate programs but repeat those of mother stations. The Commission opined that these satellite stations would mature into program originating stations. Such outlets were originally limited to UHF mother stations and UHF repeating stations. Commission policy was later broadened to include VHF mother and satellite facilities.[15] Some of the satellites are today mongrel in that at times they broadcast local material in their own right.

These variations on the theme of coverage are in the exploratory stage. They are manifestations of a countrywide determination to have television programs. This determination is confirmed by the growth of community antenna television systems (CATV). According to Television Digest, July 14, 1956, issue, there were 480 systems in operation, compared with 392 the year before. The average number of subscribers per system estimated as 912, the number of homes reached by the 320 operators reporting, 292,000. Potential estimated by 358 reporting 634,000 homes. This interesting growth is principally in the Northwest.

These innovations should be carefully studied as an organic part of any reallocations evaluation. Their role, thus far, has not received attention commensurate with their significance and potentiality.

RECEIVER

Radiated power and receiver sensitivity go hand in hand. Power is relatively more costly than receiver sensitivity. There is thus a premium on increased receiver sensitivity. A prerequisite, in any event, is that the transmitter must lay down a signal at the receiving point greater than any local noise affecting the receiver. Doubling the voltage sensitivity of the receiver enables it to receive a signal half as strong, or calls for a transmitter of one-fourth the power for the same results. Increasing the voltage sensitivity of the receiver by a factor

[14] Television Inquiry, transcript, pp. 1439–1441, testimony of Dr. Engstrom.
[15] The first such VHF grant representing a change of policy was made to KTRE–TV Lufken, Tex., November 22, 1954.

of 10, then, reduces the transmitter requirement to one one-hundredth the power. This presupposes negligible extraneous noise.

If receiver sensitivity must be pressed to very high limits (for example, if 6 db noise figure is required on the upper UHF channels) very expensive receiver tubes would have to be used and the cost to the public of having these tubes integrated over many hundreds of thousands of receivers would greatly outweigh the cost to the broadcasters of a proportionate increase in the power in the transmitter serving these receivers. It is then only within certain limits that increased receiver sensitivity can be achieved without incurring a heavy economic burden, but this cannot be pressed too far.

The sensitiveness of the receiver is measured arbitrarily in terms of its signal to noise ratio. Where the signal and the noise are the same in magnitude, one cannot distinguish between them. Disregarding any noise coming in with the signal, one must reckon with the noise generated within the receiver itself. Circuit resistors as well as the vacuum tubes themselves have the proclivity of generating noise. The input tube and its immediate circuitry are particular offenders. Here is the first place to seek improvement in receiver performance by improvement of the elements. Whereas this inherent noise cannot be eradicated, it can be minimized.

When the noise generated in the receiver is halved, the receiver can handle a desired incoming signal half as large as before. Efforts in the development of VHF receivers have already lead to relatively satisfactory performance. There is still room for much improvement in UHF receivers.

A 250-kilowatt effective radiated power transmitter has been said to cost $137,000 and a 1,000-kilowatt effective radiated power transmitter, $235,000.[16] Thus to double the signal strength in voltage at a given point in the service area is an expensive undertaking. Where manmade or other local electrical noise is below the signal strength, there is therefore a premium on doubling the voltage sensitivity of the receiver. This can often be effected by the expedient of improving the input circuit of the receiver, particularly the first vacuum tube.

Between the time of the 1954 and 1956 hearings, significant progress had been made in the reduction of inherent receiver noise for UHF receivers—it had been cut down from around 20–24 db to 9–13 db, in terms of equivalent signal voltage, by a factor of approximately one-fourth. The equivalent noise factor for VHF receivers is around 4–7 db. In terms of voltage sensitivity this still leaves UHF receivers one-half as sensitive.

QUALITATIVE COMPARISON OF VHF AND UHF TELEVISION [17]

In order to compare present day VHF and UHF television on a technical basis, the following factors must be considered.

1. External noise.
2. Noise figure.
3. Available power.
4. Transmitting antenna.
5. Receiving antenna.
6. Wavelength factor.

[16] Television inquiry, transcript, p. 1978, Dr. E. W. Engstrom, RCA.
[17] Prepared by R. P. Wakeman, Manager Systems Laboratory, Allen B. DuMont Laboratories, Inc.

7. Terrain.
8. Percentage band width.
9. Cochannel interference.

1. As the frequency increases the amount of noise, manmade and atmospheric, decreases.

2. As the frequency increases, the noise figure increases. Typical present-day receivers have the following noise figures: 6 decibels at channel 2; 10 decibels at channel 13; 19 decibels at channel 83.

3. As the frequency increases, the availability of high-power amplifiers decreases.

4. As the frequency increases, the use of higher gain transmitting antennas becomes necessary in order to obtain the maximum allowed power. At UHF, a transmitting antenna with a power gain of 40 or 50 is needed to obtain the 1 megawatt allowed, while at the low-band VHF a transmitter of 25 kilowatts and a transmitting antenna with a power gain of 4 will give the allowed 100 kilowatts effective radiated power.

Other factors being the same, if two stations have equal effective radiated powers but unequal transmitter powers then the one with the higher transmitter output will have better coverage.

5. As the frequency increases, it becomes practical to construct higher gain receiving antennas which, necessarily, have more directivity. Thus, the narrow beam width of a typical high-gain UHF receiving antenna will discriminate against unwanted or ghost signals much more than the typical low-gain VHF antenna with a broad beam width.

6. As the frequency increases, the voltage induced in a half-wave dipole decreases.

In order to produce equivalent voltages at receiver terminals, high-gain antennas must be utilized at UHF.

The theoretical gain of elaborate arrays is not realized in practice. This results from the almost universal absence of a plane phase front under typical reception conditions.

7. As the frequency increases, the percentage of diffracted signal received at a point behind a hill decreases.

8. As the frequency increases, the "percentage band width" decreases. This factor is important from a propagation point of view, since the within-channel differential effects are less of a problem at UHF than at VHF.

9. As the frequency increases, the susceptibility to cochannel interference caused by sporadic E propagation decreases. In television, such propagation is limited to frequencies under 100 megacycles.

Comparative table is a summary of the factors in order of desirability, No. 1 signifying the most and 3 the least desirable.

	Channels 2 to 6	Channels 7 to 13	Channels 14 to 83
1. External noise	3	2	1
2. Noise figure	1	2	[1] 3
3. Available power	1	1	[2] 3
4. Transmitting antenna	1	1	1
5. Receiving antenna (multipath discrimination)	3	2	1
6. Wavelength factor	1	2	3
7. Terrain	1	2	3
8. Percentage band width	3	2	1
9. Cochannel interference	3	1	1

[1] If incentive existed, UHF noise figures could be lowered.
[2] If incentive existed, UHF transmitter power could be increased.

No attempt has been made to assign weights to the above factors, the numbers having been assigned arbitrarily. Consequently, a comparison involving summation of the digits in the various columns would not prove meaningful.

INNOVATION

Technological progress in television over the past 15 years of commercialization has been reassuring. Tracing this progress yields a useful time scale by which to estimate the future rate of accomplishment and demonstrates the tremendous dependence of industrial exertion on commercial incentive.

In the course of historical stocktaking, one is impressed by the manifold problems which have arisen and the manner in which those of a technical nature have, 1 by 1, been surmounted. One is equally impressed with the uncertainty and confusion pervading each period of difficulty and experienced even by engineers.

The question of band width for a black-and-white picture was paramount. This question was some 10 years in being resolved, with many band widths argued, tried, and disposed of in the interval. The subject of spectrum conservation came to resolution when it was determined that single sideband, with the other sideband vestigial, could be effected. This expedient was several years in generation. The idea of offset carrier was proposed early, but several years elapsed before it was a practical device. The application of FM to the audio channel was subject to much speculation, experimentation, and debate before, as a concept, it took its place in the television standards of this country.

The first UHF receivers were VHF receivers fitted with converters by which the signal frequency was, in effect, converted to VHF with all the noise-level disadvantages inherent in the process. Today there are tubes which make possible the design of practical UHF receivers. The cost will decrease with demand. With incentive will come further improvements.

New techniques of reducing cochannel interference are in the laboratory. Better tubes for the generation and reception of UHF are on the horizon. The rate at which these developments battle their way to the commercial front depends on incentive.

Paradoxically, the technological aspects of television have had less regulation, but far better handling, than the equally important economic and social counterparts.

NEED FOR AN INDEPENDENT AUDIT

The history of television broadcasting since the promulgation of the doctrines and mandates of the sixth report and order, April 14, 1952, discloses virtually 6 years of uncertainty and confusion. The problems before the Commission have been complex, running the gamut from those strictly technical to those social, political, and economic.

The 15-year span since television broadcasting was first approved by the Commission as a field for commercial exploitation is replete with technical problems, often of grave importance, and a review shows that the best engineering and scientific advice has often been baffling and confusing. Nevertheless, many technological obstacles have been overcome in brilliant fashion by the professional specialists.

Progress in the nontechnical aspects of the television broadcasting field, although equally necessary, has been woefully lacking. These important issues have either been ignored or, for lack of competent analysis, been bypassed. Perhaps, for expediency, they have been subjected to cut-and-try methods, sheer speculation, and guesswork. This is the natural result of the Commission's great overburden of everyday routine housekeeping. Perhaps the Commission is overloaded with quasi-judicial responsibilities. Whatever the magnitude of these burdens, there is little evidence that this administrative tribunal has fought vigorously and consistently for the means by which to discharge its heavy responsibility in tasks like television reallocation and studies incidental to the encouragement of larger and more effective use of radio in the public interest. As a prerequisite for leadership in such vital areas, the Commission must probe for itself many of the professional problems in which it must be expert. The answer is not to be found by the vicarious method of leaning wholly on industry. Nor will the answer be found uniquely through the conventional technique of hearings. Industry has a vast body of knowledge to contribute. Its benefactions are, however, not a substitute for those acts which the Commission must itself perform. It is not an object of charity. Nor will the Commission's custodianship of the public interest be safely discharged where it can only plead for help and depend on the largess of interested parties, as through data and analyses supplied by petitioners in the course of formal actions before the Commission. Information obtained by these ways is a necessary but not a sufficient condition for the solution of the complex equations it must solve.

The VHF–UHF allocations problem has remained without decisive solution despite the years which have elapsed since the emergence of the sixth report. In fact the problem has not even been precisely formulated, despite two congressional hearings and several rulemaking proceedings. It is unfortunate that what progress has been made has been fortuitous rather than because of action by the Commission.

The record of confusion speaks clearly. What is needed is an independent audit to aid the Commission in its inordinately difficult task. This supplementary study must be a full-time effort though of limited duration. It must be made by a responsible professional agency free of direct or indirect commercial or political interest and of national reputation.

The agency must have at its disposal a staff qualified in science and technology and in television particularly, as well as authorities versed in social and political science to be drawn upon. Here, in effect, would be a consulting service by means of which the best talent of the country could be made available to the Commission on a task-force basis.

There is ample precedent for this device. In World War II, radar for example was in need of intense study and development, both in its scientific and technological aspects, and in its applications. The acute need was for a greatly accelerated program on microwave radar. The armed services were overburdened with routine tasks and their laboratories were therefore not adequate to their needs. Assistance on radar was effected through the Office of Scientific Research and Development, OSRD, through its Microwave Committee which had evaluated the broad problem facing the Nation. A specialized task force was indicated to do what the committees could not. The OSRD

contracted with the Massachusetts Institute of Technology to administer a laboratory (the Radiation Laboratory) which was to attack the problem. This laboratory subcontracted specific projects to industry where special knowledge made this appear to be the most efficient procedure. Government funds were provided through the medium of the OSRD.

The staff of this laboratory comprised the best talent of the country for the job. It was made up of scientists and engineers drawn from the leading educational centers of the country, from the industry and from the Government—all on a leave of absence or temporary basis. The success of this group was extraordinary. This technique should not be denied the Commission.

In its beginning there were those from the industry and from the military who were skeptical of this extracurricular task force technique. This skepticism soon vanished. The laboratory became a clearinghouse for ideas and needs of both the military and the industry. The end product was both intellectual and physical, both theoretical and applied.[18] It is safe to say that here was a result which could not have been achieved by any other technique.

This wartime pattern of the task-force attack of special problems under highly selected management of an educational institution or other professional research agency has been successfully used time and again by the armed services and other departments of the Government to study and make recommendations on some of their most classified technical and operational problems—an ample testimonial of its worth.

Surely, no pride should stand in the way of searching analysis. No force would bar the Commission from availing itself of the highest talent toward this end unless it be the contrivance of some private interest bent on preserving his status quo. The Commission and not some private enterprise is charged by statute with the custodianship of the public interest. Its decisive, judicial behavior should justify this trust.

It is the opinion of the ad hoc committee that there are several centers, any one of which is eminently qualified to help the Commission.

The funding of this effort is a responsibility of the Congress for there is no allowance in the Commission's budget for an operation of this character. Should our recommendation of the independent audit be accepted by the Interstate and Foreign Commerce Committee, even though the contractor be made responsible to the Commission, it is felt that your committee should maintain a monitoring interest and follow the progress.

In considering the audit or study concept, one might ask why the Commission should not be given the funds to spend directly as it did in the network study. One reason is that the knowledge that the Commission has sought an outstanding national authority would have a salutary effect on the public and the other is that the Commission would itself not be able to build up a temporary staff equivalent to that which could be mustered by the technique described.

[18] The microwave fire-control radar SCR–584 adopted by the Allies was developed in this laboratory and monitored through the production period. The ground-controlled approach system GCA used during the war and since then applied generally to civil aviation was also conceived and developed in this laboratory. An example of this technique of augmenting standard procedures of development is Project Lincoln which was established at MIT by the Department of Defense for the study of the Nation's air-defense problem. This project evolved a national plan (known as SAGE) and developed prototype hardware for its execution. Here is an illustration of how a nongovernmental resource may be utilized to assist the Government in the resolution of an important national problem.

The Commission, by reason of limited budgetary consideration, is not justified in employing on a permanent basis the services of the large variety of special talents necessary for independent evaluations and detailed long-range planning. Such expert advice is not available to the Commission on a permanent basis at salaries which would be commensurate with the compensations permitted to be paid regular Commission employees.

An audit should have as its objective the task of determining where the public interest lies. This objective in general is to determine the best way to integrate the available UHF and VHF facilities into a compatible nationwide television system. This must take into account economic realities, the immediate practical problem of deintermixture, the importance of backbone structure of networks and the relation of larger market program originating stations to a national service, and finally the importance of provision for an orderly growth of local community stations. As a goal, the objective should lead to the maximum number of choices of programs to a maximum number of families throughout the Nation.

There must be projection of the current television operation into the future, not simply in terms of the growth of the existing composite UHF–VHF system but in terms of the evolving radio communications structure as a whole. If the study indicates a movement of the center of gravity of commercial television into the UHF band, ultimately to reside there in its entirety, what is a reasonable rate of transition?

Clearly the public interest will be served best by the provision of as many television services as the country can support economically and by the extension of these services to the entire population, so far as that is practical. Inherent in this task is an evaluation of the American television system as it is now evolving.

To anticipate the findings, it appearse that as things now stand, television service is being brought to over 96 percent of the families in the United States, with over 90 percent of the television families able to receive two or more signals. It is obvious, therefore, that the problem is not one of the extent of television coverage, for the system is already nationwide. The problem is rather one of the intensity or multiplicity of coverage, as indicated by the fact that there are only 3 nationwide television networks in active competition, with 1 of the 3 at a substantial disadvantage because many important television markets have fewer than 3 equally competitive television stations. Since these markets can support more stations, it must be recognized that the national television system is not fully developed. In particular, the economic potentialities are not being fully realized since more stations can be supported than are on the air or are in prospect. Moreover the spectrum capabilities are not being fully realized since more channels are available than are being used. One must accordingly investigate what action can be taken to provide assignements for as many stations as can economically be supported and to utilize most efficiently the spectrum space allocated to television.

In effect what is required is a reexamination of the soundness of the principles underlying the sixth report, which, if to be carried out in the face of existing economic conditions, would require a

regimented economy or subsidy. In the sixth report, the guide if any, was geography rather than demography.

The allocations challenge is to evolve a rational plan which includes channel assignments for all the stations that can be supported by the economy now and in the realistic future, and to provide for the future development of local stations serving local needs.

The study, for completeness, might include an examination of the limitations of an all VHF system based on existing channels and of an all UHF system. In each instance, analyses would be in terms of dollar costs to broadcaster and to the public, and for viewers gained and lost. Intermediate cases might need to be hypothesized in similar terms, looking, for instance, toward the possible loss of the low VHF band to other services, and the possible necessity of an orderly transition of television broadcasting entirely to the UHF band.

Above all, in immediate importance, is to see how well we can do with what we have. There has been no serious professional attempt at such maximization.

This task involves a thorough consideration of the potentialities of various television techniques which are in being, and on the immediate horizon including satellites, translators, boosters, community antennas, high towers, directional antennas and cross polarization. It involves the application of the mostly highly developed aids to analysis. Electronic computers, for example, may save many, many man-hours of work, and make feasible the solution of problems which could not otherwise be attempted.

The work of the TASO group on propagation should be of immense assistance to any such study group and could readily be coordinated therewith. It is of vital importance to have factual data taken under operating conditions so one may deal objectively with coverage at both VHF and UHF frequencies over varied terrain and deal precisely with station spacing. Wishful distinctions prejudicing UHF must be eradicated. Let us not assume that the swiss cheese effects are uniquely a quality of UHF or are wholly bad because we have cultivated a taste for the cream of VHF.

Within the framework of the audit should come naturally a study of progress in apparatus. This applies particularly to transmitter tubes and to receiver input tubes and their associated circuits. In these areas where a critical lag is holding back the development of UHF, Government subsidy of research may be decidedly in the public interest.

Factors of influence on the future of television, for instance the activity of the film industry as a program source, and the introduction of magnetic tape program recorders, must be examined.

The appropriate application of closed circuit television must be studied and its effects estimated. As an instrument of communications, complementary in function to television broadcasting, it can be of great value in spectrum conservation. No signal should be put on the air if it can just as well be sent by wire.

Although subscription television has not been made a subject of examination by your ad hoc committee, this does not mean that it is unimportant. No serious audit could neglect this vital innovation which is the subject of such violent controversy.

Finally, an audit manned by inspired talent, talent which has demonstrated its capacity to do original work, holds promise of discovering new solutions of immense value which might, for example, make real the dream of community television.

It would be narrow indeed were the proposed audit opposed for fear it would jeopardize a preferred position of any commercial organization. It cannot be seen how any proposal of this character could reasonably be opposed by the Commission under the presumption that it would be an invasion of its prerogatives. The Comission needs help.

The commercial interests on which so much of the public satisfaction in television broadcasting depends, taken as a body, are evincing dissatisfaction. Next will come the public which as yet is not fully aware that its interest is not being adequately promoted.

In the words of one of the witnesses [19] at the Television Inquiry, Congress has here an obligation and an opportunity to take constructive action:

> Perhaps Congress cannot feasibly legislate the specific details of a reallocation plan. However, where, in the face of the urgent need for prompt action, the administrative agency has delayed unreasonably even in proposing a solution, and where that agency is riddled with doubts as to the proper course to pursue, there it necessarily devolves upon Congress to direct the way.

TELECOMMUNICATIONS REPORT OF 1951

Germane to the subject of this report for the guidance of the Television Inquiry proceedings of the Senate Committee on Interstate and Foreign Commerce is the Telecommunications Report to the President [20] in 1951. This report was drawn up by a committee of eminent men, including a former member of the Federal Communications Commission.[21]

The report is of value on two counts. It has intrinsic value because of the character of the data presented, the observations and the sound conclusions. Extrinsically, it is of value because it demonstrates the irresponsible indifference by the Government to the disclosures and recommendations of a highly authoritative document containing vital, timely subject matter. The presentation is so clear, inaction can hardly be explained by lack of understanding.

President Truman, in his charge to the Chairman of the Committee, had this to say:

> Communications services represent a vital resource in our modern society. They make possible the smooth functioning of our complex economy. They can assist in promoting international understanding and good will; they constitute an important requirement for our national security. There is, accordingly, a major public interest in assuring the adequacy and efficiency of these services.
>
> * * * The most pressing communications problem at this particular time, however, is the scarcity of radio frequencies in relation to the steadily growing demand. Increasing difficulty is being experienced in meeting the demand for frequencies domestically, and even greater difficulty is encountered internationally in attempting to agree upon the allocation of available frequencies among the nations of the world. In the face of this growing shortage, the problem of assuring an equitable distribution of the available supply of frequencies among

[19] Television Inquiry, transcript, p. 722.
[20] Telecommunications—A Report by the President's Communications Policy Board, Washington, March 1951. Established by Executive Order No. 10110, February 7, 1950.
[21] Lee A. DuBridge, William L. Everitt, James R. Killian, Jr., David H. O'Brien, Irving Stewart, chairman (FCC member, 1934–37).

all claimants, both governmental and private, is rapidly assuming major prominence.

Problems such as these cannot adequately be considered on a piecemeal basis. They must be viewed as parts of the broader problem of developing a total national communications policy, designed to assure the most effective utilization of the various forms of communication facilities, and the full satisfaction of those needs which are most essential to the broad public interest. An overall objective review of this entire situation is urgently needed.

* * * * * * *

* * * the Board shall make recommendations in the national interest concerning (*a*) policies for the most effective use of radio frequencies by governmental and nongovernmental users and alternative administrative arrangements in the Federal Government for the sound effectuation of such policies, (*b*) policies with respect to international radio and wire communications, (*c*) the relationship of Government communications to non-Government communications, and (*d*) such related policy matters as the Board may determine.

The report was and is worthy of serious consideration for its meaty commentary. Here is an observation bearing on confusion of administrative responsibility for the radio spectrum:

The assignment of space in the spectrum among private users (including State and local but not Federal Government agencies) is a responsibility of the Federal Communications Commission (FCC). The total amount of such space available for assignment, however, is not determined by the FCC. In effect, it is determined by the President, who is responsible for the assignment and management of those frequencies used by Federal Government agencies. The Interdepartment Radio Advisory Committee (IRAC) is the instrumentality through which frequencies are assigned to Federal users. Thus far, no national policy has existed to clarify this dual control of a single resource and thus to aid in governing the apportionment of space between private users and Government users as groups. No criteria have been established for use in choosing between the conflicting needs of a Government and a non-Government user (p. 9).

And further emphasis by the assertion that:

No agency is qualified to advise the President in fields where the interests of private and Government telecommunications users are in conflict (p. 11).

There is the bold indictment that:

The whole Government telecommunications structure is an uncoordinated one and will be even less adequate in the future than it has been in the past to meet the ever-growing complexities of telecommunications. A new agency is needed to give coherence to the structure (p. 18).

From the standpoint of utilization of this invaluable resource:

There is no evidence that the United States has made any serious attempt previously to measure the utilization of radio frequency assignments by either industry or the Federal Government. There is evidence that other countries have done some work along this line (p. 27).

From the standpoint of overall responsibility and direction:

The law was written when radio was not so highly developed and before the present demand for spectrum space had become acute. It established a dual system of allocations as between Federal Government and non-Government users but provided no umpire. The FCC is empowered to assign radio frequencies to non-Government users and the President is likewise empowered to assign frequencies to Federal Government users, a power he exercises through IRAC. Each agency enjoys coequal authority over the entire spectrum (p. 29).

A procedural looseness effecting efficiency is discussed:

Contrary to the public impression created by procedures for assigning frequencies for standard broadcast and TV purposes, the FCC in general does not require rigorous justification for the assignment of frequencies for other services. IRAC does not require sufficient justification for the assignment of frequencies, has no authority to question any Government department's state-

ment of need for a frequency, and is not constituted to do so. Assigning blocks of frequencies to be used by a particular agency on a national basis, without providing for their use by others in areas where the original assignee does not use them or is not likely to use them is wasteful of frequencies and adds to the crowding of the radio spectrum (p. 30).

The report points to a needless inefficiency:

In its management of the priceless radio spectrum, however, the United States has failed to maintain in one place adequate records of frequency assignments or deletions, or to publish a list of such assignments. The latest list available for public use was prepared by the FCC and reproduced by a private firm in 1949; it does not include the frequency assignments of the Federal Government agencies and is not now complete for non-Government users. In the event a commercial user wishes to apply for frequency assignment for a circuit, he must search through this noncurrent public list, the International Telecommunications Union (ITU) frequency list (even more out of date), come to Washington or retain the services of Washington consulting radio engineers to study the FCC records, and then file a complete application (p. 31).

On spectrum usage:

* * * the Federal Government has exclusive use of 42.1 percent of the space between 300 and 3000 megacycles. The Federal Government has its largest percentage (44 percent) of any decade between 300 and 30,000 megacycles * * * based on the probable number of useful channels which can be derived, the Federal Government has allocated for its exclusive use less than a third of the probable number of channels which can be derived from the 29,970 megacycles between 30 and 30,000 megacycles (pp. 42–43).

The growth of the usable spectrum is well expressed by a chronological table, page 21, which at once suggests the international character of the allocations problem.

Incident	Year	Usable radio spectrum
Atlantic bridged	1901	
Berlin Radio Conference	1906	500 and 1000 kilocycles.
London Radio Conference	1912	150 to 1000 kilocycles.
Washington Radio Conference	1927	10 to 23,000 kilocycles.
Madrid Radio Conference	1932	10 to 30,000 kilocycles.
Cairo Radio Conference	1938	10 to 200,000 kilocycles.
Atlantic City Radio Conference	1947	10 to above 30,000,000 kilocycles.

The need for a national policy is declared:

The radio frequency spectrum is a world resource in the public domain. Our Government must adopt policies and measures to insure that this resource is used in the best interests of the Nation, with due regard to the needs and rights of other nations (p. 20).

Furthermore, the report opines that:

Just as the United States has no clear policy for apportioning its own share of spectrum space, so it has lacked satisfactory means of determining policy as a basis for negotiations with other nations. * * * Furthermore, there is no permanent mechanism by which the stated requirements of the United States users can be adjusted with equity and safety. The imperative need for means of making such adjustments hardly requires elaboration (p. 10).

In the committee's words, principal among the disconcerting facts disclosed are the following:

Both private and public agencies operate in the telecommunications system. We have found inescapable evidence of serious difficulty, not confined to the United States alone, but international in scope, in the management and use of the worldwide but limited resource of the radio frequency spectrum. There is indication of economic danger for some private companies, and of a lack of help on the part of Government agencies in avoiding that danger. There is evidence of confusion of responsibility among Government agencies which from time to time have been established for the regulation of parts of the system (p. 6).

With respect to international aspects, the report further observes that:

The degree of spectrum crowding varies enormously in different parts of the spectrum and in different parts of the world. Opinions vary as to how serious the situation now is. But no one denies that it is getting worse and will continue to do so. Only vigilant, intelligent management and vigorous pursuit of new technological possibilities can prevent possible future chaos (p. 12).

It is this committee's opinion that—

Weaknesses in the present United States telecommunications organizations and lack of high national policy and direction have hindered the United States in the national control of telecommunications and in its international relations on telecommunications. The present telecommunications legislation and organization have failed to produce adequate direction, leadership, administration, and control and have fostered dissension between the Federal Government and industry. Many of these shortcomings could have been mitigated if not avoided (p. 47).

The predisposition toward management by committee comes in for trenchant comment:

The extent to which Government claimants must justify their requests is important to an evaluation of IRAC's role. The key to the matter is the nature of the group—a group of users, rather than an independent judging body. IRAC points to various criteria which have been decided as relevant to the justification of frequencies in its deliberations. Whatever the relevance of the criteria, no body of users acting as judge of its own requirements can take an impartial view of the requests of its members. Security problems have complicated these issues, especially in time of war, when the fact of value to national defense would often be alleged, but no supporting data brought forth on which the claim could be evaluated (p. 200).

Attention is called to insidious conflict caused by division of authority explicit in the Communications Act:

The Communications Act vests defense powers in the President alone, and divides Government power to assign spectrum space. While the preamble to the act recognizes the value of communications to national defense, and implied that the Commission has a direct interest in the management of telecommunications for defense purposes, section 606 of the act clearly vests in the President the power to take over civilian telecommunications facilities, both wire and radio, for emergency and war purposes. The President need not turn to the Commission for any sort of prior consultation or advice before exercising his powers under the act. Furthermore, section 305 of the act specifically gives the President the power to assign radio frequencies to Government stations, and specifically exempts Government stations from the licensing and other regulatory powers of the Commission when they are operating as such. The act on the one hand provides no standards to guide the President in assigning frequencies to Government stations; his determination is final. On the other hand, the act places the Commission under no duty to respect the President's assignments; either the Commission or the President could start a radio war by assigning a frequency already in use to an interfering user.

Similarly in the field of foreign relations, the preamble to the act suggests the Commission should concern itself with foreign relations by including, as part of the Commission's broad public policy objective, regulation of foreign commerce in part with an eye to fostering a rapid and efficient worldwide wire and radio communication service. Yet it is patent that Congress could not and did not wish to give the FCC powers in the field of foreign relations which are constitutionally within the prerogative of the President (pp. 193–194).

Wisely, the Stewart committee points to the importance of the Government's having to justify its claims of need for frequencies, thus forestalling entrenchment by squatters' rights or by the leverage of security:

Measured in terms of spectrum space rather than in number of discrete frequency channels, the Federal Government's share of the spectrum, though not

so great as is commonly believed, is nevertheless large. While we do not know that it is out of proportion to the Government's responsibilities, it must have the most adequate justification and careful management if the greatest benefit is to be obtained from it (p. 14).

With good reason, attention is called to the Hoover committee's observations on the FCC's working situation:

The Commission on Organization of the Executive Branch of the Government (the Hoover Commission) pointed in 1949 to the dilemma under which the FCC has long suffered: The FCC has been unable to deal effectively with the workload before it because it has not formulated the broad policies to guide its decisions and thereby expedite its handling of cases; it has been unable to formulate those policies because of the pressure of current business. The Hoover experts also reported that the FCC has characteristically faced its tasks by dealing with problems as they arise, rather than by conscious policymaking, planning, and programing for the broad future of communications regulation and development (pp. 195–196).

With respect to research to advance the Nation's progress in telecommunications, there is the interdict:

The Federal Government should step up its program for conducting and stimulating research in telecommunications, especially in those fields bearing on propagation and frequency utilization. Such studies would make it possible for the Government to take economic or technological changes promptly into account in revising policies for preserving the vigor of our private communications companies (p. 19).

The report makes a sapient observation with respect to the accessibility of Commissioners to Members of Congress who may feel a responsibility for the interest of their constituents:

Relationships between the Commission and the President are always conditioned by the views of Congress—and in particular of those Senators and Representatives who take a special interest in broadcasting or other communications matters—as to the proper role of the Commission and the degree of independence from the President it should enjoy.

Many Congressmen take special interest in matters before the Commission which may affect availability of nationwide outlets for political debate, or which may affect communications activities in their home areas. These interests are largely concentrated in the field of broadcasting and television. We take account of this fact here because of its effect on the Commission's freedom to emphasize the various parts of its total responsibility under the Communications Act according to its own sense of their importance or priority (p. 195).

The committee trenchantly observes that—

Nowhere did we find any agency or system of collaboration among existing Government agencies dealing comprehensively and continuously with policies or integrated execution of Government programs affecting non-Government telecommunications activities (p. 183).

Taking note of the past, as if portending the future, the group warned:

To create an ad hoc agency to meet each crisis would be a clumsy expedient at best and, indeed, the problems of transfer and retransfer of spectrum space and of facilities for using it are too complex for ad hoc control to be adequate. A continuing mechanism to deal with this situation is needed for the foreseeable future (p. 10).

and concluded that—

There should be established in the Executive Office of the President a three-man Telecommunications Advisory Board to advise and assist the President in the execution of his responsibilities in the telecommunications field. This Board should carry out the planning and executive functions required by the President's powers to assign radio frequencies to Government users, and to exercise control over the Nation's telecommunications facilities during time of national emergency or war. It should stimulate and correlate the formulation of plans

and policies to insure maximum contribution of telecommunications to the national interest, and maximum effectiveness of United States participation in international negotiations. The Board should recommend necessary legislation to the President, and advise him on legislation in the telecommunications field. The Board should stimulate research on problems in the telecommunications field. It should establish and monitor a system of adequate initial justification and reassignment of frequencies assigned to Federal Government users, and, in cooperation with the Federal Communications Commission, supervise the division of frequency spectrum space between Government and non-Government users (pp. 18–19). [Italic supplied.]

The committee's recommendations of a Board were weak to a point of futility, as confirmed by subsequent events. It is probable that the difficulties were foreseen and that the group compromised their real convictions knowing that a strong recommendation requiring legislation would, in the climate of the time, have been unrealistic. Perhaps there were forebodings that strong recommendations would evoke opposition from vested interests within the Government organization if not without. The Stewart report is ominously silent on these salient points.

Research was urged as an essential element in the administration of the Nation's communications resources:

We wish strongly to stress the need for more intensive and comprehensive research on problems of radio propagation and frequency utilization. In the recent past, critical decisions about use of the spectrum, including geographical and frequency separation of stations, have had to be made in the absence of sufficient scientific data.

The Board should not itself engage in research; indeed there is no necessity for it to contemplate such a role. The newly established National Science Foundation, whose principal concern will be the fostering of basic research, provides one avenue for the Board's support of projects in this field. The Research and Development Board in the Department of Defense, moreover, is in a position to deal with problems closely related to telecommunications.

At the beginning, the agency should try to improve the coverage of research on pressing problems by suggesting research projects to agencies already equipped to conduct them. Such projects should include research on propagation in particular sets of conditions, and for particular bands of the radio spectrum. The Board should be represented in the executive council of the Central Radio Propagation Laboratory. If stimulation in the form of funds is needed, the agency should encourage an existing Government department to seek such funds and to allocate them or expend them as executive agent for the particular research envisaged.

If the Board is properly to advise the President, it should also conduct and stimulate other studies pertinent to the various phases of its mission (p. 214).

Lastly, the committee struck at the security shibboleth which has in the past afforded a pernicious gimmick by which the services may escape from exposing their spectrum needs to critical comparative consideration:

All departments and agencies of the Government, including the military services and the Central Intelligence Agency, should be authorized and directed to furnish to the agency whatever information it requires to make a full determination of the questions before it.

The Board must always be in a position to receive and consider the most highly classified matter submitted by military or other Government agencies in justification of their proposals. Only thus can it hope to make reasonable judgments based on complete facts. Obviously, the Board must be in a position to protect such confidences (p. 210).

However constructive the Stewart committee effort, however inspired, and however sound the findings set forth, such notice as was taken was cavalier and shortlived.

27197—58——17

After the untimely demise of the new office, an editorial [29] referring to the need in Government for better means for handling telecommunications remarked:

> These conditions caused the President to appoint an eminent Board in 1950 to make recommendations. After a year of effort it recommended a permanent Board, or an individual, to be advisory to the President. President Truman thereupon appointed a Telecommunications Adviser in 1951. After 20 months, this office was abolished by President Eisenhower and its functions transferred to the Director of Defense Mobilization who has now appointed an Assistant Director to deal with them.
>
> Experience has shown that forward progress beyond that attainable by voluntary acceptance by the many Government agencies can be achieved by the process of an Executive order only if the President and his immediate agency heads will put their weight behind the effort and promulgate decisions. This is because decisions intended for the general national welfare are not likely to be equally acceptable to all agencies. The President and his lieutenants cannot be expected to administer to such a specialized field, as a normal and continuing matter.

This editorial proceeds with its own suggestions for remedial legislation which at least portray the problem with refreshing candidness.

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

AVIATION FACILITIES PLANNING REPORT

There is an intimate interrelationship between aviation planning and radio spectrum allocation planning. Aviation facilities planning, just as long-range radio spectrum planning, has suffered for want of affirmative attention.

Early in 1957, the President established the office of Special Assistant to the President for Aviation Facilities Planning. The assigned responsibilities were: [30]

> 1. The direction and coordination of a long-range study of the Nation's requirements for aviation facilities.
> 2. The development of a comprehensive plan for meeting in the most effective and economical manner the needs disclosed by the study.
> 3. The formulation of legislative, organizational, administrative, and budgetary recommendations to implement the comprehensive plan.

The resulting report [31] includes comments on the radio spectrum needs of aviation and other relevant observations of importance indirectly to the Committee on Interstate and Foreign Commerce in its Television Inquiry. The pertinent highlights of the report will therefore be presented here for reflection and for guidance. There are many parallels to the telecommunications problem, with potential impact upon television.

The Special Assistant, in the opening of his report, observed that—

> What we (the Nation) overlooked was the possibility that the seeming "limitless ocean of air" might be quickly overcrowded.

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[29] Tele-Tech & Electronic Industries, December 1953, p. 59.
[30] Letter from President Eisenhower to Edward P. Curtis, February 19, 1957.
[31] Aviation Facilities Planning, Final Report by the President's Special Assistant, Washington, D. C., May 1957.

This situation derives from the inseparable mixture of civil and military interest in the same limited resource. Both are claimants, day in and day out, for their essential share in the critical cubes and cylinders of the national airspace. Neither can be rationed except at the cost, on the one hand, of the free and unhindered movement of our people going about their natural business or, on the other, of a curtailment in the drill of our forces concerned with national defense. (P. 2.)

The report has this to say on the allocation of radio frequencies—

The electromagnetic spectrum, although unnoticed by the general public, is a precious national resource which has been allocated by channels freely in the past until the scarcity of available channels for new systems has become acute.

However, the modernization of our air traffic control and air navigation systems will be seriously jeopardized if limited by radio frequency allocation.

Although the Federal Communications Commission has statutory control over the radio spectrum, the Federal Government stations are not licensed by FCC. It conducts hearings on channel requests by non-Government users, confirms the need for each requested channel as well as the amount of communications services subsequently radiated on the channels.

On the other hand, Federal Government channels are processed by the Office of Defense Mobilization and allocated by you. Within the ODM the Government users more or less regulate themselves by committee—the Interdepartmental Radio Advisory Committee. About 130,000 station listings have been processed with about 18,000 new actions per year which change, delete, or add to these listings. Each of those require an expressed need in the public interest. The Federal Government agencies have been allocated approximately 50 percent of all available channels.

No Government official with an overall civil-military interest questions the stated need for a requested channel and no one monitors the usage of that channel to confirm the need for it.

All allocations are made on the basis of the kind of use the channels will serve. There is no monitoring or control on the number of transmitting devices which are actually used on each channel. Metropolitan areas are already experiencing serious interference caused by sheer numbers of equipment in use.

Several detailed and excellent studies have been made on the frequency allocation problems of the United States in recent years, and I do not pretend to have the competence of professionals in this field.

However, as the United States radio spectrum, a national resource, becomes saturated, we are rapidly losing the flexibility needed to modernize all telecommunications. Aviation is one critical activity which is caught in this dilemma. There is a growing need for civil aviation frequency assignments which must be sought from the FCC. There is likewise a growing need for Government aviation frequency assignments which must be sought in the Office of Defense Mobilization and approved by you. Since there is only one radio frequency spectrum to conserve and allocate, one responsible agency might manage this problem more logically and efficiently. (Pp. 25–6.)

Many of the critical observations apply equally well to telecommunications, witness:

Thus far, airspace has been granted on a case-by-case basis, following review and coordination in the Airspace Use Panel of your Air Coordinating Committee. No Government official with a common interest in civil and military aviation has effectively questioned the need for new restricted areas requested by the military, or the patchwork growth of zig-zag airways between cities and around such areas. Likewise, no one monitors the actual use of restricted airspace to confirm the military need (p. 25).

The report's findings have a familiar ring:

Aviation policy cannot be resolved by interagency coordination processes alone, as we have attempted in the past. Many of the responsibilities for the

Federal Government's role in aviation should be consolidated into one agency. The problems which face us are of the very broadest public nature. We are now trying to solve them in committees without statutory authority. The Congress and the executive branch need to be able to look to a properly organized agency for future plans, budgetary needs and responsibility for operations in the area of aviation (p. 21).

And:

Perhaps one of the most difficult management tasks, yet one of the most essential is long-range planning (p. 22).

The report recommends:

An independent Federal Aviation Agency should be established into which are consolidated all the essential management functions necessary to support the common needs of the military and civil aviation of the United States (p. 20).

As an interim measure, the report recommends the creation of an Airways Modernization Board [32] consisting of—

a Chairman appointed by the President, a Defense member, and a Commerce member. Its authority should include control of programs intended to develop, test, evaluate, and select systems and devices for the national plan of air-traffic control and navigation; the authority to obtain and use appropriations; create and manage field facilities for experimental purposes, to hire personnel and to let contracts. The programs decisions should be decided by majority vote of the Board (p. 18).

In its section on financing aviation facilities, the report points to a precedent for support by a special tax which suggests a study of the equivalent opportunity in communication, particularly in radio and television broadcasting.

In the interest of a sounder, more active program for the advancement of radio generally, scientific and technological progress, comprehensive overall spectrum study and management, economic, sociological, and political factors and their impact on administrative policy and legislation must be further understood. There is need for the Government to direct a supporting research program to this end. In the past, the Commission has been almost solely dependent on the industry (an interested participant limited in its largesse by responsibility to its stockholders).

Progress in these respects is not simply a matter of concern for our national welfare in the limited hedonistic sense, but a matter of crucial importance to our internal and external security and to our posture before the world at large. Research is indicated, by the Government directly, or by Government sponsored ad hoc programs carried out by private agencies.

Financing by appropriation out of general funds is one way. A more realistic procedure would appear to be by direct (excise) taxation. Constructive application of the Commission's budget is now limited by the prodigious housekeeping duties. Over a million permits for the operation of the Nation's transmitters are in force. These involve the formalities of initial grants and of periodic renewals. In addition, over a hundred thousand amateur-operator permits are processed. There is policing of the myriad transmissions. There is the burden of type approval of industrial radio and television equipment. Along with these chores are those of handling the vast administrative routine and rate determinations of common carriers whose investment aggregates some $20 billion.

[32] See S. 1856 introduced April 12, 1957, passed August 14, 1957.

There is no fee covering the license services by the Commission. No excise tax is levied on those whose commercial vehicles ride the radio highways for private profit.

The Government has taken an active part in subsidizing aviation, in both the research and operating areas. The Aviation Facilities Planning Report raises an interesting question on the technique of obtaining revenue by invoking the highway-user concept already applied to the development of the national highways.[33]

> Recent developments have clarified the status of the present Federal tax on aviation gasoline as an existing form of airway user charge. Under the Highway Revenue Act of 1956, the gasoline tax paid by motor-vehicle operators is now clearly treated as a highway-user charge, and it follows that the corresponding tax on aviation gasoline should similarly be regarded as a presently effective airway user charge (p. 36).

A report to the President[34] on revision of transportation policy observed:

> In major respects, Government has played a decisive role in these fast moving and dynamic changes in the organization, financing, and operation of the Nation's domestic transportation services. All levels of Government have participated. The States have played a dominant role in the provision of an expanding and modernized highway system, although aided by the Federal Government through a program of grants-in-aid. The Federal Government has spent vast sums of the general taxpayer's funds for the improvement of rivers and harbors. More recently it has aided materially in the development of airports, the financing and management of a nationwide system of aids to air navigation, and has advanced substantial sums of money in the form of direct financial assistance for the development of air transportation.
>
> The net result is a competitive system of transportation that for all practical purposes has eliminated the monopoly element which characterized this segment of our economy some 30 years ago (p. 1).

One is prompted to ask what, correspondingly, has been done to support our most essential vehicle of public information and control; namely, radio.

Here is more than precedent for consideration, in the search for means to make an affirmative advance in the Commission's trusteeship of our radio communication heritage—this priceless resource in the public domain.

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[33] See also Federal Highway Act of 1956, Public Law 627, 84th Cong., p. 25 and bottom p. 27.

[34] Revision of Federal Transportation Policy, a report to the President prepared by the Presidential Advisory Committee on Transport Policy and Organization, April 1955. Sinclair Weeks, Chairman.

APPENDIX

Suggestions to Engineering Committee on Allocation Problems

Warren G. Magnuson, Chairman, Interstate and Foreign Commerce Committee

I would like to raise with you the following problems and ask you to study them and eventually report back to us your conclusions.

1. The feasibility of utilizing the 88–108 megacycle band, more familiarly known as the FM band, for additional VHF channels, without disturbing existing FM licensees. Obviously if this could be done, there would be a 25-percent increase in the number of VHF stations.

2. A large number of VHF grantees have turned back their licenses, which in many instances remain unused in communities to which they are assigned. I would like to have you explore the possibility of utilizing these channels and grants in areas where facilities under the present table of assignment are inadequate.

3. I would like to have you consider the suggestions for selective deintermixture.

4. I would like to have you consider the possibilities of increasing the number of stations by the use of techniques developed in radio such as the dropin, directionalization along both seaboards, since clearly there is little audience in the offshore areas of the Atlantic and Pacific Oceans, and any other means of expanding the full use of the spectrum.

5. Finally, in addition to these specific problems, my committee would like to be advised as to what possibilities exist of a readjustment, and perhaps more realistic allocation of the available airspace, so as to bring about a more equitable distribution of existing facilities. Of course the committee would appreciate any other avenues of approach you can suggest to the fullest use of the spectrum.

Mr. Sidney Davis, special counsel for the committee, 912 HOLC Building, Republic 7–7500, extension 4732, and Mr. Robert L. L'Heureux, 914 HOLC Building, Republic 7–7500, extension 5325, will be available to assist you.

The Federal Communications Commission will be glad to cooperate.

AD HOC ADVISORY COMMITTEE AFFILIATIONS

Edward L. Bowles: Consulting engineer, formerly professor of electrical communications and presently consulting professor of industrial management at the Massachusetts Institute of Technology, consultant to the president, Raytheon Manufacturing Co.

T. A. M. Craven, of the firm of Craven, Lohnes & Culver, consulting radio engineers.

A. Earl Cullum, Jr.: Consulting engineers.

Allen B. Du Mont: Chairman of the board, Allen B. Du Mont Laboratories.

Robert P. Wakeman: Manager, systems laboratory, research and development division, Allen B. Du Mont Laboratories.

William S. Duttera: Manager, allocations engineering, National Broadcasting Co., Inc.

Donald G. Fink: Director of research, Philco Corp., president of the Institute of Radio Engineers.

Ralph N. Harmon: Vice president, engineering, Westinghouse Broadcasting Co., Inc.

C. M. Jansky, Jr., and Stuart L. Bailey: Jansky & Bailey, Inc., radio and electronic engineers.

William B. Lodge: Vice president, engineering and station relations, CBS Television, Columbia Broadcasting System, Inc.

Frank Marx: Vice president, American Broadcasting Co.

Curtis B. Plummer: Chief of Broadcast Bureau, Federal Communications Commission, at the time.

Edward F. Kenehan: Chief of Broadcast Bureau, Federal Communications Commission, replacing Curtis B. Plummer.

Haraden Pratt: Vice president and chief engineer, Mackey Radio & Telegraph Co., retired; vice president in charge of engineering and operation, Dualex Corp. (Telecommunications adviser to the President of the United States 1951–53.)

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