

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FCC 78-863
4887

In the Matter of
Clear Channel Broadcasting in the
AM Broadcast Band } Docket No. 20642

FURTHER NOTICE OF PROPOSED RULE MAKING

Adopted: December 19, 1978 ; Released: January 15 , 1979

By the Commission:

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1. Map of Nationwide Aural Broadcast (AM and FM) Nighttime Primary Services.
2. Summary of Comments by the Parties.

FURTHER NOTICE OF PROPOSED RULE MAKING

I SUMMARY

(A) The Essential Issue

1. The basic issue has not changed in half a century: should the reach of 25 dominant Class I-A AM stations on the 25 Class I-A clear channels, many hundreds of miles from their transmitters, be preserved and extended, or should it be limited in order to make room for more radio stations serving nearby listeners? On balance, we think the latter, and invite comment on methods proposed for accomplishing that result.

2. The nighttime propagation of radio signals by "skywave", which carries both the service and interference potential of AM stations much farther at night than during the daytime, necessitates making the basic choice between maximizing the protected reach of the wide-area service stations, or increasing the numbers of stations on the channel.

3. We think the public's needs will be optimally served by enlarging the possibilities for additional stations on the Class I-A clear channels beyond the initial steps we took in this direction in 1961, 31 FCC 565. We base this on our fresh evaluation of the circumstances affecting the public's needs today. These circumstances have undergone notable changes, including the continuing growth of FM as a fully recognized part of the U.S. radio service, the growth of television broadcasting and the growth of cable TV, with consequent reduction of the need to rely on far-distant AM stations at night.

4. Dependence on distant stations, when it applied to many more millions of people and to a far larger proportion of the population than today, provided justification for permitting each of the 25 Class I-A clear channel stations the exclusive use of an AM channel at night. Later, nighttime sharing of some Class I-A frequencies was permitted, but only on a narrowly restricted basis because many millions were still considered to be dependent on distant stations at night.

5. Now, recognizing the lessening of that dependence, we propose changes in the use of Class I-A clear channels which we think optimally balance present day competing needs.

(B) FCC's Basic Proposals

6. In opening the way to additional station assignments on the Class I-A clear channels we propose to: (1) settle the old issue of higher power for the dominant stations by maintaining the present ceiling of 50 kW; and (2) look to additional AM and FM stations as the preferable means of providing for today's radio service needs, among the most prominent of which is enhancement of opportunities for minority ownership and operation of stations.

(II) THE RECORD

7. We do not here minutely retrace the long and involved course of clear channel inquiry and rulemaking proceedings which started with the inauguration of the predecessor Docket No. 6741 in 1945. That is already set out at length elsewhere, primarily in:

Our 1961 Report and Order in Docket 6741, 31 FCC 565

Our Memorandum Opinion and Order denying reconsideration, 45 FCC 400, and

The 1975 Notice of Inquiry and Notice of Proposed Rulemaking adopted in this Docket 20642, 40 Fed. Reg. 58467, December 17, 1975.

By way of introduction we pause only to note the basic circumstances and developments which form the context of the continuing tug of war over AM clear channel spectrum space.

(A) Original Clear Channel Objectives

8. Recognizing the inherent conflict between maximizing the service range or the numbers of stations assigned to any AM broadcast frequency, the Federal Radio Commission in 1928 adopted the practice, continued by this Commission, of establishing differing conditions for the use of different groups of AM frequencies. The group which came to be known as the "Clear Channels" was set aside primarily for use by stations so protected from interference as to enable them to provide services at long distances by day and considerably greater distances at night, when reflection from the ionosphere carries nighttime AM transmissions many hundreds of miles farther out from the transmitter than during the daytime. When protected from interference from other stations,

this skywave service from existing Class I-A stations is generally usable, although varyingly intermittent, at distances up to about 750 miles from the transmitter.

9. Under some conditions, skywave reception occurs even farther out, although more intermittently. Given this, and the early paucity of the more steady but less far-ranging groundwave AM signals, Class I-A clear channels were set aside for the exclusive use of a single station operating during the nighttime hours.

10. Subject to a few limited exceptions, this nighttime exclusivity continued until 1961 for the 25 Class I-A unlimited time stations assigned--one each--to the 25 Class I-A frequencies, the reallocation of which is under consideration in this proceeding.

(B) Previous Reallocations.

11. Between 1945 and 1961 the Commission in a major predecessor proceeding--Docket 6741-- examined numerous possible modifications of the rules governing the use of the AM clear channels. Confining their use to a single station operating at night on each such channel with 50 kW power was recognized as questionable. This exclusivity protected the Class I-A stations far beyond any areas where they could provide a reliable signal.

12. In Docket 6741 the Commission considered many alternative plans which reflect two essentially opposed views. One was that the 25 Class I-A stations should continue to enjoy exclusive nighttime occupancy of their respective channels while their permissible maximum power would be raised to 500 kW or 750 kW. (For several years during the 1930's experimental operations had been conducted by Class I-A station WLW at Cincinnati, using 500 kW).

13. The opposing view was then, as it now remains, that the 50 kW maximum should be retained, and that the sole Class I-A station on each channel should be required to share the use of the channel with other unlimited time stations.

14. In 1961 the Commission decided to permit one additional unlimited time Class II-A station on each of 11 (now 12) Class I-A channels ^{1/} for the primary purpose of providing nighttime groundwave AM service to places which had none. These 12 Class II-A stations have brought a first nighttime AM primary service to approximately 400,000

^{1/} 670, 720, 770, 780, 880, 890, 1020, 1030, 1100, 1120, 1180, and 1210 kHz.

persons in the western half of the country. Each is required to protect the 0.5 mV/m 50 percent skywave contour of the co-channel Class I-A station, a radial distance of about 750 miles. Four other unlimited-time Class II stations have been authorized to operate on Class I-A channels, two of them on channels used by Class II-A stations.

15. When it marked 12 Class I-A channels for shared use by Class II-A stations the Commission reserved for future decision the options to be exercised regarding the 13 remaining Class I-A channels. The generally exclusive nighttime use by Class I-A stations of the remaining Class I-A channels was meanwhile continued, and the use of adjacent channels was so restricted as to avoid significant preclusions of the potential use of the reserved Class I-A channels either for additional Class II-A stations or for higher power operation by the Class I-A stations.

(C) Questions Now Pending

16. In our Notice inaugurating this proceeding we noted the results of our 1961 action, inaugurated formal inquiry into a number of matters bearing on the use of Class I-A clear channels under present day conditions, and invited comment also on the desirability of:

- "(1) Amendment of the rules to permit the authorization of power in excess of 50 kilowatts for selected Class I-A stations.
- "(2) Amendment of the rules to permit additional unlimited-time Class II stations on the 'duplicated' Class I-A channels, either in limited number and in designated areas (the present 'II-A' plan), or to permit the addition of new stations in all instances where adequate protection for the clear channel station's secondary service and for other stations is afforded.
- "(3) Amendment of the rules to permit the assignment of unlimited-time Class II stations to those I-A channels which are presently unduplicated, either on a designated basis, or generally, with protection, in each instance, afforded the I-A station's secondary service.

"(4) Amendment of the rules to permit the employment of some or all of the present I-A channels by a multiplicity of stations which are intended to render only local or regional groundwave service."

Recognizing the variety of possible actions under these alternatives, and reserving the possibility of proposing still other kinds of actions, we announced our expectation that, after review of the responses filed to the questions propounded in the Inquiry portion of the Notice, we would proceed with a Further Notice of Proposed Rule Making defining more specifically those particular modes of amending the clear channel rules on which it appeared desirable to focus our further consideration.

17. The subjects of our Inquiry, which were set out and explained at some length in the text of the 1975 Notice, encompassed:

- the service potential of FM;
- the economic and social effects of higher power;
- power levels at which licensees desiring higher power would propose to operate;
- sources and levels of interference on the Class I-A channels;
- effects of using standard radiation patterns; and
- the use of secondary (skywave) service from clear channel stations in areas without nighttime primary service.

(D) Urgings by the Parties 2/

(1) Higher Power

(a) The Proposals

18. The 17 licensees of the 25 Class I-A stations took the following positions on possible raising of the 50 kW power maximum:

- 9 licensees stated their intent, if permitted, to increase the power of their 11 Class I-A stations to:

2/ Attachment 2 is a fuller summary of the comments.

100 kW	at	1	station
200 "	"	"	1 station
250 "	"	"	5 stations
300 "	"	"	1 station
450 "	"	"	1 station
500 "	"	"	2 stations

--3 licensees of 3 other stations indicated they were exploring or considering the possible use of higher power at their stations if permitted, but were not committing themselves to do so.

--CBS, licensee of 4 Class I-A stations, did not object to permitting higher power, but would not use it for CBS stations.

--NBC and ABC, each the licensee of 2 Class I-A clear channel stations, opposed authorizing the use of higher power.

--The two licensees of the remaining 3 Class I-A stations filed no comment.

19. The Clear Channel Broadcasting Service (CCBS), an organization of which 12 licensees of 16 Class I-A stations are members, strongly urged increase of the 50 kW power limit, and supported their position with voluminous data and argument. In their individual comments, only 9 of the 12 CCBS members stated a clear intention to use higher power at their 10 Class I-A stations.

20. Among other supporters of higher power were a number of farm organizations, consulting engineers and other individuals. There are possible benefits from exceptional and narrowly limited use of higher power for certain specific and highly limited purposes which the National Black Media Coalition and the Corporation for Public Broadcasting thought might merit consideration.

21. We next note the principal contentions for and against higher power, which we will evaluate in later sections of this Further Notice.

(b) Service Potential

22. The prime justification advanced for higher power is that it would provide new and improved service to underserved areas and populations. The proponents put forward CCBS studies showing that at night over half the land area of the United States and 26 million people lack primary (ground wave) AM service, and they discount the showings, in studies conducted by the former Office of Telecommunications, ^{3/} of extensive FM radio services to much of those areas.

^{3/} Now part of the National Telecommunications and Information Administration.

23. Higher power, coupled with the prohibition of additional unlimited time co-channel stations on the Class I-A channels could, say the proponents, provide much needed increments of first or additional groundwave services. They also claim that higher power would provide extended and improved skywave services to allegedly large numbers of people who they say cannot be otherwise provided with needed radio service. Only limited attempts were made, however, even to approximate the numbers of people lacking AM nighttime primary service, or an FM signal with a field strength of at least 1 mV/m, who would gain a first nighttime primary service free both from objectionable interference from other stations and from distortion through interaction between the stations' own skywave and groundwave signals.

24. Some of the licensees proposing higher power did offer figures indicating the numbers of people who would receive the station's skywave signals for the first time, or would receive an improved skywave signal, if the station were permitted higher power.

25. Proponents also argued that higher power is needed to offset interference received within the United States from stations in other countries.

(c) Economic Effects

26. As in earlier clear channel proceedings, parties who oppose higher power argued adverse competitive impact on other stations within the service areas of Class I-A stations using power in excess of 50 kW. Proponents either rejected such claims or felt that they should be adjudicated only on the explicit facts of individual proposals under established Carroll principles and procedures.

(d) Technical effects

27. Opponents also challenged higher power on technical grounds which proponents debated with counter-arguments:

(i) Blanketing

28. The question here was whether stations operating with powers in excess of 50 kW can reasonably overcome certain potentially adverse effects which could occur near the transmitting system, such as:

- overloading the input of receivers, thereby blocking reception of other stations serving the area;

- the electrical charging of metallic objects--such as wire fences -- by the higher power radiations;
- interference to the operation of such equipment as electronic switches at telephone central offices;
- the possible exposure of human beings to harmful levels of radiation.

(ii) Ionospheric Cross-Modulation

29. On this point, the parties argued for and against the likelihood that AM signals transmitted at higher power would significantly induce cross-modulations of other radio signals in the ionosphere, thus superimposing the broadcast programs on other radio transmissions, both broadcast and non-broadcast.

(iii) Other Ionospheric Effects

30. Additionally, the parties offered conjectural argument as to the possibility that higher powered transmissions would deteriorate the functioning of the ionosphere as a reflector used for skywave transmissions of both broadcast and some non-broadcast signals.

31. We discuss these opposed technical contentions in section IV.

(e) Diversification of Program Sources

32. Some parties charged that Class I-A stations operating with higher power would become so dominant that undue concentration of media control would result. The proponents of higher power felt the multiplicity of other broadcast services and non-broadcast media would preclude this potentially damaging effect. Some cited the Fairness Doctrine and other requirements broadcasters must meet.

(f) Programming and Listening

33. The parties debated at length the value of program services to distant listeners and drew supportive, but contradictory, inferences from listener data. The latter included data compiled from a national radio listening survey conducted by Arbitron in 1975, telephone and mail responses to 25 listener surveys conducted between 1969 and 1976 by the licensees of 10 Class I-A stations, and a number of

surveys of farm listening to radio stations in Iowa and nearby states conducted in 1976 by Doane Agricultural Service, Inc. Some of the surveys by the broadcast stations were directed to listening by automobile and truck travelers.

34. We discuss in Section IV the factual submissions and the opposed contentions as to the value of clear channel and local radio services--a prime question bearing on the choices we have to make.

(2) "Duplication"

35. Many parties commented in support of action to end the exclusive nighttime occupancy of any Class I-A channel by a single dominant station, and advocated opening all 25 of them to unlimited-time use by additional stations. More than one station on a channel is referred to as "duplication."

36. Some parties would curtail the degree of protection generally afforded to Class I stations by other, Class II co-channel stations. Class II-A stations thus far authorized to operate on each of the 12 Class I-A channels afford nighttime protection to the 0.5 mV/m 50% skywave contour of the dominant Class I-A co-channel stations. This conforms with the long-established general norm for nighttime protection to the Class I-B clear channel stations.

37. Some parties would confine protection solely to the groundwave (primary) service areas of the Class I stations. This would subject to destructive interference all of the skywave service rendered by the Class I stations. If, as proposed by some, this were applied to Class I-B stations as well, AM skywave service would be destroyed altogether. Whatever deprivation that would represent to users of skywave service who are within the primary service areas of other stations, it would fall most heavily on those who live or travel in places which receive no AM or FM primary service.

38. Although differing as to the degree of protection Class I stations should have, the parties advocating duplication all join in urging that the value of broadcast services originating from distant stations has become enormously reduced since the days when AM was the only radio service and distant clear channel stations were the only source of broadcast programming to many millions more than today. They contend that, given the enormous increase in the numbers of AM stations, the establishment, growth and wider availability of FM, the establishment of television broadcasting, and its emergence as the dominant broadcast

service whose viewing peaks during the nighttime hours when radio listing has fallen off, there is far less dependence on transmissions by distant clear channel stations than in the days when the protection standards were developed to enable them to render service free from other-station interference at extreme distances from their transmitters.

39. While extolling the superior values of originations from stations close to listeners, the supporters of duplication seek differing kinds of benefits from the multiplications of new unlimited time stations on the clear channels.

40. The Corporation for Public Broadcasting (CPB), joined by National Public Radio (NPR), proposes a grid of non-commercial educational AM stations for which clear channel spectrum space would be reserved. They specify three sources: space made available by authorizing duplicating station assignment on the clear channels; reduction of the "separation" between AM frequencies from the present 10 to 8 or 9 kHz; and the allocation of AM broadcasting on frequencies below and above the present 545 to 1605 kHz AM band.

41. The National Black Media Coalition (NBMC) stresses the desirability of using at least part of any clear channel spectrum space which may be made available, to enhance the numbers of minority-owned and operated stations. The Daytime Broadcasters Association (DBA) and the licensees of numbers of daytime-only stations see the clear channels as a spectrum resource for enabling stations now limited to daytime hours, to operate unlimited time.

42. The common contention of all the various proposals favoring duplication is greater value to listeners of radio programming originating from nearby stations, as compared with the value of programs from distant stations. Weather, farm market reports, local news and local public affairs programming were particularly singled out in this respect.

43. The CCBS and licensees of Class I-A clear channel stations generally opposed duplication, and made arguments conforming with some of the arguments they used to support higher power, stressing importance of preserving, if not extending, the range of service available from Class I-A stations under the present rules.

44. The Association for Broadcast Engineering Standards (ABES) submitted detailed illustrative studies showing possible distributions of new 1-kW unlimited-time stations. They estimated 78 such stations on the unduplicated Class I-A channels.

III EXTENT OF EXISTING NIGHTTIME PRIMARY SERVICE

45. The starting point in considering how best to use the spectrum space on the Class I-A channels is the extent to which a major allocations objective - some service to all of the people of the United States - remains to be achieved. This question is particularly pertinent during nighttime hours when skywave propagation by unlimited time AM stations causes much mutual interference.

46. In 1961 when we last made significant changes in the clear channel allocations rules we again assessed the extent of existing radio service on the basis of the areas and populations with interference-free AM groundwave service, and estimated the numbers of those lacking it and therefore considered dependent on the inherently less satisfactory skywave signals from Class I stations. Then, as now, studies and maps of nationwide AM service indicated that over half the land area and about 26 million persons lacked interference-free groundwave AM service during the nighttime hours.

47. Since 1961, however, FM broadcasting has undergone widespread growth and acceptance, and we have for some time based our approach to radio licensing on recognition of the fact that AM and FM are contributing elements to a single aural broadcast service. Thus, as we pointed out in the Notice inaugurating this proceeding, it is no longer appropriate to consider AM service - its existence or its lack - independently of FM service, the other component of the nation's aural broadcast service. For this reason, the nationwide depiction of AM groundwave service at night prepared by and recently updated by CCBS no longer provides a useful indication of those areas dependent for radio service upon the skywave transmissions of distant Class I stations.

48. Studies prepared by the Office of Telecommunications and submitted as part of the record of this proceeding show the extent of existing FM service. This was shown on two bases. One showing depicted the area served by FM signals with a field strength of at least 50 $\mu\text{V}/\text{m}$. Another showing depicted nationwide FM service with a field strength of at least 1 mV/m .

49. For our purpose here - establishment of the nationwide picture of where primary aural broadcast service exists and where it is lacking - we find it appropriate to use OT's depiction of FM service of 1 mV/m or greater. While our rules recognize that in some circumstances an FM signal of at least 50 $\mu\text{V}/\text{m}$ is sufficient for usable service we have customarily, (as in Section 73.37(e) of the rules) used 1 mV/m as the minimum level of FM signal whose presence or absence is treated as

significant in establishing the number of FM services available at a particular place or area. This criterion has been used, for example, in determining the extent to which the proposals of individual applicants for a new AM station would provide a first radio service in the sense that the area or population to be served presently has neither interference-free AM groundwave service nor FM service of at least 1 mV/m field strength.

50. Some parties presented technical arguments against relying on OT's depiction of areas served with FM signals of at least 1 mV/m, but we find in them no adequate reason to reject the use of OT's depiction of such service in assembling a broad nationwide picture which, for the spectrum allocation purposes of this proceeding, sufficiently approximates the extent and locations of nighttime aural primary service. This depiction furnishes useful guidance in determining service needs and in considering how clear channel spectrum space may best be used to meet them. CCBS's depictions of AM nighttime primary service are open to some question and adjustment because of departures from the conventional methods of ascertaining the existence of interference-free AM service. However, as in the case of the FM service depictions by OT, for purposes of assembling a nationwide picture of AM nighttime groundwave service, we may satisfactorily use the showings made by CCBS in its updated depictions on this record of what it calls "Type B" nighttime primary AM service. We think it clear that further refinement of either the AM or FM showing would not be useful because it could not be expected to result in a substantial or significant difference in the nationwide measure of the area or count of the population lacking nighttime primary aural radio service.

51. Consolidating CCBS's mapped depictions of nighttime primary service with OT's depictions of FM signals of at least 1 mV/m, we developed a map which, on a reduced scale, is associated herewith as Attachment 1. It shows that only about one third of the land area of the contiguous 48 states lacks a nighttime primary aural broadcast service, as contrasted with the more than half of such area depicted as unserved on CCBS's AM maps. According to a population count derived from the 1970 U.S. Census map, fewer than 3-3/4 million people or of the 200 million who reside in the contiguous 48 states lack nighttime primary aural service as defined. This compares with the 26 million persons estimated by CCBS to lack nighttime AM primary service.

52. Our count of 3,750,000 lacking nighttime primary service is conservatively high for two reasons: we counted as unserved the entire population of all towns located on the borderline of the served areas; and we treated FM translators as serving no-one outside small towns in which they are located.

53. It must also be recognized that uncounted but substantial numbers of people who live where there are FM signals with a field strength of less than 1 mV/m but at least 50 uV/m are in fact provided with satisfactory FM service. A count by the Columbia Broadcasting System indicates that only about 1 1/4 million persons who lack AM nighttime groundwave service in the 48 contiguous states also lack FM signals with a field strength of at least 50 microvolts per meter (50 uV/m). On this reckoning, approximately 2 1/2 million people (the difference between 3 3/4 million and 1 1/4 million) who lack AM nighttime primary service have FM signals with field strengths ranging from 50 uV/m up to 1 mV/m. Making generous allowance for the effects of conditions which CCBS argues will preclude satisfactory reception of FM signals in that range, it would grossly underestimate the probabilities not to recognize that a substantial number of the foregoing 2 1/2 million people have satisfactory FM service, although of a field strength under the 1 mV/m level denoted as the lower limit of primary FM service. Even making the implausible assumption that only a third of that 2 1/2 million persons (830,000) have satisfactory FM service, deducting 830,000 from our count of 3,750,000 lacking primary service at night, it can be conservatively estimated that fewer than 3 million persons have neither AM primary service nor a satisfactorily usable FM service at night. But we place no reliance on this since, even were the actual number of unserved persons to be assumed - most implausibly - to be as much as a million higher than our 3 3/4 million figure, that would still indicate the substantially similar result of nighttime primary aural service being available to about 97.5% of the 200,000,000 inhabitants of the 48 contiguous states instead of the 98.2% who are served according to our count. Such a difference is not significant for purposes of establishing or revising nationwide allocations policy.

54. The essential point here is that the future use of clear channel spectrum space must now be determined in recognition of the fact that today all but about 2% of the population in the 48 contiguous states have nighttime aural primary broadcast service. This is far smaller than the proportion lacking nighttime AM primary service, on which CCBS and the station licensees seeking higher power heavily rely.

IV ACTIONS NOW PROPOSED BY FCC

55. The basic pattern of Class I-A channel usage was established over 50 years ago and remains essentially unchanged except for the addition of a single unlimited-time Class II-A station on each of 12 channels.

56. We here set out those conditions for the future use of the 25 Class I-A clear channels which, after considering the comments so far filed, we think would optimally serve recognized allocations objectives under the much changed conditions of today.

57. We reserve our final decision on all the questions arising in this proceeding until we have the benefit of further comment directed to the specific proposals here announced. We accordingly limit our discussion in this Further Notice to the more basic circumstances and considerations which at this stage make the actions we propose appear preferable to the numerous alternatives. We thus endeavor to facilitate further comment by the parties by stating the controlling considerations which have led us to the present proposals, and the purposes to which they are directed.

(A) Preservation of the 50 kW Power Maximum

58. For the reasons which follow, we propose to retain the present 50 kW maximum power for Class I-A stations.

(1) Balancing Public Benefits

59. Much has been said for and against authorizing Class I-A stations to operate at powers greater than the present 50 kW maximum. The question is not whether higher power could yield some public benefit, but whether, on balance, the public interest would be better served by the use of higher power or by retaining the present 50 kW ceiling, thereby opening wider possibilities for a larger number of additional stations serving audiences in their local communities and nearby areas.

(2) Potential For Expanded Services

60. The provision of a first nighttime aural primary service to persons now without AM groundwave or FM service is the most significant kind of gain which could be invoked in support of higher power. Yet only 4 Class I-A stations provided estimates of the numbers of people who would acquire their first nighttime aural primary service if they increased power. Those figures, rounded, indicate that 2 of the stations would each provide a first aural nighttime primary service to about 15,000 people. Another claimed 59,000, and the remaining station claimed 180,000.

61. It does not appear, however, that, in arriving at the foregoing figures, the parties took account of limitations imposed on the radius of useful groundwave service by the station's own skywave signals. This is caused by differences in the path traveled by a station's groundwave and skywave signals to points where both are received. The skywave signal travels upward and outward to the ionosphere, which reflects it back over another path down to a place of reception on the earth's surface which the station's groundwave signals have previously reached over the more direct and therefore shorter path which groundwave signals follow along the earth's surface.

62. The resultant time interval between the reception of a station's groundwave and skywave signals and phasing changes cause distortion or fading which interferes with satisfactory reception. This is considered to occur noticeably in the so-called "distortion zone" where the field strength of the station's skywave signal is in the range of half to twice the field strength of its groundwave signal. This distortion zone often occurs geographically where its effect is to shorten the range of a station's satisfactory groundwave service at night to something less than the distance to the 0.5 mV/m groundwave contour.

63. At higher power, with the present antenna system, the field strengths of both the skywave and groundwave signals of a station at any point of reception would increase by the same ratio. Since their relative values would therefore not change, the distortion zone would not shift geographically with the use of increased power, and the range of satisfactory groundwave service rendered by the station would consequently remain essentially unchanged, unless there were modifications to the antenna which resulted in an appropriate change of the radiation angle. The results of doing this would vary considerably, however, depending on numbers of factors including the frequency, the pertinent soil conductivities, and the amount of the power increase. Calculations by A. Earl McCullum, Jr. and Associates submitted on behalf of the licensee of WCCO, a Class I-A station at Minneapolis, show that, under differing combinations of the foregoing controlling variables, the potential for primary service gains through power increases is restricted in varying degrees. The estimates of primary service gains which have been submitted on this record do not appear to reflect the distortion zone. They therefore cannot be accepted as realistically reflecting the meaningful primary service gains which could be reliably expected to be realized if the stations in question used higher power.

64. Estimates were submitted for two other stations indicating the numbers of persons to whom higher power would bring a first AM primary service. Such figures do not, however, bear significantly on the questions before us since--as we announced in the Notice inaugurating

this proceeding--we will evaluate the extent of and the need for service by treating AM and FM not as separate services, but as component parts of the nation's aural broadcast service. Persons who receive FM service with a field strength of at least 1 mV/m cannot be treated as unserved for the purpose of establishing meaningful figures showing the potential of higher power for creating a first nighttime primary aural service.

65. Certain other kinds of potential service gains quantified by several Class I-A station licensees similarly offer little of controlling significance in evaluating the pros and cons of higher power. This applies, for example, to counts of people who would, as a result of higher power, receive a stronger skywave signal where the station already provides at least the recognized minimum standard of secondary service - i.e., 0.5 mV/m 50% skywave signal. We are unable to find convincing support for higher power in estimates of the numbers of people who would gain a new or improved skywave service which take no account of the numbers of persons in such gain areas who already have primary service. Some skywave service is already available everywhere in the contiguous 48 states, and most of the population can receive four or more skywave signals. Ten or more skywave services of at least the long recognized standard (0.5 mV/m 50% skywave signals) are available in much of the country. Considering the long distances, ranging into hundreds of miles, between transmitting stations and their outer skywave service areas, as well as the limited extent of listening to distant stations, we cannot find that improved or extended skywave service would sufficiently offset the disadvantages of higher power even with respect to the scattered and relatively few persons who lack nighttime primary service.

66. Nor does higher power appear to promise the provision of a first primary service to enough persons to justify authorizing it at the expense of reducing the numbers of new stations which could otherwise be authorized to provide for needed services to much closer audiences. In any case, whatever numbers of people might be shown to gain a first primary aural broadcast service at night through power increases of Class I-A stations, we believe, for reasons discussed later, that the value of programming services transmitted by stations located relatively distant from the listener cannot be equated with, or even considered as approaching, the presumptive value of service which could otherwise be provided by new stations located much closer to the listeners if power continues to be limited to a 50 kW maximum.

(3) Program Service

67. The argumentation among the proponents and opponents of higher power focuses in part on the value of radio programming to persons living many miles away from the station. The licensees of the stations seeking high power, the Clear Channel Broadcasting Service (CCBS), a number of farm and other organizations, and some individual persons strongly assert that the programming of clear channel stations is beneficial both to rural residents and nighttime highway travelers. They base their statements chiefly on the following grounds:

- That the larger stations are able, with their greater resources, to provide useful national and world agricultural market information and other agricultural news and program services of interest over wide areas; and that smaller stations lack the resources to provide programming of this kind or quality.
- That the general programming of clear channel stations, as well as their specialized farm programming, is of interest to both residential and mobile audiences far from the stations, citing listener surveys which we briefly note in the next section of this Further Notice.

68. Those who oppose higher power challenge the value of the programming of Class I-A stations to distant listeners on numbers of grounds. They find in the differences in crops and agricultural pursuits circumstances which preclude Class I-A stations from being responsive to particular local needs for information about local weather, local market conditions, local pest and disease problems, local calendars of farm organizations and local news and public affairs programming focused on local community problems. The opponents of higher power also stress the extent to which television provides programming of general nationwide interest, and the presentation of national and international news over the facilities of FM stations and smaller AM stations as well.

69. We think the truth lies between the extremities of the positions argued by the contenders, but that stations serving their own and nearby communities generally are in a decidedly better position to provide aural broadcast services which are meaningful and informative and beneficial to their listeners. It is a subject endlessly debated, on which some data take the form of listener surveys, which we turn to next. The Class I-A stations differ considerably in the extent to which they devote staff resources and broadcast time to the provision of programming of the kind which has traditionally been invoked as a prime justification for preserving the long reach of Class I-A clear channel stations with distant rural areas: their farm and agricultural

programming. Of the 25 Class I-A clear channel stations, 8 reported that they retain the services of at least one fulltime farm service director. They vary considerably in the amount of time devoted to the broadcast of farm news, farm market reports and other programming primarily of agricultural interest. Several of them reported no such programming. It amounted to at least one hour per week day in only three cases. There was much variation in the performance of stations with respect to programming of particular interest to farm populations in the areas lacking nighttime groundwave service.

70. Among the more concrete indications of the value of radio programming from distant sources are the data which we next note reflecting the patterns and extent of listening to the Class I-A stations.

(4) Listener Surveys

(a) Arbitron

71. Some indication of the extent of listening to clear channel stations in areas lacking primary service may be gleaned from data on this record compiled from Arbitron's 1975 nationwide radio survey.

72. At FCC's request, Arbitron compiled, from its national survey, data on 159 of the counties we had preliminarily designated as lacking FM signals with a field strength of at least 1 mV/m. Arbitron had received usable listener diaries from those 159 counties but not from other counties we had additionally named.

73. One of the compilations prepared by Arbitron is entitled "Nighttime Radio Use in Pre-Selected Counties." After eliminating 33 of the 159 counties in that report, which our subsequent studies show as having AM groundwave service at night, we note the following data on listening to Class I-A clear channel stations in the remaining 126 counties, all or the larger parts of which lack nighttime primary service.

74. As Arbitron itself acknowledged, and some parties point out, too few diaries came from many of the individual counties to permit reliable conclusions as to listening habits within those counties individually. We think, however, that enough diaries were received in the aggregate to throw useful light on questions pertinent to the basic allocations issues before us in this proceeding.

75. Arbitron received 888 usable diaries from the 126 underserved counties in our study. Only 352 (39.6%) of those 888 diaries indicated any nighttime radio listening at all. Among those

352, only 37 diaries reported listening to one or more Class I-A stations. Those 37 diaries constituted 4.1% of the 888 usable diaries from the 126 counties.

76. The 352 diaries had collectively made 525 separate mentions of particular radio stations listened to at night. Of those 525 mentions, 47 (fewer than 1 out of 10) were mentions of Class I-A stations. Only 8 of those 47 mentions were made by diarists located more than 750 miles from the Class I-A station mentioned.

77. In all 7 counties where diarists made 8 mentions of listening to distant Class I-A clear channel stations, there were mentions of listening to 1 or more (up to 7) other stations as well.

78. It is possible that a survey based on a larger sampling (i.e., more diarists) might reflect more listening to clear channel skywave signals than this Arbitron survey indicates. There is, however, no rational basis for expecting the figures reflecting listening to attain the magnitude which would be necessary to offset the clear showing of relative disinterest in nighttime listening to distant Class I-A stations or the advantage of radio programming from nearby sources over that produced far away.

(b) Listener Surveys by Stations

79. Reports (and in some instances copies) of communications received by mail and telephone from listeners to 11 of the Class I-A clear channel stations showed some scattered listening on home or vehicle radios far from the stations. But the 20 such surveys on this record which appear to provide at least minimally usable data indicated that, generally, an overwhelming preponderance of listeners were located within a 750-mile radius of the station. A substantial portion of them are located considerably closer to the station than that.

80. While fully recognizing the indications in the station surveys that some persons living or traveling at greater distances do listen to far away Class I-A stations, we have been unable to find merit in further extending the outer reach of Class I-A stations by permitting them to operate at powers exceeding 50 kW, particularly at the cost of diminishing the potential for adding new co-channel and adjacent channel stations able to serve people living much closer to the principal communities served.

81. We recognize that listening to Class I-A stations may increase to some extent in areas where higher power would provide additional skywave signals or improve existing ones by increasing their field strength and making them less subject to intermittent fading. But again, such listening would have to increase to levels far beyond any reasonable expectancy to offset the enormous qualitative preference we think clearly attaches, under today's conditions, to creating the opportunities for larger numbers of new stations serving nearby listeners. This objective is best served by retaining the present 50 kW maximum power.

82. The preferability of optimizing the potential for new stations by holding the power maximum at 50 kW is not offset by such figures as CCBS gleans from Arbitron. Certain of these data indicate that the few diarists in underserved counties who did listen to clear channel stations reported doing so an average of 17 partial or full quarter hours between 9:00 pm and 4:45 am - almost as much as the 19 quarter hours similarly reported for greater numbers of listeners in the home markets of those stations. Nor do we think the case of higher power is significantly strengthened by CCBS's derivation from Arbitron data of a showing that 43% of the clear channel listeners in the underserved counties listened to Class I-A stations at least 3 nights per week, 28% on 4 or more nights, and 10% on six or more nights.

(c) Doane Farm Broadcast Studies

83. Among the listener surveys submitted were a number prepared under the auspices of the National Association of Farm Broadcasters. Conducted for the most part in 1976 and entitled "Doane Farm Broadcast Study" for particular stations, each of these surveys compiled data indicating listening by farmers to a particular radio station and to other radio stations within that station's principal service area.

84. One such study was prepared for WHO, the Class I-A clear channel station operating on 1040 kHz, at Des Moines. That survey covers 69 central Iowa counties and 5 contiguous counties in northern Missouri. These counties appear to lie within the 0.5 mV/m ground service contour of WHO as indicated on Figure 1 attached to the engineering exhibit accompanying the comments filed in this proceeding by Palmer Broadcasting Company, licensee of WHO. As might be expected, WHO led all other radio stations in the percentages of farmers in the survey area listening during 9 half-hour periods (5 morning, 3 mid-day and 1 early evening). Listening in those periods to WHO was reported by

42.9% to 67.7% of the farm homes surveyed. WHO was named by 44.2% of the farmers surveyed as the radio station they feel "provides the most useful and reliable programs and information on weather, farm markets and farm news and information" - over 3 times the percentage for the next most popular station in that respect.

85. Doane farm broadcast studies prepared for other stations in Iowa indicate that WHO commands substantially less of an audience than other stations in numbers of counties within WHO's primary service area. For example, a Doane survey conducted in 28 eastern Iowa counties indicates that WMT, a 5 kW station at Cedar Rapids, Iowa was named by 41.1% of the listening farmers as the most useful and reliable for farm program services, while 17% named WHO. It is significant that 22 of those 28 counties lie wholly within WHO's 0.5 mV/m groundwave (primary service) contour, while substantial parts of the remaining 6 counties also fall within that contour.

86. During 4 morning, 3 mid-day and 2 early evening half-hour periods, between 36.0% and 58.4% of the farms surveyed listened to WMT, while 9.1% to 24.8% of them listened to WHO. These figures give some indication of the extent to which, even within the primary service area of a major clear channel station which devotes considerable staff and programming to farm needs, the farm listeners tend to patronize a closer station.

87. Another instance of this is reflected in a Doane survey prepared for station KMA, a 5 kW AM station at Shenandoah, Iowa. It was named by 44.9% of the farmers surveyed as the most useful and reliable source of programming of interest to farmers - nearly 4 times the nearest competitor. KMA's farm audience shares were higher than those of the other stations surveyed, and ranged from 27% to 54.8%, while WHO's shares for the same periods ranged from 6.8% to 23.9%. WHO's listening exceeded KMA in 2 of the 10 periods while in 8 it ranged from 13% to 49% of KMA's share. Every county in KMA's listening area surveyed is within the .5 mV/m groundwave contour of WHO.

88. Another Doane survey indicates that even a small Class IV station at Burlington, Iowa (KBUR) could, during some periods, attract larger audiences than WHO, whose groundwave service covers all of the 4 southern Iowa counties and 1 contiguous Illinois county included in the KBUR listener survey. While KBUR was reported to have a sharply lower farm audience share than WHO during 2 half hours KBUR was moderately lower than or tied with WHO in 3 other periods and exceeded WHO in 2 periods.

89. Doane surveys thus show that closer by stations can exert a highly significant draw on listeners even within the primary service area of a Class I-A stations.

90. To sum up, the several sources of listener data in the record of this proceeding indicate the relative lack of value of distant signals, especially distant skywave signals, as compared with the much more heavily patronized program service provided by nearby stations. This illustrates the waste of spectrum space which would result from permitting Class I-A stations to use higher power, as a means of further extending the already long reach of their usable groundwave signals, or of extending the range - already counted in hundreds of miles - of their usable skywave signals. These listening data underscore the preferability of retaining the 50 kW power maximum in order to maximize the numbers of stations able to provide the more useful, and more used, programming services nearby stations can offer.

(5) Interference from Foreign Stations

91. Some proponents argued that higher power would help to overcome interference received within the United States from stations outside this country.

92. A report of monitoring conducted by FCC's Field Operations Bureau on May 20 and May 22, 1976 at twelve locations distributed throughout the 48 contiguous states records 197 instances of interference detected from stations outside the United States. Only 21 of those 197 instances were monitored at locations within the 750-mile radius of the US Class I-A station's transmitter - the general range of skywave service of the standard of 0.5 mV/m 50% skywave signal or better.

93. Of the 21 instances, 7 were on the channels occupied by Class I-A stations which did not state any clear intention to adopt higher power even if permitted. All of the remaining 14 instances were monitored from locations about 600 miles or more from the Class I-A stations concerned. That is to say, the only 21 instances reported at locations within the 0.5 mV/m 50% skywave contours of the U.S. Class I-A stations were nevertheless detected so far away from the Class I-A station that improvement achieved by the use of higher power could only serve to bring programming in more clearly from very distant stations at the cost of reducing the numbers of new stations which could otherwise be assigned to the Class I-A channels concerned.

94. Studies indicating interference from foreign sources to the service areas of three Class I-A stations (WSM at Nashville, WGN at Chicago and WWL at New Orleans) were submitted as part of an engineering statement submitted on behalf of the CCBS. In the case of WSM the interference was indicated to occur in areas extending from about 250 to 750 miles from the station. A similar showing was made for WGN. In the case of WWL the interference calculated from a station in Havana,

Cuba was indicated on a map as interfering with reception in a wide area which included all of the primary (groundwave) service area of the station. This depiction appears to be based on skywave-to-skywave interference, and does not reflect interference-free groundwave service which is rendered by WWL.

95. Primary service, not indicated on CCBS' submission, is available from other stations throughout most of the areas in which foreign interference to the three foregoing stations is depicted. Multiple skywave services numbering for the most part 5 or more are available throughout those interference areas.

96. Neither these nor other pertinent submissions have demonstrated that higher power - at the cost of reducing or eliminating the potential for new stations - could be justified as a means of overcoming interference from foreign stations. In so evaluating the data and argument on this subject, we do not rely on speculation advanced by some parties that if U.S. Class I-A stations were to increase power, others (who are in violation of NARBA in some cases, or who in other cases are not NARBA signatories) would make offsetting power increases which would nullify the effect of power increases by U.S. Stations.

(6) Other Considerations Affecting Higher Power

97. Opponents additionally object to higher power on economic, social, and technical grounds: excessive competitive advantage, excessive concentration of control and excessive radiation.

(a) Competitive Impact

98. The contention that the use of higher power by Class I-A stations would inflict intolerable economic injury on competing stations, to the detriment of their capacity to serve the public, was urged by the licensees of 17 AM stations, the National Radio Broadcasters Association (representing over 700 AM and FM stations), several state and local broadcasters' associations and others. The 17 included licensees of 2 Class I-B stations operating at 50 kW power in the same city as the pertinent Class I-A station. The remaining 15 included 4 Class II stations, 8 Class III stations and 3 Class IV stations. Of the 17, 5 (including the two Class I-B stations already mentioned) are located in the same city as the Class I-A station whose power increase they object to, and 12 were located outside those cities. The 17 included 14 unlimited-time stations, 2 daytime only stations and one limited time station.

99. Some of the objectors offered only unsupported assertions such as that higher power would "injure thousands of local stations financially" or would cause "economic devastation" or "irreparable financial harm" to smaller stations in the area. Others rationalized their objections with argument that, with higher power, Class I-A stations would siphon or fractionalize audiences of the smaller local stations, and would capture or divert undue shares of the advertising dollars previously available to the smaller stations. Supporting data were not furnished.

100. Counter arguments by CCBS and the Class I-A stations seeking higher power included contentions that:

- the claims of economic injury were unsupported;
- the proponents of higher power should not be called upon to prove a negative;
- questions about economic injury were more suitable for resolution in adjudicatory hearings on specific applications for higher power.

101. A study prepared by Professor Edward J. Mitchell of the University of Michigan's Graduate School of Business Administration indicates that an additional signal may be expected to reduce the audiences and revenues of existing stations only by very small amounts.

102. We are unable to find that a convincing case has been made for the proposition that higher power may generally be expected to exert competitive impact adverse to the public interest. We agree with those who contend that the question of economic injury here, as in other instances, is better suited to evaluation and decision in ad hoc adjudications based on the facts of particular cases.

103. We do not pause to discuss the pros and cons of the comments on economic injury in more detail because the preference for maintaining the present power limit--which we believe is clearly demonstrated on other grounds--moots this issue. In making this assessment, we have not relied on the contraverted and thinly supported contention about the potential of higher power to inflict economic injury.

(b) Concentration of Control

104. Opponents of higher power argue that permitting it would disserve the objectives of diversification of control over mass media, and would unduly concentrate in a few stations an objectionable degree of mass media control.

105. Energetic pumping may be needed to keep this contention afloat in the sea of broadcast signals flooding places where the American populace predominantly lives, with multiple waves of broadcast programming transmitted by 8,500 AM and FM radio stations, nearly 1,000 TV stations, and further disseminated by additional thousands of FM and TV translators and cable television systems.

106. In noting that most Americans are thus assured multiple broadcast services from diverse--and for most part, numerous--sources, we neither intimate that we think the goal of diversification of broadcast programming has been fully attained nor discount the importance of continuing efforts to enhance the degree to which it has so far been achieved. Nor do we mean to suggest that we see the enlargement of what are already the most extensive service areas of any class of station as devoid of any potential of undue media concentration.

107. It is noteworthy, however, that it was not in derogation of the importance of diversification that the Class I-A stations have always been afforded protection from interference greater than that provided to any other AM stations. Class I-A stations have thereby been afforded wider reach for the explicit purpose of enabling them to provide usable skywave signals to people living in more sparsely settled areas where primary service is not available from stations closer by.

108. As a result of being enabled to place interference-free signals far out from their transmitters, Class I-A stations typically place serviceable signals over areas encompassing tens of millions of persons. Service needs as they existed in the past justified--if not commanded--the establishment of such vast service areas and such potentially vast audiences for clear channel stations, which are unavoidably limited in numbers by the relentless imperatives of nighttime propagation conditions in the AM band.

109. As we now re-examine Class I-A clear channel allocations, we believe we should similarly give controlling weight to service needs as we find them today. Accordingly, in choosing between divergent courses of allowing higher power or of opening the way to more new co-channel and adjacent-channel stations than could be attained if higher power were permitted, we have been impelled to our preference for the latter not because we can perceive in higher power a demonstrably damaging diminution of media diversity or realistic opportunity for Class I-A stations to exert dominating "concentration of control". Rather, we have found under today's conditions that the need for more

stations able to serve the public in and relatively near their principal communities has been convincingly shown to be greater than the need for augmenting the capacity of clear channel stations to extend the reach of their signals through the use of higher power. In so finding we have not placed reliance on the questionable claim that Class I-A stations with higher power would become devouring mass media monsters. Such a contention is hardly borne out by fifty years of experience with the operation of Class I-A stations protected, either totally, or to a degree greater than any other class of station, against interference from co-channel operations at night.

(c) Technical Effects

110. Opponents objected to higher power for several alleged terrestrial and ionospheric effects. We discuss them only briefly because, for the below-stated reasons, none of the technical arguments has been accorded controlling weight in arriving at our proposal to reject higher power.

111. (i) Blanketing. We do not question the arguments presented that blanketing problems would occur with the use of power greater than 50 kW. With field strength running extremely high out as far as five or more miles from the transmitter site, there would be problems involving receiver overloading, electrical charging of objects, interference to the operation of telephone office equipment, internal and external cross-modulation, and others. However, these anticipated problems are not of such magnitude as to be beyond state-of-the-art techniques for resolving them.

112. We would expect and require, if higher power were authorized, that transmitter sites be selected in areas where the least number of potential problems would be incurred; and our rules (see Section 73.88) require a licensee "to satisfy all reasonable complaints of blanketing interference within the 1V/m contour." Objects which might be electrically charged could be grounded or detuned. Also, interference to the operation of nearby telephone equipment could be corrected through the use of shielding or other devices. The principal contention of AT&T appears to be that its subsidiary operating companies should be spared the cost of such needed corrections, not that such correction could not be made.

113. A question has been raised as to the potential biological effects that might result from the use of higher power. At the present time there are no meaningful standards for determining what levels of radiation at the subject frequencies could be expected to be biologically

harmful. In light of our proposal to retain a 50 kW maximum power level, we need not defer acting on clear channel reallocations until such indefinite future time as adequate data and reliable standards have been developed.

114. (ii) Interference to Adjacent Channel Stations.

Another ground of objection advanced against higher power is resultant interference to adjacent channel stations. The remedy of a low pass audio filter has been plausibly suggested; but we do not, in any event, propose to authorize higher power.

115. (iii) Ionospheric Effects. Objections that signals transmitted at powers in excess of 50 kW would induce interfering cross-modulation with other signals reaching the ionosphere, or would appreciably deteriorate the capacity of the ionosphere to function as a reflector of radio signals, were neither supported nor refuted conclusively. The Office of Telecommunications advised that additional testing programs would be needed to evaluate the merits of so-far insufficiently supported claims. It is unnecessary, however, to incur either added cost or delay for such testing since, on the entirely independent grounds of service needs, we in any event propose to retain the present 50 kW power maximum.

(7) Across-The-Board 9 - Times Power Increase

116. The licensee of Class I-A station WCCO at Minneapolis proposed that all AM broadcast stations of all classes operating on all channels be authorized to increase power to 9 times the present levels. On this basis, WCCO proposed to increase its own power 9 times to 450 kW. Two additional licensees support this approach.

117. This proposal is beyond the scope of Docket 20642, which encompasses only the Class I-A channels. Apart from the fact that this proposal involves all AM broadcast channels, it would necessitate prior negotiation and agreement with the neighboring countries whose use of AM frequencies is governed by international agreements.

118. Also, this proposal would call for large outlays for transmitting equipment which may be beyond the means of many stations whose service areas would be much reduced if the increased field strength of interfering signals were not offset by corresponding power increases of their own.

119. These, in any event, are not questions which we could appropriately attempt to deal with in this proceeding.

(8) The Decisive Factor: Service

120. The fulcrum on which the arguments for and against higher power balance most decisively is potential service gain. We have therefore sought to weigh carefully the service gains realizeable with higher power against others best attainable if power continued to be restricted to the present 50 kW maximum.

121. In comparing service gains foreseeable with and without higher power, mere head counts of the numbers of persons standing to benefit in some fashion or other cannot be permitted to dictate the choice. When dealing, as we do here, with basic spectrum allocations, some qualitative differences among various kinds of service gains bear much more significantly on the legislated goal of a "fair, efficient and equitable distribution of radio service" than mere comparative enumerations of populations in gain areas.

122. We do not overlook the enthusiasm for distant stations displayed in some testimonials filed on behalf of higher power when we recognize the predominant - in some cases the virtually exclusive - orientation of radio stations to their own and relatively nearby communities. With the shift of most broadcast programming of national interest to television, the predominant fare of aural broadcasting has become a combination of recorded programming and locally oriented live program services. Because of this, the value of adding even primary service out at the periphery of the groundwave service area of Class I-A stations - which is usually up to 100 or more miles from the transmitter - does not weigh comparably, under today's very much changed patterns of broadcast programming and listening, with the patent benefit which a first primary service, (or the fulfillment of some other kinds of needs noted later) can provide to audiences living much closer to a station. We accordingly believe that mere comparative counts of populations in primary gain areas cannot govern our election between higher power and the maximization of the potential for new stations able to serve listeners who live closer by, although they may aggregate smaller numbers.

123. In sum, under today's conditions the preferability of aural broadcast service from a closer source, as compared with far-distant sources, is so marked that it decisively impels us to favor retaining the present 50 kW maximum power in order to maximize the opportunities for providing additional services.

(B) Shared Use of Class I-A Clear Channels

(1) Protected Class I-A Service Areas

124. Some parties urge that, whether or not we authorize higher power, we should in any event permit no further duplication of station assignments on the Class I-A clear channels. This is proposed on the essential basis that there should be no curtailment--by interference from added cochannel stations--of the service Class I-A stations can render if further channel sharing is barred at night within the 48 contiguous states. We are asked to maintain such a barrier alike for the 11 channels now occupied exclusively by a single class I-A station, the 12 on which one additional station now operates, and the remaining two, the use of which the Class I-A station now shares with two other unlimited time stations located in the 48 contiguous states.

125. This position is extreme. Even in 1961, when we still counted persons lacking nighttime primary service as numbering over 25 million, we recognized that it would not be appropriate to continue indefinitely to confine the nighttime use of 25 AM clear channels to a single station operating at 50 kW. That evaluation is strongly reinforced with the recognition, today, that fewer than 4 million persons lack nighttime primary radio service, and by the fact that -- making generous allowance for the imprecision of available listener data--there is scant listening on any regular basis to 50 kW stations located more than 750 miles away. The showings that a relatively few more distant residents or travelers do listen to far away Class I-A stations do not justify the preservation of the possibility of such reception at the cost of barring additional stations needed for the far more useful purpose of providing local service to relatively nearby audiences.

126. We are thus unable to see merit in the status quo, which would amount to the perpetuation of a now outmoded barrier to placing any additional stations on Class I-A clear channels.

127. On the other hand, we are urged to end protection to any skywave service provided by Class I-A stations. Some would go even further and permit new stations to place interfering signals even within the present primary (groundwave) service areas of the Class I-A stations. One proponent advocated establishing the 2.5 mV/m groundwave service contour as the protected service contour. Others would have us reduce substantially the maximum power now permitted for Class I-A stations, thus effectively reducing their status and curtailing their capacity to serve their metropolitan areas which, in some instances, are extensive.

128. Proposals such as the last-mentioned one go, we think, to unwarranted extremes, and depart excessively from the previously established nighttime protection standard for duplicated clear channel Class I stations: i.e., protection by co-channel Class II stations to the 0.5 mV/m 50% skywave contour of the Class I station. This standard applies to already duplicated Class I-A channels and conforms with the even longer established degree of protection accorded to Class I-B clear channel stations. It protects from objectionable interference areas where the Class I station provides reasonably usable signals. It permits interference to areas--generally more than 750 miles or so from the station--where intermittence, fading, and weakness of signal preclude generally satisfactory service and permit only random or sporadic reception. Always of questionable value, such service cannot on any reasonable basis be viewed today as warranting preservation at the cost of barring the addition of needed stations on the least crowded portion of the AM spectrum.

129. We accordingly propose, as one alternative, to establish the 0.5 mV/m 50% skywave contour of the Class I-A stations as defining the areas which new stations must individually preserve from objectionable interference. Any lesser standard of protection to Class I-A stations would remove some usable signals now available to some places dependent on skywave services.

130. In referring to the location of a protected 0.5 mV/m 50% skywave contour as 750 miles or so from the transmitter, we have for convenience used an approximation from which departures occur in practice. First, the precise location will vary by some tens of miles with differences in antenna systems. Also, numbers of co-channel Class II stations, each individually protecting the 0.5 mV/m 50% skywave contour, may be expected--because of cumulative effects--to create some additional interference within that contour. There is no rational basis, however, on which to expect shrinkage of the service area within that contour to be large enough to upset the balance of basic considerations underlying our present proposals. That balance does not teter precariously on the 0.5 mV/m 50% skywave contour, and it remains unaffected by cumulative interfering effects such as those now experienced, and permitted, in the case of Class II stations on Class I-B clear channels.

131. We also invite comments on and will consider the alternative of ending protection for skywave services areas of some or all of the Class I-A stations, particularly those located east of the Mississippi River, where AM and FM primary service is more plentiful than in the West. Nighttime protection would, instead, be afforded to the 0.5 mV/m groundwave contour of the Class I-A station. Proponents of this protection standard should submit showings as to the additional numbers of new stations which this step would make possible and comparisons of the needs they could serve with the value of the skywave services so eliminated.

132. Although, as stated in Section IV(B)(4)(b), we propose initially to defer acceptance of applications for new daytime-only Class II stations on the Class I-A channels, we invite comment at this time on the question of whether protection to the Class I-A stations should be changed from their 0.1 mV/m contour to their 0.5 mV/m contour.

133. Having reviewed the sparse comments in this docket on standard radiation patterns, we see no reason not to require their use by new Class II station on the Class I-A clear channels.

(2) Objectives

134. We propose to provide for acceptance of applications for unlimited-time facilities on the 25 Class I-A clear channels which would either serve one of the purposes set out in Rule Section 73.37(e)(2), or merit waiver of those threshold requirements because they would help to remedy the dearth of minority-owned stations, or present other sufficiently meritorious grounds for waivers.

135. The application of Section 73.37(e)(2) would permit the filing of applications which assure:

- ✓ (i) That at least 25 percent of the area or population which would receive interference-free primary service at night from the proposed station does not receive such service from an authorized AM broadcast station or service from an authorized FM broadcast station with a signal strength of 1 mV/m, or greater, or,
- ✓ (ii) That the proposed station would provide the community designated in the application with a first or second authorized nighttime aural transmission service, and no FM channel is available for use in the community, or,
- ✓ (iii) That at least 20 percent of the area or population of the community designated in the application receives fewer than two aural services at night from authorized stations, and that no FM channel is available for use in the community.

These purposes, well established for AM stations on other channels, are similarly suitable for new unlimited-time stations or nighttime facilities for authorized daytime-only stations on the Class I-A channels; and we propose to permit use of the full range of operating powers which are permissible for Class II stations generally: from 0.25 to 50 kW. Geographic limitations such as for Class II-A stations would not be useful under our present proposals.

(3) Opportunities for More Minority-Owned Stations

136. The Commission, the Executive Branch, and the Courts, noting the marked dearth of minority-owned broadcast stations, have recently expressed increasing recognition of the deficiency this represents in fulfilling the public interest objectives of the nation's broadcast service. ^{4/} It will accordingly be our policy to give attentive consideration to the possible merit of granting waivers of the above-noted rules to minority applicants. We do this in recognition of the large unsatisfied need for minority-owned stations which exists in numbers of large multiple-station communities where large numbers of minority persons live, and where new stations could not meet the stated threshold requirements of the rules. It may be easier to meet such requirements in the case of stations serving minorities living on Indian reservations, but we would of course consider waiver requests, where needed, for them also.

137. We believe this waiver process is the method most conducive to advancing the goal of enhanced minority ownership and operation of broadcast stations, while avoiding exclusions of non-minority applicants or the preclusion of opportunities, either under the rules or under rule waivers, for new stations on the Class I-A clear channels which would serve other purposes. In according due recognition to the dearth of minority ownership of broadcast stations and the public purposes which could be served by enlarging such participation by minorities in this broadcast service, we establish no quotas or automatic exclusions or inclusions, but leave the way open to consider, on the facts of each case, the public benefits promised by minority applicants, as against the public benefits which may be expected to flow from use of the spectrum by any others, either for purposes recognized in the rules or for any other purpose for which rule waivers may be shown to be meritorious.

(4) Daytime-Only Stations

(a) Extended Hours of Operation

138. The Daytime Broadcasters Association and numbers of station licensees urged that Class I-A clear channels be used to accommodate unlimited-time operations (or extended hours) for daytime-only and limited-time stations.

^{4/} TV 9, Inc. v. FCC, 495 F.2d 929 (1973), cert. denied 418 U.S. 986. Garrett v. FCC, 513 F.2d 1056 (1975).

FCC Statement of Policy on Minority Ownership of Broadcasting Facilities, FCC 78-322, May 25, 1978.

Office of Telecommunications Policy (OTP) Petition for Issuance of Policy Statement, filed with FCC January 31, 1978.

139. To the extent that they could meet proposed requirements set out in Sections IV-B(1), (2) and (3), the licensees of existing daytime-only and limited-time stations would be able to apply for authorization to operate unlimited-time on Class I-A clear channels.

140. Some licensees, who may be unable to meet the foregoing requirements, have urged special considerations such as that extended hours of operation would enable them to provide agricultural programs, in which they specialize, at convenient morning hours to much larger numbers of farm listeners located over a much wider area. The appropriate way to obtain consideration of proposals believed to have special merit, but which do not comply with general requirements, or the rules, would be to submit duly supported requests for waivers of such requirements. We cannot appropriately act upon such ad hoc proposals in this broad, nationwide allocations proceeding.

(b) New Daytime-Only Stations

141. We propose to defer accepting applications for new daytime - only stations on the Class I-A clear channels until we find such deferral no longer necessary to avoid preclusion by daytime-only stations of potential for needed services gains realizable from unlimited-time Class II stations.

5. Noncommercial Broadcasting

142. The Corporation for Public Broadcasting (CPR), in comments supported by National Public Radio (NPR), which were accompanied by much impressively detailed supporting data, analysis and documentation, proposed three methods for making possible the assignment of considerable numbers of additional noncommercial AM radio broadcast stations.

143. Two of those methods--use for AM broadcasting of frequencies below and above the present AM band, and the reduction of AM channel separations from the present 10 kHz to eight or nine kHz--are beyond the scope of this proceeding, and would require international concurrence.

144. We have been unable to evaluate the third proposal--reservation of clear channel spectrum space for noncommercial educational use--as commanding a preference over the other needs we have noted in this Further Notice, only a part of which could in any event be met with the Class I-A spectrum space we are able to make available. In these circumstances, while recognizing the worthwhile nature of the purposes for which CPB and NPR seek a reservation of AM spectrum space for noncommercial use, we must regretfully decline to adopt their proposals to add a substantial reservation of AM spectrum space to the existing provisions for exclusive noncommercial use of 20 FM channels.

6. Other Demands for Clear Channel Spectrum.

(a) KOB and 770 kHz.

145. The licensee of KOB, authorized to operate at Albuquerque, New Mexico as a Class II-A station on Class I-A channel 770 kHz, recurs in this proceeding to a long-standing request for authorization to operate in the manner of a Class I-B station, mutually protecting and receiving directionalized protection from the dominant Class I-A co-channel station, WABC at New York City. WABC, wishing to continue omni-directional operation, objects.

146. Questions about the appropriate mode of KOB operation on 770 kHz have been before us for 37 years, since November, 1941, when its operation was shifted to 770 kHz as necessitated by international agreement on the use of AM channels in North America. No other station assignment among the thousands so far established has approached this one in the length, complexity, and thoroughness of the consideration that has been accorded in adjudicatory and rulemaking proceedings before the Commission, and in repeated judicial reviews. It required five pages of the Report and Order we adopted in 1976 on this matter in Docket 6741 59 FCC 2d 32-36, even to outline the major developments affecting KOB's use of 770 kHz since 1941. We concluded in that proceeding that KOB should function as a Class II-A station directionalized to protect the 0.5 mV/m 50 percent skywave contour of co-channel Class I-A station WABC at New York City operating omni-directionally. This decision was affirmed by the Court of Appeals of the District of Columbia, Hubbard Broadcasting, Inc. v. FCC, _____ F.2d _____ (1978), The United States Supreme Court denied certiorari, _____ U.S. _____, (1978).

147. In comments filed in this proceeding, KOB would have us conduct still further proceedings through which it persists in seeking what we considered and rejected in the above-cited Report and Order (authorization to operate on 770 kHz in the manner of a Class I-B station at Albuquerque, mutually protecting and receiving mutual protection from WABC, which would be obliged to be directionalized in the manner of a Class I-B station). The specific question of whether to provide for the Class I-B mode of operation on 770 kHz has been before us since 1944, when we instituted an adjudicatory proceeding in Docket 6584 to consider it and other possible modes of operation by KOB. In 1958, we concluded in favor of Class I-B type operations by KOB and WABC sharing 770 kHz. The Court of Appeals of the District of Columbia, when it affirmed this decision, American Broadcasting-Paramount Theatres, Inc., 280 F.2d 631 (1960), noted and characterized as an "inequity" the fact that WABC was being required to directionalize its operation while the other two network "flagship" stations, WCBS on 880 kHz and WNBC on 660 kHz, would be permitted to continue to operate omni-directionally. The

court indicated its expectation that the Commission would provide opportunity in appropriate proceedings to deal with this disparity, which the court considered objectionable.

148. In 1961, in our decision in the general Clear Channel rulemaking proceeding in Docket 6741, we rejected, as undesirable, the general pairing of Class I-A stations with another Class I co-channel station, and adopted, instead, reallocation plans in conformance with which WCBS and WNBC were permitted to continued omni-directional operation. Pursuant to the above-noted 1960 mandate of the Court, we proceeded then to consider (in further adjudicatory proceedings in Docket No.6584) whether, taking into account all the relevant circumstances, the disparity in requiring WABC to directionalize while WCBS and WNBC remained omni-directional was justified. We concluded that it was, 35 FCC 36, (1963).

149. Upon review, the Court of Appeals for the District of Columbia reversed, American Broadcasting Paramount Theatres, Inc. v. FCC 345 F.2d 954 (1965), and directed the Commission to conduct still further proceedings to remedy what the Court found to be unacceptable distinctions in the treatment of the three New York network-owned AM stations. For that purpose, we reopened the Clear Channel Docket 6741 to consider how KOB could best be authorized to operate on 770 kHz while meeting the Court's requirements with respect to equivalent treatment of the network-owned "flagship" stations. On April 21, 1976, after considering detailed submissions by the licensees of KOB, WABC and other interested stations, we adopted our above-cited Report and Order definitively establishing KOB's status as a Class II-A station obliged to protect WABC operating omni-directionally as the Class I-A station on the channel, at New York City.

150. In the present proceeding, KOB asks that we issue a supplementary notice of proposed rulemaking looking toward permitting applications for a second Class I station operating in a class I-B mode which would mutually protect and receive protection from the present Class I-A station operating on 13 of the Class I-A clear channels: 660, 670, 720, 770, 780, 880, 890, 1020, 1030, 1100, 1120, 1180, and 1210 kHz. This proposal is similar to, but much more sweeping than the proposal on which we invited comments in our 1958 Further Notice of Proposed Rulemaking in Docket 6741, in which we proposed I-B type pairing of two Class I stations on five of the Class I-A clear channels. After considering responsive comments, we subsequently rejected Class I-B pairing as an undesirable general method of reallocating the use of the Class I-A clear channels for reasons stated in our 1961 Report and Order in Docket 6741, 31 FCC 565, 570.

151. We have again, in the instant proceeding in Docket 20642, considered this general mode of clear channel reallocation under the changed conditions of today. Again, we find it undesirable. The delays and problems in accommodating new directional antennas which in crowded metropolitan areas would meet zoning, environmental, aircraft safety and other requirements, contribute to the undesirability of ordering directionalization of Class I-A stations. That is in any event undesirable because service gains from a second co-channel Class I station could be achieved only at the excessive cost of uprooting patterns of service to metropolitan areas and in some cases, virtually throughout the home state of the present Class I-A station, on which the public has come to rely over a period of decades.

152. The service gains which directionalizing the Class I-A station would make it possible for a co-channel station to provide would occur beyond the outer reach of the interference-free signal a Class II station can provide with the Class I-A continuing undisturbed omni-directional operation. Thus, the gains achieved at the cost of dislocating longstanding service by the Class I-A station would generally fail to achieve today's goal of service from radio stations able to orient their broadcasts to the needs of persons living relatively nearby.

153. A general program of I-B type pairing on Class I-A channels would be subject to the additional disadvantage that it would trade primary service gains in some areas for primary services losses in others. This would be especially objectionable for persons who would thereby lose their only nighttime primary service. The extent of such losses would vary from channel to channel, but they would be objectionable wherever they occur. KOB has presented data in this proceeding going to the relative gains and losses which directionalizing the three New York Class I-A stations would provide. In doing so, KOB would have us once again entertain its ad hoc proposal which has been litigated and relitigated all the way to the Supreme Court in the most prolonged proceedings in the history of this Commission.

154. Having again considered Class I-B pairing on a general, nationwide scale, and still believing it to be undesirable--and clearly less desirable under today's conditions than the alternative nationwide reallocations we propose in this Further Notice--we do not now reopen or re-evaluate the merits of the exceptional, ad hoc Class I-B type pairing which KOB again proposes for 660 kHz, 770 kHz and 880 kHz.

155. Nor do we relitigate the question on which the Court of Appeals has spoken twice: whether 770 kHz alone might be I-B paired while the CBS and NBC "flagship" stations are left omni-directional.

(b) Use of AM Clear Channels in Alaska

156. Three licensees of AM stations in Alaska propose revision of the present method of calculating the field strength of the skywave signal which Alaskan stations lay down at night within the lower 48 states. By Section 73.25(a)(4) of the Rules, Class II stations operating in Alaska on the Class I-A channels are forbidden to place a signal within the 48 states greater than 0.025 mV/m-10 percent skywave.

157. Essentially, the Alaskan stations claim that the curves which the rules now oblige Alaskan stations to use neglect the effect of high latitudes of the transmission path between Alaska and the 48 contiguous states, and that due cognizance of those latitude effects would indicate a much lower field strength for their signals within the 48 states. It is accordingly requested that Alaskan stations be permitted to use a different curve that would reduce the indicated interfering potential of their signals within the 48 states enough to enable them to use higher nighttime powers, thereby bringing service to needful areas in Alaska. This is opposed by the licensees of stations in the lower 48 states, who offer counter arguments.

158. Lacking adequate factual basis for doing so, we do not endeavor to resolve this matter in this proceeding. We have, however, taken steps to set up a program for securing field strength measurements needed for the evaluation and resolution of this question. If the data we obtain adequately support revision of the present curves, we would proceed by way of a separate proceeding appropriate for that purpose.

159. It is useful that this matter has been raised, and we regret our inability to deal with it in this proceeding on the basis of the information so far available to us. In pursuing this matter separately we remain mindful of the desirability of expanding the services available in Alaska.

160. We propose, in any event, that Class II stations operating on Class I-A channels in Alaska no longer be required to provide border protection to the 48 contiguous states, but that they be expected to meet the same standards of protection to Class I-A stations and other stations as apply to Class II stations located within the 48 contiguous states.

(c) Additional Facilities on Adjacent Channels

161. We also propose that, upon the adoption of new rules governing the use of the Class I-A clear channels, the limitations, in Section 1.569 of the rules, on adjacent channels be rescinded.

(D) Applications Processing

162. Our proposals for opening up spectrum space on the 25 Class I-A clear channels and adjacent channels may be expected to attract the filing of numerous applications, many of which may be mutually exclusive with numbers of others. The Commission is considering means by which the delays and costs of long, complicated comparative hearings may be reduced.

163. For one thing, we are studying possibilities for assisting with the resolution of conflicts without hearings by facilitating negotiations leading toward the voluntary adjustment of station proposals so as to eliminate mutual exclusivities wherever the parties may find it feasible and in their interests to do so.

164. We also believe it worthwhile to inquire into the possibilities for resolving remaining conflicts by other means, such as by using lotteries or auctions--methods which are now under consideration as possible alternatives to time-consuming hearings which are financially exhausting for some applicants, prohibitive for others, and unduly burdensome to the public.

165. Comment is invited on how alternative means, such as the foregoing, of resolving mutual exclusivities without hearings may be feasibly employed.

V INVITATION TO COMMENT

166. Accordingly, pursuant to authority under Sections 1, 4(i) and (o), and 303(a) through (d), (f), (g), (h) and (r) of the Communication Act of 1934, as amended, IT IS PROPOSED TO AMEND the rules governing the use of the AM Class I-A clear channels and of adjacent AM channels so as to permit their use, and impose associated requirements, substantially as basically proposed in this Further Notice of Proposed Rule Making, or in accordance with such variants, modifications or alternatives within the scope of the issues of this proceeding as we may find preferable after considering the entire record.

167. Pursuant to applicable procedures set forth in Section 1.415 of the Commission's Rules, interested parties may file comments on or before April 9, 1979, and reply comments on or before May 9, 1979.

168. In accordance with the provisions of Section 1.419 of the Commission's Rules, an original and 5 copies of all comments, replies or other documents filed in this proceeding shall be furnished to the Commission. Participants filing the required copies who also desire that each Commissioner receive a copy of the comments may file an additional 6 copies. Members of the general public who wish to participate informally may submit one copy of their comments, specifying the docket number. Responses will be made available for public inspection during regular business hours in the Commission's Reference Room at its headquarters, 1919 M Street, N.W. Washington, D.C.

169. For further information concerning this proceeding contact:

Louis C. Stephens, Staff Attorney (202) 632-6302, or
Gary L. Stanford, Staff Engineer (202) 632-9660.

Members of the public should note, however, that from the time a notice of proposed rule making is issued, and until the matter is no longer subject to Commission consideration or court review, all ex parte contacts are prohibited in Commission proceedings such as this one, which involves present and future AM station assignments and channel utilization. An ex parte contact is a message (spoken or written) concerning the merits of a pending rule making other than comments officially filed at the Commission or oral presentation required by the Commission.

FEDERAL COMMUNICATIONS COMMISSION

William J. Tricarico
Secretary

CLEAR CHANNEL BROADCASTING
FCC Docket No. 20642

SUMMARY OF COMMENTS

Over 130 parties filed comments in the *Inquiry and Rule Making* proceeding in FCC Docket No. 20642 relating to the use of the 25 Class I-A AM clear channels.

This summarizes the principal contentions by the parties, and is not an exhaustive statement of them. All comments and reply comments have been closely reviewed; and those not explicitly referred to in this summary added helpful comment and data generally on the lines noted here.

Summary of Comments in the Clear Channel Rule Making
(Docket No. 20642)

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Summary of Comments in the Clear Channel Rule Making
(Docket No. 20642)

Introduction

1. The issues set out in the *Notice* addressed the social, economic and technical effects, as well as the effects on signal availability, deriving from the different possible modes of reallocating the use of the 25 AM Class I-A clear channels, *i.e.*:

Permitting additional co-channel stations (*i.e.*, "duplication"),

Permitting higher than the present 50-kW maximum power for some or all Class I-A stations, or

Combining further duplication with higher power.

2. This summary assembles the points made by the commenting parties under those four basic kinds of effects. It also presents the highlights of the comments made under the other focal questions raised in the *Notice* as to:

FM's potential for extending nighttime service to all parts of the United States.

Intentions of Class I-A stations as to higher power, if permitted.

Significance of standardized directional antenna patterns as restrictions on new Class II-A stations.

Audience surveys of use of secondary service from clear channel stations by persons living and traveling in areas lacking nighttime AM primary service.

Social Effects

3. These encompass:

The relative usefulness of programs from distant and nearby stations, and

The effects on diversification of program sources and on concentration of mass media control.

Distant or Nearby Program Sources

4. The supporters of higher power for Class I-A clear channel stations (principally the licensees of fourteen Class I-A stations seeking higher power, several farm organizations 1/ and some individuals) assert that the programming of clear channel stations is beneficial both to rural residents and nighttime highway travelers, chiefly on one or more of the following grounds:

The larger stations are able, with their greater resources, to provide useful national and world market and other agricultural news and other program services of a special value to farmers over wide areas, and that local stations lack the resources to provide what the large clear channel stations can in those respects.

That the present value of these services and diversification will be enhanced by their wider dissemination through higher power.

In support of the arguments of the usefulness of clear channel station programming to farmers, stations submitted a number of testimonial letters from individuals, from the Lt. Governor of Tennessee, from the Chicago Board of Trade and others.

Comment by the National Livestock Feeders Association presented the results of a questionnaire it had circulated to all of the 25 Class I-A clear channel stations reporting a wide range of practice as to the amount of their regular farm market and farm news programming. The results:

No responses on behalf of three stations.

Seven stations reported no farm news or marketing reports: WABC, WCBS and WNBC at New York City, WCAU at Philadelphia, WMAQ in Chicago, WWL at New Orleans, and WWWE at Cleveland.

1/ American National Cattlemen's Association, American Soybean Association, Iowa Farmers Union, Minnesota Association of Wheat Growers, National Farmers Organization, National Grange, National Live Stock and Meat Board.

Two stations reported 5 to 15 minutes daily, on weekdays, of farm news and marketing programming: KDKA at Pittsburgh, and WBBM at Chicago.

Three stations reported 16 to 30 minutes daily: KSL at Salt Lake City, WSB at Atlanta, and WSM at Nashville.

Three stations reported 31 minutes to one hour daily: WCCO at Minneapolis, WHAS at Louisville, and WBAP at Fort Worth.

Six stations reported over an hour of daily programming of farm news and farm marketing reports: KFI at Los Angeles, WGN at Chicago, WHAM at Rochester, New York, WHO at Des Moines, WLW at Cincinnati, and WOAI at San Antonio.

That the general programming of clear channel stations, as well as their special farm programming, is of interest to both residential and mobile audiences far from the stations, as indicated by listener responses to call-in surveys and other listener data including the 1975 Arbitron figures invoked by FCC. (Listener surveys will be separately summarized.)

That so much of the land area (half) and so many people (26,000,000) lack AM service that (in view of deficiencies in FM service noted elsewhere) there is now and always will be wide-spread dependence on clear channel programming for both rural populations and travelers in service deficient areas, and that it should both be more widely distributed through higher power and protected against deterioration through further duplication, either on already duplicated clear channels or on the 13 Class I-A clear channels which have no Class II-A stations assigned.

Testimonial letters which have been submitted attest to extensive reliance on the farm-oriented programming of some stations, such as for example: WCCO Minneapolis, WHO at Des Moines, WHAS at Louisville, WLW at Cincinnati.

5. Parties opposing higher power and favoring further clear channel duplication contended that:

The need in underserved areas for programming originated by nearby stations is far greater than for distant originations, which are claimed to be unrelated to local needs for programs about the weather, market information, pest and disease information, local calendars of farm organizations, local news, local community problems and public affairs, local emergencies, and religious programming.

The need for wide area service from clear channel stations hundreds of miles away, which is only speculative, has been much reduced since the advent of FM, TV, and Cable Television, as well as the increment of additional AM stations.

Stations cannot and do not effectively program in response to the needs of communities beyond a 50 to 100 mile radius (National Livestock Feeders Association would permit higher power only to stations demonstrating service to rural populations).

Protection to clear channel stations should be reduced at least to their .5 mV/m groundwave contour daytime and their .5 mV/m 50% skywave contour nighttime.

The licensees of several stations (e.g., KSGT, a Class IV at Jackson, Wyoming, WAIT, a Class II limited-time station at Chicago, WBLR, a Class III daytimer at Batesburg, South Carolina, and WSKY, a Class IV daytimer at Asheville, North Carolina) would do away with protection to skywave service areas altogether, as would Daytime Broadcasters Association, on the undemonstrated ground that it is no longer needed.

WFTW, a Class III daytimer at Ft. Walton Beach, Florida, would reduce Class I stations* to 5 kW power. WCFT, a Class II daytimer, would reduce the groundwave protection for clear channel stations* to their 2.5 mV/m contour. *Nighttime.

The Daytime Broadcasters Association reiterated its urgings that daytime-only stations be permitted to operate from 6:00 AM to 6:00 PM. Extended hours for daytimers was also advocated by the licensees of at least 9 daytime-only or limited-time stations (as well as by at least one small unlimited-time station). Among the daytimers is WRFD, which operates on 880 kHz at Worthington (Columbus), Ohio, owned by Ohio Farm Bureau Federation, and WOSU(AM), Columbus, Ohio, operated on 820 kHz by Ohio State University. Additional proposals by licensees of daytime-only and limited-time stations seeking specific unlimited-time authorizations which cannot be acted upon in this general rule making proceeding are listed later under "Proposals for Nighttime Operation." The

U.S. Catholic Conference, supporting power reduction for clear channel stations to 5 kW would permit many more local stations and permit discontinuance of the fairness doctrine.

Diversification of Program Sources

6. Several proponents of clear channel "breakdown" asserted that expanding the reach of Class I-A clear channel stations through higher power would cause undue concentration of mass media control. As the Daytime Broadcasters Association put it, higher power would do violence to the "spirit and purposes" of the multiple-ownership rules. DBA also noted that Class III and Class IV AM stations and Class A and B FM stations could not attain--collectively even--as much coverage of stations under common ownership as is already permitted by the Commission from the groundwave service alone of Class I clear channel stations.

7. The licensee of WAIT, a 5 kW daytime-only station at Chicago, broadly asserted that higher power would create "information Monopolies able to manipulate public opinion." Rounsaville of Cincinnati stated that higher power would be contrary to the goal of maximum diversification. KTSA, a 5-kW unlimited-time Class III station at San Antonio, Texas, incorrectly assuming the use of higher power at 750 kW, broadly depicted large and (apparently taking skywave service into account) overlapping service areas among various stations commonly owned by the licensees of six Class I-A clear channel stations: KFI, WNBC, WABC, WBAP, WCCO and WHO. WAIT characterized these licensees as "major media groups that already dominate broadcast ownership." The licensees so characterized are Cox Broadcasting Co., NBC, ABC, Capital Cities, Knight Ridder, and Palmer Broadcasting, Inc. The following counter arguments were offered by CCBS and members of the clear channel Class I-A stations advocating higher power:

CCBS noted FCC-imposed restraints such as the *Fairness Doctrine*, the personal attack rules, Section 315, requirements with respect to political editorials, and sponsorship identification. These safeguards were alleged to remove any possibility of undue monopolization of programming by clear channel stations given larger audiences through the use of higher power.

WHO similarly pointed out the multiplicity of other media, namely newspapers, magazines, cable TV, AM and FM radio, and the vigilance of broadcast journalist and citizens' groups as safeguards which would preclude the exercise of undue control by stations permitted higher power.

WOAI, speaking for itself, said it was locally owned and controlled and would therefore not form part of any national monopolization.

KFI asserted that its policy was the broadcast of diverse viewpoints in political and cultural areas, and that its public interest programming (unparticularized) would refute undue "social power."

Other clear channel stations made similar points.

8. One of the arguments which can be classified under this heading of "Social Effects" stems from the arguments (separately noted below) about economic injury to smaller stations deriving from higher power operations by Class I-A dominate clear channel stations. It was either expressly alleged, or at least implied by those claiming such economic injury, that the public would suffer by the consequential curtailment of public service programming by smaller stations which, it was claimed, would sustain revenue reductions through competition exerted by higher power clear channel stations reaching their communities either for the first time or with a stronger signal than at 50 kW.

9. Also classifiable under "Social Effects" arguments, is the position advanced principally by the National Black Media Coalition, which argues strongly for a breakdown of the clear channels to the point of "splintering" them, for the purpose of making possible numbers of new stations which could be owned by minorities.

10. Also under the heading of "Social Effects" is the position maintained by the Corporation for Public Broadcasting and supported by the National Public Radio to the effect that the clear channels should be broken down and the spectrum space thereby released made available for numerous non-commercial, educational AM stations which CPB projects as needed to fill out a national AM coverage of noncommercial educational programming.

Economic Effects of Higher Power

11. A familiar battle-line was drawn between one group of parties who urged that higher power would inflict intolerable economic injury on lower powered stations in their service areas (and consequently reduce the potential of the lowered powered stations for serving public programming needs). The other group, as outlined below, contended the opposite. Supporters of the view that higher power would inflict significant economic injury included the licensees of 17 AM stations, the National Radio Broadcasters Association (representing over 700 AM and FM stations), the Nebraska Broadcasters

Association, the Colorado Broadcasters Association, and the San Diego Broadcasters Association. Among the 17 stations there were two Class I-B stations operating unlimited time with 50 kW power in the same city as the pertinent Class I-A station (*i.e.*, WOR at New York City, and KSTP at Minneapolis). The remaining 15 stations were divided among 4 Class II's, 8 Class III's and 3 Class IV's. Of the 17 stations, 5 were located in the same city as the Class I-A station whose operation at higher power was the subject of protest (including the two Class I-B stations already mentioned); and 12 were located outside the home cities of the pertinent Class I-A stations. Fourteen of the 17 stations were unlimited time operations, two were daytime-only stations and one was a limited time station. The comments contending economic injury ranged from those consisting of merely unsupported or unexplained assertions to those presenting arguments noted below. Examples of the unsupported assertions include the comment by Radio WEW, a 1 kW daytimer at St. Louis, to the effect that higher power would "injure thousands of local stations financially;" the assertion by WAIT, a Class II limited time station in Chicago, that higher power would cause "economic devastation of hundreds of local radio stations;" the contention by WDEA, a Class II unlimited time station at Ellsworth, Maine, of "massive competitive advantage" for power 10 to 15 times the present 50 kW maximum level, and the contention by KSFA, a Class II daytime-only station at Nacogdoches, Texas, that higher power would cause "irreparable financial harm to smaller stations in the area" of the Class I-A stations. Those who rationalized their contentions that higher power would inflict economic injury used the arguments that with higher power the Class I-A stations would siphon or fractionalize audiences of the smaller local stations, and would capture or divert undue shares of the advertising dollars that were once available to the smaller stations. These assertions about diversion of audience and advertising dollar were unsupported by any developed supporting data.

12. The Clear Channel Broadcasting Service and the Class I-A stations advocating higher power directly contradict the urgings of those who predict economic injury to smaller stations in existing and enhanced service areas of the Class I-A stations. First, they point out the assertions are unfounded by data or much developed analysis. They also assert that the promoters of higher power should not be required to prove the negative (*i.e.*, that economic injury would not result), and they suggest that any claims of harmful economic effects of higher power for Class I-A stations on other stations either in their home cities or in existing or extended service areas should be dealt with in an *ad hoc* fashion under the principles of the *Carroll* case. In support of their position, the higher power proponents use a number of arguments outlined below, and submitted one economic study by Professor Edward J. Mitchell of the

University of Michigan, which is summarized below. The contention is made that local advertiser support for smaller stations would not diminish or switch to the higher powered Class I-A stations, because the Class I-A stations rates are too high for most advertisers in the smaller communities. WSM at Nashville gave the example of its rates, which they stated were 16 times greater than those at Murfreesboro, Tennessee, where WSM provides a 5 mV/m signal. WGN, at Chicago, similarly used the example of the contrast between its rates for one minute commercial spots (\$67 to \$270) whereas the rates for a one minute spot on WPOK at Pontiac, Illinois, approximately 80 miles from Chicago, is \$6 per minute. In support of this line of argument CCBS points out that according to the Commission's records for 1975, 76 percent of time sales by radio stations were to local advertisers and that station revenues from network sales amounted to less than 1 percent of all time sales reported by stations. National and regional advertising accounted for some 23 percent of all station time sales. But in non-metro areas with three or more stations, less than 14 percent of all time sales were to national and regional advertisers. The equivalent percentage was 11 in non-metro areas of two stations and approximately 9 in non-metro areas having one station.

13. It was also argued that the capital and operating costs of higher power would cause the clear channel stations using it to have to increase their rates. KFI, at Los Angeles, thought that its rates would not increase significantly, however, while KSL, at Salt Lake City, felt that it would have to increase its rates up to 4 times because, for one thing, its operating expenses would be calculated to increase from \$51,000 to \$412,000, with a proposed 500 kW operation.

14. There was some argument to the effect that some local advertisers in the areas of the major stations might even shift from the Class I-A station to other stations in its service area on account of higher rates. It was argued (e.g., by the licensee of WHO, Class I-A station at Des Moines) that regional advertisers, like local advertisers, would not want to have higher power station coverage at the higher rates.

15. A related argument was invoked by WGN and KFI, who pointed out that in cities where the stations (at Chicago and Los Angeles) placed a strong, usable signal (Milwaukee and Tucson) national advertisers now buy stations in Milwaukee and Tucson rather than rely on those outside Class I-A stations for local coverage.

16. The argument is also made that despite the presence of the Class I-A signal in other communities the Class I-A station is not listened to an extent sufficient to attract national advertising, since people tend to look toward local or nearby stations if they are operating in the vicinity.

17. WLW looked back over the time of its pre-World War II experience with 500 kW operation for six years during the 1930's, alleging that the adverse effects that have been urged failed to materialize then. For example, they claim that during WLW's 500 kW operation, many new AM stations proliferated within WLW's service area, and that this and increases in network affiliations for other stations in WLW's service area had all disproved the claim that higher power at WLW would exert adverse economic effects on competing stations in its service area.

Programs for Developing Meaningful Information as to the Economic Effects of Higher Power

18. The invitation to comment on this elicited only the already noted urging by the Clear Channel Broadcasting Service (CCBS), and some of the Class I-A station licensees to deal with allegations of economic injury from higher power as a *Carroll* issue on applications for higher power. This would--and the parties argued, should--place the burden of proof on parties alleging economic injury, and call for explicit support on the particular facts of each case.

19. Capital City Communications, Inc., licensee of Class I-A stations WRJ at Detroit and WFAP at Fort Worth submitted the report of a study prepared by Professor of Business Economics Edward J. Mitchell of the Graduate School of Business Administration at the University of Michigan. Professor Mitchell performed a "cross-sectional" type study aimed at establishing the probable effect on radio stations of the introduction of a new outside signal. The major conclusions of the study were:

- (1) The presence of one additional outside station in a locality reduces the audience of local stations by about 2.2 to 3.6 percent, with estimates depending upon size of city and mathematical model used. In some possibly aberrational cases estimates as low as 1.1 percent were reached but no higher estimates were found.
- (2) This latter audience reduction translates into an average reduction of broadcast revenues of local stations of about 1.5 to 2.4 percent with estimates depending upon the size of city and mathematical model used.
- (3) The competitive effects of outside stations generally are about the same as those of outside clear channel stations.
- (4) The presence of an additional local station reduces the local audience of the average local station by about 2 1/2 times as much as the presence of an additional outside station.

- (5) There is a very small but still significant tendency for a larger proportion of the population to listen to radio when more stations are available. The average listening audience will rise by about two-tenths of a percent for each additional station.
- (6) This "menu" effect is larger for additional local stations as compared to additional outside stations.
- (7) Local broadcast revenues and total broadcast revenues do not increase in proportion to size of audience.
- (8) Additional outside listeners make much smaller contributions to a station's broadcast revenue than additional local listeners; thus the financial benefits of clear channel expansion would be much smaller in percentage terms than the gain in audience.
- (9) The popularity of a clear channel station in its home city has no measurable effect on its popularity and competitiveness in other cities that its signal reaches.
- (10) While none of the research conducted was directed toward the question of the competitive impact of clear channel expansion on other stations in the clear channel's home city, some findings of this report have a bearing on this issue and suggest that the impact may be very small.

Technical Effects of Higher Power

20. The comments as to technical or "secondary" effects of higher power relate basically to:

- Effects near the transmitter, such as "blanketing" of broadcast receivers, generation of spurious signals in other radio equipment, interference to the operation of telephone equipment, and the induction of dangerous voltages in nearby ungrounded metallic structures. CCBS and the Class I-A stations generally treated these problems as satisfactorily resolvable.

- The parties invoked WLW's 6-year experience with 500 kW and its satisfactory working out of problems of this nature in the vicinity of the transmitter. AT&T cites problems experienced in the past with broadcast signal disruption of the functioning of telephone equipment (*e.g.*, electronic switching at central offices) and insists that if higher power were authorized, consequent costs to protect the functioning of telephone equipment be borne by the station licensees who use higher power.

- Ionospheric effects, including cross-modulation (the "Luxemburg Effect" of imposing information from the broadcast transmission on other radio signals), and scattering and fading effects produced by modifications of the ionosphere, some of which may persist for some time after a high-power

transmission is terminated. Thus, OT recommends a program of testing which it is willing to perform if FCC requests it (and presumably, pays for it). OT notes that such testing has been conducted at and above 2700 kHz.

Effects on Service Areas

21. The 14 Class I-A stations seeking or considering higher power expressed interest in operating in a range from 100 kW to 500 kW, with most preferring around 250 kW. Most of the potential higher power applicants failed to develop a count of the number of persons living in areas now lacking nighttime AM groundwave or FM service to whom higher power would provide a first aural service. Four of the parties did provide estimates of the numbers of people who would receive their first aural service as a result of the use of higher power. Those figures, rounded, indicate that two stations each would gain 15,000 people, another 59,000, and the largest gain would be 180,000.

22. The above figures as well as those submitted by the others did not take into account the expectable distortion by the station's own augmented skywave signal of its similarly augmented groundwave signal in areas that were considered as gain areas.

23. The proponents of higher power claimed that objectionable interference can and would be avoided by stations using higher power. They relied chiefly on the use of 5 kHz low band pass filters to meet the problem of added adjacent-channel interference, which were the subject of a few comments by objectors to higher power.

24. The licensees of the following stations proposed a universal power increase of nine times the present power ceilings for all classes of AM stations:

<u>Call Letters</u>	<u>Location</u>	<u>Class</u>	<u>Channel</u>	<u>Present</u>	<u>Facilities</u>
WCCO	Minneapolis, Min.	I-A	830 kHz	50 kW	U
KEX*	Portland, Ore.	I-B	1190 kHz	50 kW	U
KMPC*	Los Angeles, Cal.	II	710 kHz	50D/10N	U
KSFO*	San Francisco, Cal.	III	560 kHz	5D/1N	U
KVI*	Seattle, Wash.	III	570 kHz	5kW	U
WTAE	Pittsburgh, Pa.	III	1250 kHz	5 kW	U

*/ Licensed to Golden West Broadcasters.

This, it was submitted, would help overcome noise within the present service areas, and in some cases (*e.g.*, WCCO) would enlarge and improve nighttime and skywave service areas.

25. Several Alaskan stations requested revision of the curves and methods for determining skywave transmissions in the northerly latitudes in order to recalculate more realistically the interfering effects within the lower 48 states of Alaskan transmissions. The parties commenting claim that the proposed method will reduce the showings of such interference, thereby opening the way to nighttime power increases (within the present power ceilings), thus permitting the renditions of improved and extended service in Alaska.

FM Service

26. OT Report 76-93, released by the Department of Commerce's Office of Telecommunications (OT) in July, 1976, depicted FM coverage in the conterminous United States with a F(50,50) signal of at least 50 uV/m, and separately, at least 1 mV/m.

27. CBS (the network, not CCBS, the Clear Channel Broadcasting Service) submitted a map which shows those places receiving neither a nighttime, Type B AM groundwave signal as depicted on CCBS' map, nor a 50 uV/m FM signal, CBS counted an aggregate of 1,245,757 residents in those nighttime unserved areas, or 0.6% of the 1970 population of the conterminous United States. Since CBS' tally used (except in four instances) the entire 1970 population for counties, irrespective of whether all or only part of the county fell in the unserved area, a more accurate count would probably total moderately less than the 1-1/4 million shown by CBS.

28. Despite much unsupported argument, pro and con, as to FM's capacity to extend service to the now unserved areas, no one attempted a finite prediction or an area or population count, probably because of the speculative aspects of such a prediction.

29. Some comment was, however, directed to FM's service capacity as observed so far. CCBS queried the accuracy of OT's coverage showings on several grounds, *e.g.*:

- Inclusion of Class D stations and FM translators whose coverage is estimated without cognizance of their actual antenna heights,
- The assumption of omnidirectional transmission, when some FM stations use directional antennas or radiate directionally because of distortions from side mounting of antennas.
- Disregard of co-channel and adjacent channel interference limitations of some FM stations--particularly Eastern and West Coast--within their 1 mV/m contours.

30. Other arguments generally put forward by the proponents of higher power question the reliability of OT's FM service depictions because of non-recognized coverage reductions owing to uneven terrain, particularly in mountainous parts of the Eastern or Western United States. These criticisms are coupled with observations that OT's assumed receiver antenna height (30 feet) is unrealistic, both for mobile and fixed-location audiences.

31. Additionally, the higher-power proponents argue with respect to FM as well as AM, that because of the low population densities typically found in the wide areas remaining unserved, significant reduction of the unserved areas will always remain beyond the capacity of local stations, and that they will always remain dependent upon skywave service. Hence, their contention of the need for higher power to improve skywave service to areas beyond the reach of primary service.

32. FM, as a service for travelers, was found wanting both by the higher power proponents and by at least one advocate of clear channel "breakdown" (WCPC, a 50 kW Class II daytime-only station at Houston, Mississippi), who pointed out the relative dearth of FM car radios and the constant shifts necessitated by long-distance travelers as they left the service areas of successive FM stations (or worse, translators) behind.

33. Some parties who opposed higher power (as well as some who opposed the continued protection of any secondary service from clear channel stations) cited statistics reflecting the extensive growth of FM from the early days of clear channel allocations when there was no FM, to the present where there are over 3,500 FM stations and spectrum space for more.

Intentions of Class I-A Stations
Advocating Higher Power

34. Positive intentions to increase power were stated by the licensees of only 11 of the 25 Class I-A stations, 1 of whom specified 100 kW, another, 200 kW, 5 others, 250 kW, 1, 300 kW, 1, 450 kW and 2, 500 kW. Three others were non-committed, but potentially interested I-A's, specified 200 kW, 300 kW and a range from 250-750 kW.

35. Of the 14, 1 (WHO at Des Moines) proposed to operate with higher power (200 kW) during nighttime hours only.

36. Six of the 14 proposed to use directional antennas.

Standardized Directional Antenna Patterns

37. Although the *Notice* explicitly requested comments on the significance of this restriction on the possible future assignment of new Class II-A stations, this request received virtually no attention from commenting parties. The advocates of higher power opposed any further duplication of nighttime assignments on the Class I-A clear channels, while the advocates of duplication generally did not get into requirements of this kind. CCBS indicated that none of the existing 50 kW Class II-A stations could meet the standardized requirements, and that such requirements would "limit the white area service which Class II-A stations could provide."

Foreign Interference to U.S. Clear Channels

38. The *Notice* (para. 21 and fn. 5, p. 10) invited updated information on reportedly increasing interference from foreign stations to skywave service by U.S. clear channel stations, and looked to the Field Operations Bureau for systematic monitoring at as many locations as possible.

FOB Monitoring

39. FOB conducted nighttime monitoring of the 25 Class I-A channels on May 20 and May 22, 1976, at 11 of its 12 monitoring stations in the 48 contiguous states. One hundred ninety-seven instances of foreign interference were detected, in all, by 10 of the 11 reporting stations. The 11th, at Allegan, Michigan, reported no detections of foreign interference to any of the 25 Class I-A stations. The 197 instances were distributed as follows:

- By Monitoring Locations:

139 (70.6%) in the southeast (Ga. and Fla.), on all but 2 of the 25 channels (1120 and 1200). 22 (11.2%) in the southwest (Ariz. and Tex.), on 11 of the 25 channels. 36 (18.2%) elsewhere in the 48 states, on 13 of the 25 channels.

- By Country:

Of the 197 instances, 49 were identified only by use of Spanish. The remaining 148 instances of interference were identified with the following countries:

Belize	4
Canada	13
Columbia	7
Costa Rica	4
Cuba	92
Dominican Republic	3
Guatemala	8
Mexico	11
Nicaragua	4
Venezuela	2
<hr/>	
Total	148

- By Channel:

Ten or more instances were reported on each of the following Class I-A channels:

640 (KFI, Los Angeles):	18
660 (WNBC, N.Y.C.):	11
720 (WGN, Ohio):	18
750 (WSB, Atlanta):	12
760 (WJR, Detroit):	14
820 (WBAP, Ft. Worth):	15
880 (WCBS, N.Y.C.):	22
1210 (WCAU, Phila.):	10

From 1 to 9 instances were monitored on each of the 17 remaining Class I-A channels.

Comments by Parties

40. While interference from foreign stations was mentioned generally by some parties, there were no reports of the results of systematic monitoring.

CCBS tabulated the results of the FOB's recent monitoring on a table showing interference on 19 of the 25 U.S. Class I-A clear channels by 22 stations in Latin American countries and Belize. Thirteen of the interfering stations were Cuban.

CCBS also mapped interference to WSM, Nashville, WGN, Chicago, and WWL, New Orleans from stations in Costa Rica, Cuba, and Santo Domingo. They depicted increases in interference-free skywave service with WSM operating at 500 kW.

41. KFI, the Los Angeles Class I-A station on 640 kHz, challenged claims by WHLO, limited time 1 kW station at Akron, that interference from Cuba's co-channel CMH, operating in violation of NARBA at 50 kW, so restricted KFI's interference-free skywave service area that WHLO's proposed unlimited time operation would not invade it.

42. Two letters from listeners to WGN, Chicago Class I-A station on 720 kHz, referred to interference by a Cuban station. An individual, Jack Parks of Hamlet, North Carolina, stated in a letter to the FCC that high powered stations in Central and South America "create great disturbances on many domestic channels." He favors higher power for some Class I-A stations as a partial remedy.

43. Ronald F. Schatz, a consulting engineer filing for himself, lists as sources of interference 35 co-channel stations operating in Latin American countries and the Caribbean on the 25 U.S. Class I-A clear channels.

44. Other scattered references were made to alleged interference, by Spanish-language foreign stations, to service from U.S. Class I-A stations.

Surveys of Listening to Class I-A Stations

45. There were three kinds:

- Arbitron's 1975 nationwide radio listening survey of diarists.
- Surveys by Class I-A stations of listener responses by mail or phone.
- Doane surveys of radio listening by farmers to WHO (Class I-A station at Des Moines) and other radio stations and farm radio networks in Iowa and nearby states.

Arbitron

46. In 100 western counties */ in all or a significant part of which there is no nighttime AM groundwave service and no FM signal greater than 50 mV/m, only 27 (9.7%) of the 279 usable diary responses reporting any nighttime radio listening, indicated listening to one or more of the 25 Class I-A clear channel stations. These 27 constituted 3.7% of the 736 usable diaries returned from those counties.

47. Similarly, in 26 other counties (in 21 widely scattered states) lacking nighttime AM groundwave, but having FM between 50 mV/m and 1 mV/m, 10 (13.7%) of the 73 usable diaries reporting any nighttime radio listening, indicated listening to one or more Class I-A's. This was 6.6% of the 152 usable diaries returned from those 26 counties.

48. In the foregoing underserved 126 counties (100 plus 26), 37 (10%) of the 352 usable diaries reporting any nighttime radio listening indicated listening to one or more Class I-A's. Of the 888 usable diaries from those 126 counties, 536 (60.4%) reported no nighttime radio listening. Thus the 37 who reported nighttime listening to any Class I-A station(s) constituted only 4.2% of the usable diaries returned from those 126 counties.

*/ Grossly distorting figures from the 101st county returning usable diaries (Washoe, in Nevada) have been omitted.

49. CCBS and Daytime Broadcasters Association both contend that a number of sampling and other deficiencies severely impair the reliability of the Arbitron study. Arbitron itself acknowledges that the sample size for the survey areas selected by FCC (unserved or underserved counties) are "far below Arbitron minimum standards," that is, for the purpose to which these figures are being put. No usable diaries were received from 41 of the counties selected by FCC for study because of lack or scarcity of nighttime radio service. Only 1, 2 or 3 were received from each of almost half of the selected counties which did return usable diaries. This makes the county-by-county figures unreliable. But a higher probable reliability attaches to a reading of the aggregated figures. In the 126 underserved counties already referred to, only 47 of the 525 mentions of stations listened to were Class I-A clear channel stations (1 in 11). Eight of the 47 mentions of Class I-A stations were from places more than 750 miles from the mentioned stations. These 8 Class I-A mentions occurred in (at most) 8 (0.9% or 1 in 111) of the 888 usable diaries returned from the above-mentioned 126 underserved counties. This (subject to the uncertainties already noted which derive from the unduly small numbers of the sample) suggests that only a small portion of the population living more than 750 miles from Class I-A stations would be deprived of a service they actually use if clear channel duplication permitted interference beyond the 750-mile radius. In all 7 counties where the 8 Class I-A mentions were made, there was reported listening to 1-7 other stations as well. Other stations listened to totalled 5 or more in all but 2 of those counties.

50. CCBS contends that the Arbitron figures understate Class I-A listening as compared with listening to closer-by stations. Apart from the absence of any usable diaries in 41 counties and the distortions (which this summary has eliminated) caused by the inclusion of Washoe County, Nevada, CCBS argues that the population in the included counties with sizeable unserved areas will be clustered in or near towns which have local radio stations, that sampling will correspondingly (and for present purposes, excessively) cluster Arbitron's diaries in parts of the county where, local service being available, it will be preponderantly used by nighttime radio listeners. This, CCBS claims, is not representative of nighttime radio listening patterns in the unserved portions of the surveyed counties, which portions CCBS contends are underrepresented in the survey.

51. CCBS also derived from a review of Arbitron's raw data additional showings, e.g.:

- Frequency of clear channel listening:

43% of Arbitron's clear channel listeners in the selected counties listened to Class I-A stations at least 3 nights per week. Also, 28% tuned in 4 or more nights, and 10% on 6 or more nights. This allegedly showed consistent dependence on clear channel service.

- On the average, persons tuning in to Class I-A stations in the underserved counties listened to clear channel stations at night almost as much (17 quarter hours weekly between 9:00 PM and 4:45 AM) as clear channel listeners in the stations' home markets (19.3 quarter hours between 7 PM and midnight), this being taken as indicating that clear channel stations are a primary source of radio service for persons living in distant counties.

52. While relying on it for inferences such as the foregoing, CCBS generally disparaged the reliability of the Arbitron survey figures. Frailties of diary surveying as such were particularly noted.

53. One analysis of the Arbitron figures performed for CCBS by Customs Audience Consultants, Inc., indicated that of the 38 million people at least 12 years of age estimated to constitute the aggregate 24-hour audience of all 25 Class I-A stations, 1,300,000 (3.4%) live in areas not reached by any nighttime AM groundwave signals according to CCBS' map depicting AM "white areas." Compilations of figures from 16 participating Class I-A stations submitted by the same consultants indicated that 17.5% of the aggregate audiences of the Class I-A stations are located somewhere beyond their home market service areas (essentially, it appears, in their skywave service areas).

54. According to Arbitron survey analysis by Daytime Broadcasters Association, the 6,971 total such mentions of Class I-A stations averaged 1.338% (1 in 75) of all 520,696 station mentions by diariests from counties outside the pertinent home markets of the Class I-A stations.

Listener Surveys Conducted by Class I-A Stations

55. Responding to the *Notice*, 11 Class I-A stations (KFI, KSL, WBAP, WGN, WHAM, WHO, WJR, WLW, WOI, WSB and WWL) submitted reports of mail or telephone responses to listener surveys and counts of unsolicited mail. Numbers of those letters reflected considerable interest in some programs broadcast by the Class I-A stations. Some station tallies included and some excluded the count of such responses or unsolicited mail from the home state or from places within a radius of about 100 miles. Others appeared to have included all such mail or responses irrespective of location. Among the 20 surveys which appear to be usable for the purpose, a count was made of the telephone calls or mail reportedly received from places outside the station's 750-mile radius, in order to obtain as much indication as such survey figures can provide as to the portion of Class I-A station total audiences whose listening would become subject to interference from co-channel duplicating stations protecting the .5-50% skywave contours. In the 20 such usable surveys mentioned, the ratio of returns from beyond 750 miles to the total returns from all places reached by the station ranged from 0.2% to 21.7%. */ The median was 5.9%.

56. How many of the foregoing 5.9% are in areas wholly dependent on skywave service is not shown, but no places would become deprived of all available skywave service (which comes from Class I-B stations as well as from I-A's) if the nighttime service areas of all Class I-A stations were reduced by duplication limiting their interference-free service to areas within their .5-50% skywave contours.

The Doane Surveys of Radio Listening by Farmers

57. Palmer Broadcasting Company, licensee of WHO, Class I-A station at Des Moines, submitted, in addition to the results of 5 listener surveys performed by it, the reports by Doane Agricultural Service, Inc., of several of its 1976 surveys of the listening habits of farmers in Iowa and several nearby stations. Each of these Doane studies presents, for a designated group of counties, and separately for each of 8 or 10 half hour periods (some early morning, some midday and some early evening) the percentages of the farm listeners tuned in during those periods to each radio station they listened to.

58. A survey in 64 Iowa counties and 5 adjacent Missouri counties, not surprisingly showed WHO leading all other stations in

*/ Another such survey by WWL which appears to show over 50% of the returns from beyond a 750-mile radius appears to be too disparate to have been based on comparable survey methods and counts. In some part the disparity appears to derive from WWL's directionalization. The other surveys were for Class I-A stations operating nondirectionally.

share of the farm audience ranging from 42.9% in the 6-6:30 PM segment to 67.7% for 5:30-6:00 AM. Of the farmers surveyed, 44.2% named WHO as the radio station they feel "provide the most useful and reliable programs and information on weather, farm markets and farm news and information," over 3 times the next named station (WOI with 13.1%).

59. The following additional survey results of other Doane surveys are summarized in some detail because although submitted by a Class I-A station (WHO) which opposes duplication and seeks higher power, they constitute the strongest available statistical documentation of the degree to which--surprisingly near to a Class I-A station which is a marked leader in farm programming services--reliance on the clear channel station falls off and is exceeded by reliance on smaller but less distant stations. The Doane survey figures thus appear to contribute significant support to the view that it is preferable to use the available spectrum space on the Class I-A channels for additional co-channel stations serving nearby populations than to augment the outer reach of the Class I-A stations by authorizing higher power.

60. For example, a Doane survey conducted in 28 eastern Iowa counties, WMT, a 5 kW station at Cedar Rapids, Iowa, was named by 41.1% of the listening farmers as the most useful and reliable for farm program services, while 17% named WHO. WMT's share of the farm audiences ranged from 36.0% to 58.4% during 10 half-hour periods surveyed, when WHO attracted a 9.1% to 24.8% share.

61. Similarly, in 16 Western Iowa counties and 9 in adjacent Nebraska, and Missouri, KMA, a 5 kW station at Shenandoah, Iowa, was named by 44.9% of farm listeners as the most useful and reliable source of programming of interest to farmers, reportedly nearly four times the nearest competitor (unnamed--possibly WHO). KMA's farm audience shares led all the other stations, ranging from 27% to 54.8%, while WHO ranged from 6.8% to 23.9%. WHO's farm audience matched or exceeded KMA's in 2 periods, and in 8 ranged from 13-49% of it.

62. Another Iowa station*, a Class IV at Burlington, Iowa, operating with 1 kW daytime and 250 watts nighttime, commanded in 4 southeast Iowa counties and one adjacent Illinois county a sharply lower farm audience share than WHO during 1 early morning and 1 midday half hour, was moderately lower than or tied WHO in 3 other periods, and exceeded WHO in 2 periods.

*KBUR.

63. In a 40-county area in western Iowa and eastern Nebraska, WHO, with farm audience shares of 1.9% to 7.3% was exceeded by both KFAB at Omaha (0.7% to 44.3%) and KMA at Shenandoah, Iowa (15.4% to 25.8%).

Summary

64. To recapitulate, subject to considerable limitations on the reliability of the survey results, the record contains indications that:

- In 126 underserved counties, (with no AM nighttime groundwave and FM either below 50 mV/m or between that and 1 mV/m), Arbitron's 1975 survey indicated mentions of nighttime listening to Class I-A stations by only 37 of the 888 persons returning usable diaries from those counties (1 in 24, or 4.2%).
- Of all the station mentions by the 352 diarists from the 126 underserved counties reporting any nighttime radio listening, 47 (1 in 11) indicated listening to Class I-A stations.
- The 888 usable Arbitron diaries returned from the 126 underserved counties contained only 8 mentions of listening to Class I-A stations by persons living over 750 miles from the station.
- Over 4 in 10 (43%) of those listening to Class I-A stations reported listening at least 3 nights a week, while 1 in 10 listened at least 6 nights weekly.
- Of the 38.3 million persons age 12 or over estimated to constitute the total unduplicated daytime and nighttime audience of all 25 Class I-A clear channel stations, 1.3 million (3.4%) live in areas lacking AM nighttime groundwave service. (An undetermined number of those have some FM service. CBS counts only 1.2 million persons in the entire county who have neither AM groundwave nor at least a 50 mV/m FM signal.)

- Listener surveys conducted by Class I-A stations themselves indicate that the returns from places over 750 miles from the station ranged from 0.2% to 21.7% of the total returns from all areas, with a median of 5.9%.

- Doane surveys of farm listening in Iowa and nearby states indicate that WHO, the Class I-A station at Des Moines, captures the predominant share of the farm audience and is the station most relied on by farmers only in an area composed of 64 central Iowa counties and 5 adjacent Missouri counties; and that WHO's predominance gives way to the predominance of numbers of other stations in other counties in Iowa.

65. Proposals for Nighttime Operation
by Individual Stations on Specified Clear Channels

640 kHz (Class I-A KFI at Los Angeles)

WCPC, a Class II station operating at Houston, Mississippi on 940 kHz with 50 kW daytime (and licensed to operate with 250 watts nighttime) seeks 50D/10N on 640 kHz.

WOI, a 5 kW daytime-only station operating on 640 kHz at Ames, Iowa, continues to seek authority for unlimited-time operation (denied in previous adjudicatory hearing) on this channel.

WHLO, a 1 kW limited-time station operating on 640 kHz at Akron, Ohio, seeks authorization to operate on 640 kHz at 500 watts (or 382 watts) during nighttime hours.

WSKY, a Class IV unlimited-time station operating on 1230 kHz at Asheville, North Carolina (1D/0.25N) seeks 10 kW unlimited-time operation on 640 kHz.

750 kHz (Class I-A WSB at Atlanta)

KXL, a 50 kW Class II limited-time station on 750 kHz at Portland, Oregon, seeks an unlimited-time Class II-A operation on 750 kHz, with any higher power authorized to WSB directionalized southeastward.

KFQD, a Class II unlimited-time station operating on 750 kHz at Anchorage, Alaska, with 50 kW day, 10 kW night, seeks 50 kW day and night, nondirectional on 750 kHz.

760 kHz (Class I-A WJR at Detroit)

KFMB, a 5 kW Class II unlimited-time station operating on 760 kHz at San Diego, seeks 10 kW day and night on this channel.

770 kHz (Class I-A WABC at New York)

KOB, a 50 kW unlimited-time Class IIA station on 770 kHz at Albuquerque seeks "I-B" pairing on 770 kHz with WABC.

WEW, a Class II 1 kW daytime-only station on 770 kHz at St. Louis, seeks an unlimited-time 50 kW Class II-A operation on 770 kHz, along with paired I-B operations by KOB and WABC on 770 kHz.

820 kHz (Class I-A WBAP at Fort Worth)

WDEA, a 5 kW unlimited-time Class III station on 1370 kHz at Ellsworth, Maine, seeks a 50 kW unlimited-time Class II-A assignment on 820 kHz.

KFRB, a 10 kW unlimited-time Class II station on 900 kHz at Fairbanks, Alaska, seeks a 10 kW unlimited-time station on 820 kHz.

830 kHz (Class I-A WCCO at Minneapolis)

KBOA, a 1 kW daytime-only station operating on 830 kHz at Kennett, Missouri, seeks longer hours morning and evening on this channel.

880 kHz (Class I-A WCBS at New York)

KIXI, a 1 kW Class III unlimited-time station on 910 kHz, at Seattle seeks a 50 kW unlimited-time Class II-A operation on 880 kHz.

1160 kHz (Class I-A KSL at Salt Lake City)

WJJD, a 50 kW limited-time station on 1160 kHz at Chicago, seeks a Pre-Sunrise Authorization (PSA) and authorization to operate at 10 kW during nighttime hours.

Additionally, 3 Class II stations which overlooked the exclusion of Class I-B clear channels from this proceeding stated their interest in nighttime operations on Class I-B channels on which they operate daytime-only stations:

1090 kHz -- WMTY, Greenwood, South Carolina
 1500 kHz -- WGFT, Youngstown, Ohio
 1520 kHz -- WTRI, Brunswick, Maryland

One unlimited-time Class II station on a Class I-B channel (KBRW, a Class II station operating unlimited-time on 680 kHz at Barrow, Alaska, 10D/5N) proposed that it be permitted to operate at 10 kW day and night on the channel.

General Proposals
Duplication of the Class I-A Clear Channels

66. In addition to requests by individual Class I-A stations for higher power and by individual Class II, III and IV stations for initiation or expansion of operation on I-A channels (para. 65, hereof), several parties proposed more general modes of reallocating the use of the 25 Class I-A clear channels. Highlights are as follows:

67. Corporation for Public Broadcasting (CPB)
(Endorsed by National Public Radio (NPR))

Priority I: Immediate opportunity for 37 specified noncommercially operated Class II, III and IV stations to engage in or increase power for nighttime operations.

Priority II: Increase clear channel operations in the top 30 Arbitron markets by upgrading existing operations and adding new ones by:

- (a) Extensive breakdown of "existing clear channels."
- (b) Removing freeze on adjacent channel assignments.
- (c) Reduce channel spacing from 10 kHz to 9 kHz.
- (d) Add 1 channel below and 22 above the existing broadcast band.
- (e) Use low frequency band 150-285 kHz for broadcasting.

Priority III: Establish regional class unlimited-time stations commensurately with needs of major educational institutions or community-sponsored broadcast operations.

Priority IV: Establish local class stations in the several states to provide complete coverage for statewide noncommercial network operations.

68. CPB's comments, supported by NPR, are accompanied by a long detailed supporting statement by Jansky and Bailey and a voluminous compendium of figures and appendices.

69. The essential thrust of this massive submission is to seek the provision and reservation of generous amounts of spectrum space for AM noncommercial broadcasting.

Association for Broadcast Engineering Standards (ABES)

70. ABES projects an increment of 78 new unlimited-time stations on the 12 unduplicated Class I-A clear channels, and 25 more on adjacent channels through relaxation of the present freeze under Section 1.569 of the FCC Rules. Maximum power of 1 kW is proposed.

71. The new stations would protect the 0.1 mV/m contour of co-channel I-A's daytime and their 0.5 mV/m 50% skywave contour at night. They would receive co-channel protection to their 0.5 mV/m contour daytime and daytime adjacent channel protection as any other Class II or III station. At night, they would be authorized to accept interference limits "up to 10 mV/m RSS."

72. The broad object: to augment local radio service, principally to satisfy demands for local transmission services (i.e., local outlets). A tighter approach to the "suburban community problem" is advocated. All stations with main studios within 10 miles of a community would be reckoned as already providing a transmission service there.

National Black Media Coalition (NBMC)

73. NBMC suggests that the "splintering" of the 25 existing clear channels (11 of which now have "entire frequencies to themselves at night, while half the nation's stations go dark") will have significant effects on Black entry into radio. NBMC believes this could:

- "1. increase the number of available stations by over 1,000 stations across the country;
- "2. lower the cost of minority and women's entry into the radio market;
- "3. increase employment of minorities and women in the broadcasting industry;
- "4. spur diversity of local formats by increasing specialization of programming--with a likely increase in formats aimed at Blacks and other significant minority groups;
- "5. decrease scarcity of broadcast frequency space and possibly with it partially decrease the need for program content regulation;
- "6. spur economic competition by other local broadcasters, since the clear station now reach many more people than the stations they compete with, and;

"7. serve First Amendment goals by increasing the number of local information sources and by providing a greater opportunity for journalists, representatives and other spokespeople to communicate meaningfully in a mass society."

74. NBMC argues that splintering "may lead to rural people hearing more local area programming than they do now over clear channels licensed to large cities hundreds of miles away."

75. NBMC also states that FCC "should ultimately opt for the solution which will most increase the number of new stations all over the country while providing everyone with an opportunity to hear a local or regional station or translator." NBMC suggests that "those who would not receive acceptable AM or FM service by increasing the power of local and regional stations should be served by boosters or translators for signals of nearby stations. If the new rules allowing local advertising on translators is not sufficient impetus for private entrepreneurship in most areas, the government should consider subsidies for these nonprogramming entities." NBMC also stated: "Loans or grants, based on objective criteria, might better assure some broadcast service to everyone without wasting so much spectrum space on a few clear channels. */

76. The Commission should also consider whether television reception in rural areas is equivalent or better in service than clear channel broadcasting in the provision of relevant information to the population of "unserved areas," NBMC argues. If so, it further minimizes the need for future protection and governmental favoritism towards the clear channels in light of the need for the allocation of a large number of new radio stations.

77. Alternatively, NBMC continues, if the entire national population cannot be served by existing and additional AM, FM and translator services, "then the Commission should allow two or three noncommercial stations to operate at superpower in order to reach the remaining unserved areas. But this approach should only be a last resort."

78. NBMC also states that since it "does not have access to the engineering resources necessary to compute a reallocation of the AM radio band," it has supplied the Commission at this stage with specific goals to aim for, recognizing that the Commission intends to issue further Notices of Proposed Rule Making. NBMC urges the Commission "to seek comprehensive engineering reports to accomplish the objectives NBMC has suggested."

*/"Funds for such subsidies might be generated simply by the increase in filing and other fees to the Commission arising out of the large increase of radio stations spurred by the "splintering" policy here proposed. Should the Commission opt for this approach, it could see legislation to provide for these governmental subsidies where necessary."

79. A Petition for Rule Making and Notice of Inquiry filed November 12, 1973, by Citizens Communications Center (CCC) as Counsel for NBMC proposed, among other things, that FCC reduce the number of Class I stations to three or fewer, increase the power of those remaining to 100,000 watts to ensure service to the entire country, and require that they be operated noncommercially. This portion of the 1973 petition has been associated as comments in Docket 20642 pursuant to the Commission's "BY DIRECTION" letter to CCC of July 15, 1976, informing them that this would be done.

Daytime Broadcasters Association (DBA)

80. As already noted, DBA recurs to its support of extended and regularized hours of operation for daytime-only stations generally. This embraces both its 6:00 AM-6:00 PM daytime proposal, and the objective of increasing the numbers of unlimited time operations on the clear channels.