

Before the
Federal Communications Commission
Washington, D.C. 20554

MM Docket No. 88-511

In the Matter of

Review of the Methods for Calculating
Nighttime Protection for Stations
in the AM Broadcast Service

NOTICE OF PROPOSED RULE MAKING

Adopted: October 13, 1988; Released: November 4, 1988

By the Commission:

INTRODUCTION

1. The Commission is initiating this proceeding to propose revision of its Rules relating to procedures for calculating nighttime protection level to be afforded stations in the AM broadcast service. In particular, the Commission is considering modifying its Rules that relate to the calculation of nighttime RSS (root-sum-square) skywave interference levels to the protected groundwave contours of Class II and Class III AM broadcast stations and the skywave service contours of Class I clear channel stations. Consideration also is given to including adjacent channel skywave signals in such calculations.

2. This proceeding is an outgrowth of the *Notice of Inquiry (Inquiry)* in MM Docket No. 87-267, which initiated a comprehensive review of the Commission's AM broadcast assignment criteria and related matters.¹ Its goal was to identify any needed changes to the Commission's Rules which would permit AM stations to improve their service to the public and enhance their ability to compete in the market place.

3. Among the issues discussed in the *Inquiry* was the most appropriate method of calculating the RSS skywave interference to the nighttime groundwave service of Class II and Class III AM stations.² Alternative methods for modifying the current calculation procedure prescribed in the FCC Rules were discussed, along with the possible need for including the effects of adjacent channel skywave signals in the calculations. Subsequent consideration of this matter has led us to tentatively conclude that a similar calculation procedure may be useful in determining interference to the skywave service of Class I stations. Accordingly, this possibility will be examined herein.

4. A substantial number of comments addressing nighttime interference issues and procedures were received in response to the *Inquiry*. These comments support further consideration of the improved methods for calculating nighttime interference discussed in the *Inquiry*. Accordingly, we believe that the time is now ripe for considering changes to the procedures for calculating nighttime interference as proposed below.³ Before addressing these proposed changes, however, the following background information is provided.

BACKGROUND

5. The AM service is the most technically complex broadcast service to administer. This is due largely to the propagation conditions that exist in the AM broadcasting band. In contrast to other frequency bands where broadcast services are authorized, the propagation characteristics of the AM band vary with the time of day. During daytime hours, service is provided predominantly by groundwave signals that travel along the surface of the earth, and which are affected by the soil conductivity along the propagation path.

6. During nighttime hours, however, skywave signals from an AM station may be reflected from the ionosphere⁴ and can be propagated many hundreds of miles from the transmitter location. This nighttime propagation has both positive and negative implications. On the one hand, nighttime skywave signals can be employed to provide service many hundreds of miles from the transmitter. On the other hand, such enhanced signal propagation increases the probability of interference among stations hundreds of miles apart. Consequently, co-channel stations that could be located reasonably close to one another without interference during daytime hours could cause significant mutual interference during nighttime hours.

7. Interference during nighttime hours is further exacerbated by the fact that skywave interference can be caused by several co-channel and adjacent channel AM stations simultaneously. For this reason, the Commission adopted rules several decades ago to deal with the effect of cumulative interference to the service of Class II and Class III stations. However, as will be discussed below, there is reason to believe that the current Rules do not adequately deal with the effect of cumulative interference received from multiple interfering AM signals.

8. Class I and Class II stations operate on clear channels. Class I stations provide extensive primary (groundwave) service during the day and night, as well as secondary skywave service during nighttime hours generally extending out to 750 miles or more. Class II stations normally render primary service only, the area of which depends on the station location, power, and frequency. Class III stations operate on regional channels and provide primary service to larger cities and the surrounding rural areas.

9. Requisite protection to existing nighttime service of Class II and Class III stations is calculated in accordance with §73.182(1) of the Commission's Rules, which provides that the basis of protection to an existing station is the RSS (root-sum-square) value of interference caused to that station. In order to limit the number of interfering signals that must be taken into account, a "50% exclusion method" is used in making the calculations. This method provides a procedure for determining at what point interfering signals can be disregarded. Thus, the RSS for a station is determined by considering interfering signals in order of decreasing magnitude, excluding those that are less than 50% of that obtained using the stronger signals.

10. In the case of U.S. Class I stations, protection is afforded to the nighttime 0.5 mV/m 50% skywave signal.⁵ However, currently protection is calculated only on a "single signal" basis (i.e., each interfering signal is to be treated individually without considering the effect of other interfering signals). Thus, unlike the RSS procedure applied to Class II and Class III stations, no provision is currently made for considering the effect of multiple inter-

fering signals. Absence of such a provision is mitigated by the fact that, unlike the regional channels where many nighttime stations operate, the clear channels are used by far fewer nighttime stations.

DISCUSSION

Limitations associated with the current method of RSS interference calculation.

11. Calculating a station's RSS interference level using the 50% exclusion method cannot yield the true RSS value since the contributions of the weaker stations are excluded. Thus, its use can result in the gradual erosion of nighttime service as new nighttime operations are placed into service, or as existing stations modify their facilities to increase the signal strength in various directions. In fact, this method may allow each new nighttime operation to cause about 12% (approximately 1 dB) of additional interference to an existing nighttime station.

12. Additionally (as we pointed out in the *Inquiry*), there is a basic inconsistency in the application of the 50% exclusion method. For example, a new station can be placed on the air as long as its interference contribution to other stations is sufficiently low as to be ignored by the 50% exclusion method. However, an existing station whose interfering contribution to the same protected station is sufficiently strong to already require its inclusion in the protected station's calculated RSS value would not be permitted to increase interference by any amount, even though the resulting interference may be equal or less than that caused by a proposed new station.

13. The *Inquiry* discussed two alternative procedures that might be used instead of the current RSS method in order to alleviate its shortcomings. One was to eliminate the 50% exclusion method altogether and to apply an acceptable factor (some decibel or percentage increase) by which the RSS interference level at the protected contour of any station could be increased by another station. This procedure would have the advantage of consistent application to all stations whether they are already included in the RSS of an existing station or not. However, those filing comments generally did not favor this approach, because it would permit each station to cause some additional interference, and because of its potential for abuse (nothing was proposed that would prevent a particular station for filing for successive upgrades, each of which would comply with the new standard, the aggregate of which could substantially exceed it).

14. The other alternative proposed a reduction (such as 25%) in the exclusion reference, above which new interference contributions would not be permitted. This procedure would not resolve the inconsistency discussed in the paragraph 12, above. Nevertheless, this proposal received the greatest amount of support, since it was seen as capable of providing a modest reduction in overall interference levels without eliminating all flexibility in facility design or modification.

15. The primary objectives in considering a change in the procedures for RSS calculations are to determine service and interference more accurately, and to limit the incremental increase of interference that may be caused to existing stations by new stations or changes in the facilities of existing stations. In doing so, we must take care that the imposition of rigid interference constraints does not restrict substantially the introduction of new AM service in

areas lacking it or changes to existing existing facilities.⁶ Some mechanism is needed to balance restrictions on the incremental increase of interference to existing stations while, at the same time, maintaining sufficient flexibility for new stations or modifications to existing stations to be effectuated in order to meet the service needs of the public and AM stations alike. In the past we believed that authorizing facilities that contributed interference levels less than half of that existing previously was a reasonable way to balance these conflicting concerns.

16. We are sensitive to the concerns of those who feared that replacing the 50% exclusion method with a method that would allow a station to increase interference to any other station by a given amount (e.g., 1 dB or 0.5 dB) could be subject to abuse. Such a method would need to include a procedure to preclude the filing of successive applications by a station, where each application raised the level of interference to other stations by the maximum amount permitted. Such a procedure may be difficult to enforce in actual practice, however, because of the administrative complexity of examining subsequently filed applications for consistency with the requirement.

17. We have, therefore, tentatively concluded that a modification of the current RSS calculation procedure prescribed in §73.182(l) of the Rules to change the 50% exclusion to a 25% exclusion would provide the best balance between limitations on new interference and flexibility in facility design. The 25% exclusion method that we are proposing would be applied in a manner similar to the current 50% exclusion method; that is, each contributing interfering signal would be ranked in descending order of magnitude and all interfering signals that are less than 25% of the RSS of preceding contributors would be disregarded in the calculation of the RSS.⁷ Although we are proposing an exclusion level of 25%, we solicit comments on whether some other value would be more appropriate. We also solicit comment on whether the need for consistency and improved accuracy in the determination of interference levels warrants elimination of the approximate method of determining the nighttime service of Class IV stations given in the Note in Section 73.182(a)(4) of the Commission's Rules. Considering the refinement in the calculation methodology we are proposing herein, retention of such an approximate approach to interference computation may no longer be appropriate.

18. The 25% exclusion method would permit the RSS of an existing station to be increased by up to 3% (.26 dB) by a new co-channel station. We would note, however, that the RSS limits of existing Class II and Class III stations would increase when they are recalculated in the future because a greater number of existing interfering contributors would be included in the RSS calculation using the 25% exclusion method, as compared to the 50% exclusion method.

19. On a related matter, Section 73.182(m) of the Rules states, in effect, that objectionable interference from a station on the same channel shall be considered to exist to a station if the interfering field strength at the normally protected contour for the protected station (or the contour corresponding to the RSS for the protected station) from another station exceeds the value prescribed in Section 73.182(s), or the RSS divided by 20, whichever is greater. We also solicit comments as to whether it is still appropriate to maintain the provision of Section 73.182(m) in the Rules.

Adjacent channel skywave interference

20. Another issue concerning calculation methodologies relates to adjacent channel skywave interference. Section 73.182(n) of the FCC Rules limits the amount of interference that is permitted at the normally protected contour of a station resulting from the groundwave signal of an adjacent channel interfering station. However, no provision currently is made for also considering the effect of adjacent channel skywave interference. Comments filed in response to the *Inquiry* indicate that adjacent channel skywave signals can cause significant interference.

21. The *Inquiry* discussed two possible alternative procedures for dealing with the effects of adjacent channel skywave interference. One alternative discussed would be to amend the Rules to include co-channel and adjacent channel skywave signals in a single RSS calculation with appropriate weighting to account for the adjacent channel protection ratio. The other alternative discussed would be to require inclusion of adjacent channel skywave signals in the calculation of the adjacent channel groundwave RSS in the traditional manner prescribed in §73.182(n) of the Commission's Rules, in which the adjacent channel RSS level is computed normally, then checked to determine that it does not exceed the specified adjacent channel protection.

22. While the subject of adjacent channel interference is not well developed in the comments, the majority of commenters nevertheless expressed strong convictions that the current levels of interference in the AM broadcasting service border are nearly intolerable. They assert that over the years, there has been a continuing increase in interference levels, along with corresponding erosion of service areas. It is argued that this has perpetuated a steady decline in the AM audience because of public dissatisfaction with the level of interference to received programs. The comments are unanimous in expressing the opinion that not only should no further increase in interference be permitted under any circumstances, but steps should be taken to reduce current levels. Accordingly, the Commission is being strongly urged to direct its immediate attention to the amendment of §73.182, so that it more completely and accurately addresses actual signal and interference levels.

23. Encouraged by this general mandate to amend §73.182 to be more responsive to the foregoing concerns, we are proposing to amend paragraph (n) to include skywave signals on first adjacent channels along with co-channel skywave signals in the calculation of a station's RSS interference level.⁸ Adjacent channel skywave signals would be weighted with an appropriate first adjacent channel protection ratio in the calculation procedure.⁹ We further propose that the 25% exclusion method, proposed above, be applied to the weighted first adjacent channel skywave signals in the same manner as for co-channel interfering signals. Thus, a proposed new station, or modification to the facilities of an existing station, would not be permitted to increase the RSS level of any station within 10 kHz of the frequency of the proposed facility. We do not believe that it is necessary to consider the effect of skywave signals on second or third adjacent channels¹⁰ because of the skywave field strength that would be required, after weighting with the applicable protection ratio, before such interference would become significant.¹¹

24. We believe we should also consider at this time what changes, if any, may be appropriate in the protection afforded the skywave service of Class I stations. As we pointed out in paragraph 10, protection to the 0.5 mV/m 50% skywave signal of Class I stations currently is calculated by treating each interfering signal individually without considering the effect of other interfering signals. The effect of multiple interfering signals was believed to be mitigated by the relatively limited number and geographic distribution of co-channel Class II stations on any given clear channel frequency.¹² However, inasmuch as an important objective of this proceeding is the consistent application of improved interference prediction criteria to current and future broadcast facilities, we believe the proposed RSS computational method should be extended to cases where multiple interfering signals may affect the skywave service of Class I stations.¹³

25. In order to limit the effect of such cumulative interference, we are proposing to require that protection to a Class I station be determined by calculating the RSS at the 0.5 mV/m skywave or groundwave contour, whichever extends farther along each pertinent radial. Proposed new nighttime operations or modifications to existing facilities would be required to protect either the calculated RSS at any point on the protected contour or 0.5 mV/m, whichever is greater.¹⁴

26. There is presently no provision in the Commission's Rules to limit interference to the skywave service areas of Class I stations from adjacent channel skywave interference. Here also, the Commission is concerned that an increase in the number of nighttime operations on channels adjacent to clear channels could result in additional interference to Class I stations. We are, therefore, proposing to include skywave signals on first adjacent channel frequencies in the RSS calculations performed at the protected contour.

27. A final issue that must be resolved regarding the calculation of the RSS at the nighttime protected contour of Class I stations is the point at which interfering skywave signals are not included in the RSS calculation. Because we are proposing use of the 25% exclusion method for Class II and Class III protection, we believe that for purposes of consistency, Class I stations should be treated similarly. Nevertheless, there may be circumstances which warrant consideration of some other value. For example, the RSS calculation for Class II and Class III stations is related to protection of primary (groundwave) service, whereas the RSS calculation for Class I stations would be primarily related to secondary (skywave) service. The secondary skywave service of Class I stations may not need be protected to the same degree as primary service because skywave service does not have the same degree of reliability as groundwave service, due to the widely varying characteristics of skywave propagation. Therefore, while we are proposing use of the 25% exclusion method when calculating the RSS for Class I stations, we recognize that some tradeoff between the quality and quantity of service may suggest some other value as being more appropriate. Accordingly, we encourage interested parties to give careful consideration to this issue.

Protection of nighttime service of Class I stations

OTHER MATTERS

28. We believe we should treat the signals of stations in Canada and in Mexico as we would domestic stations in terms of their contribution to the calculation of co-channel and adjacent channel interference as proposed herein, to the extent such action would not conflict with current international agreements. Thus, until any change in the international agreements are effected, foreign facility proposals will continue to be evaluated as to their impact on U.S. stations pursuant to the 50% exclusion method and they will not be questioned on the basis of their adjacent channel skywave interference potential. Moreover, protection to foreign assignments will continue to be afforded in accordance with applicable international agreements. However, we propose to treat such foreign stations as we would domestic stations in terms of protection to domestic facilities.

29. Several parties commenting in response to the *Inquiry* were concerned about the impact that use of new calculation procedures may have on current AM broadcast service. For instance, although endorsing the use of more accurate procedures, several commenters urged the Commission not to implement their use until other AM assignment criteria were fully considered in appropriate rule makings. ABES and CBS, for example, are supportive of the more accurate procedures, adding that a rule making proceeding on this subject should be instituted. Such a proceeding, according to ABES, would permit a more detailed evaluation of its technical aspects as well as the potential impact on existing AM broadcast service such as changes in interference levels to existing stations, issues related to the processing of applications, and the potential for added administrative burdens.

30. We are cognizant of the relationship between the calculation procedures which we are considering in this *Notice* and other assignment criteria that may be considered in future rule making proceedings. We do not believe, however, that this fact should restrict us from proceeding with rule making at this time in order to develop a better record on this issue. Such a record will guide the Commission on appropriate actions which ultimately should be taken. We believe, however, that there may be practical reasons for considering a delay in implementing new calculation procedures, if adopted, until consideration of other possible changes to interrelated technical assignment criteria is concluded. Rather than implementing various changes to the technical assignment criteria in a "piece meal" fashion, there may be merit in considering implementing simultaneously all the interrelated changes that may ultimately be adopted. This approach could minimize administrative burdens for the Commission, as well as uncertainties within the broadcast industry. Accordingly, we seek comment on the advisability of such an approach.

31. It would not be our intent to require any modifications of existing facilities as a result of the changes proposed in this *Notice*. Nor would we require modifications to applications pending at the time any changes proposed herein are implemented.

ADMINISTRATIVE MATTERS

32. Authority for the rule changes on which comments are invited is contained in Sections 4(i) and 303(f) of the Communications Act of 1934, as amended.

33. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, interested parties may file comments on or before **December 27, 1988** and reply comments on or before **January 11, 1989**. All relevant and timely comments will be considered by the Commission before final action is taken in this proceeding. To file formally in this proceeding, participants must file an original and five copies of all comments, reply comments and supporting comments. If participants want each Commissioner to receive a personal copy of their comments, an original and nine copies must be filed. Comments and reply comments should be sent to the Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the Dockets Reference (Rm. 239) of the Federal Communications Commission, 1919 M Street, N.W., Washington, D.C. 20554.

34. For the purposes of this non-restricted notice and comment rule making proceeding, members of the public are advised that *ex parte* presentations are permitted except during the Sunshine Agenda period. *See generally* Section 1.1206(a). The Sunshine Agenda period is the period of time which commences with the release of a public notice that a matter has been placed on the Sunshine Agenda and terminates when the Commission (1) releases the text of a decision or order in the matter; (2) issues a public notice stating that the matter has been deleted from the Sunshine Agenda; or (3) issues a public notice stating that the matter has been returned to the staff for further consideration, whichever occurs first. Section 1.1202(f). During the Sunshine Agenda period, no presentations, *ex parte* or otherwise, are permitted unless specifically requested by the Commission or staff for the clarification or adduction of evidence or the resolution of issues in the proceeding. Section 1.1203.

35. In general, an *ex parte* presentation is any presentation directed to the merits or outcome of the proceeding made to decision-making personnel which (1) if written, is not served on the parties to the proceeding, or (2), if oral, is made without advance notice to the parties to the proceeding and without opportunity for them to be present. Section 1.1201(b). Any person who submits a written *ex parte* presentation must provide on the same day it is submitted a copy of same to the Commission's Secretary for inclusion in the public record. Any person who makes an oral *ex parte* presentation that presents data or arguments not already reflected in that person's previously-filed written comments, memoranda, or filings in the proceeding must provide on the day of the oral presentation a written memorandum to the Secretary (with a copy to the Commissioner or staff member involved) which summarizes the data and arguments. Each *ex parte* presentation described above must state on its face that the Secretary has been served, and must also state by docket number the proceeding to which it relates. Section 1.1206.

36. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an initial regulatory flexibility analysis (IRFA) of the expected impact of these proposed policies and rules on small entities. The IRFA is attached as Appendix A. Written public com-

ments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments on the rest of the *Notice*, but they must have a separate and distinct heading designating them as responses to the Regulatory Flexibility Analysis. The Secretary shall cause a copy of this *Notice of Proposed Rule Making*, including the Regulatory Flexibility Analysis, to be sent to the Chief Counsel for Advocacy of the Small Business Administration in accordance with Section 603(a) of the Regulatory Flexibility Act, Pub. L. 96- 354, 94 Stat. 1164, 5 U.S.C. 601 *et seq.*, (1981).

37. The proposal contained herein has been analyzed with respect to the Paperwork Reduction Act of 1980 and has been found to impose a new or modified information collection requirement on the public. Implementation of any new or modified requirement will be subject to approval by the Office of Management and Budget as prescribed by the Act.

38. For further information on this proceeding, contact Steven Selwyn, Mass Media Bureau, (202) 632-9660.

FEDERAL COMMUNICATIONS COMMISSION

Donna R. Searcy
Secretary

APPENDIX A

REGULATORY FLEXIBILITY ACT INITIAL ANALYSIS

I. Reason for Action:

In this proceeding, we seek public comment on the desirability of modifying existing procedures for calculating nighttime interference to AM stations resulting from multiple interfering signals. Changes being proposed pertain to improvements to the FCC's Rules related to the the RSS (root-mean- square) calculation of interference for Class II and Class III stations. Consideration is also given to calculation of interference to the skywave service area of Class I clear channel stations by the RSS method. Additionally, this *Notice* gives consideration to including the effect of adjacent channel skywave signals in the RSS calculation.

II. Objective:

The proposed changes are intended to modify provisions of the Rules which have been found to be inaccurate. This is in keeping with the Commission's efforts to update and improve the standards upon which the AM service is based so as to reflect the actual representation of service and interference.

III. Legal Basis:

Sections 4(i), 303 and 307 of the Communications Act of 1934, as amended, 47 U.S.C. §§154(i), 303, and 307.

IV. Description, Potential Impact and Number of Small Entities Affected:

There are approximately 5000 AM broadcast stations in the United States. None of these stations should be affected directly by this proposal since the changes proposed only relate to procedures for calculating interference to AM stations resulting from multiple interfering signals from other AM stations. We expect no negative impact to these stations, small entities or large, as we are not mandating any new requirements or showings. Actual interference is not expected to increase as a result of the specific changes proposed in this *Notice*. Indeed, the objective of the changes being proposed is to minimize new interference that could result in the future from new AM stations or changes to the facilities of existing stations.

V. Reporting Record Keeping, and other Compliance requirements:

There is no additional impact.

VI. Federal Rules that Overlap, Duplicate or Conflict with These Rules :

There is no overlap, duplication, or conflict.

VII. Any Significant Alternatives Minimizing Impact on Small Entities and Consistent with Stated Objectives:

There are no significant alternatives available.

APPENDIX B

The overall RSS (root-sum-square) field strength due to two or more individual co-channel and first adjacent channel interference contributions would be calculated using the expression:

$$RSS = [(a_1E_1)^2 + (a_2E_2)^2 + \dots + (a_iE_i)^2]^{1/2}$$

Where:

E_i is the field strength of the i 'th interfering transmitter (in uV/m);

a_i is the radio frequency protection ratio associated with the i 'th interfering transmitter, expressed as a numerical ratio of field strengths.

We propose that the field strength of interfering signals be arranged in descending order of magnitude (adjusted for weighting factors) and the interfering contributions of signals that are less than 25% of the RSS resulting from stronger signals be disregarded in the RSS calculation.

In the case of Class II and Class III stations, the calculations would normally be made on a transmitter site to transmitter site basis (site-to- site). In the case of Class I stations, the RSS would be calculated at the 0.5 mV/m 50% skywave contour, or the 0.5 mV/m groundwave contour, whichever extends farther along the pertinent radial. The RSS calculations would be made at as many points along the contour as are necessary to obtain an accurate indication of predicted interference.

FOOTNOTES

¹ See , *Notice on Inquiry, Review of Technical Assignment Criteria for the AM Broadcast Service*, MM Docket No. 87-267, FCC 87-245, adopted July 16, 1987, released August 17, 1987, 2 FCC Rcd 5014 (1987), 52 Fed. Reg. 31975, August 24, 1987. The *Inquiry* was issued after review of the comments received in response to the Mass Media Bureau's *Report on the Status of the*

AM Broadcast Rules, RM-5532, (Report) released April 3, 1986. The Report discussed the status of AM broadcasting and addressed a large number of technical, legal, and policy issues.

² See *Inquiry*, para. 74-80.

³ This proceeding will examine only those issues pertaining to procedures for calculating nighttime interference for Class I, Class II, and Class III stations. Where appropriate, the Commission will institute rule making proceedings to deal with the remaining issues addressed in the *Inquiry* and in public comments.

⁴ The ionosphere is a region of the earth's atmosphere consisting of several layers subject to ionization. These layers are alphabetically designated and have varying effects on radio waves. Pertinent to the propagation of AM broadcast signals are three ionization layers (D, E, and F). The distance of these layers above the earth varies from approximately 50 km for the D-layer (nearest the earth) to approximately 300 km for the F-layer (farthest from the earth).

⁵ See Section 73.182(a)(1)(i)(B).

⁶ Commission experience has been that a substantial number of existing stations make changes to their facilities each year for a number of reasons. In some cases such changes are required because the station has lost its transmitter site and must move to a new location. More commonly, construction in the vicinity of the current antenna site causes the directional antenna pattern to experience adjustment difficulties, thereby requiring a new directional antenna pattern or a new antenna site. In other cases changes result due to refurbishing the antenna system or because the station needs to adjust its service area due to demographic changes that have occurred in its community of license.

⁷ For purposes of protection, the RSS would not be considered to be increased when a new interfering signal is added which is less than 25% of the RSS value of interference from existing stations, and which at the same time is not greater than the smallest signal included in the RSS value of interference from existing stations. Moreover, it should be noted that the anomalies discussed in Section 73.182(1)(3),(4) and (5) would still need to be assessed.

⁸ The formula that we are proposing for use in calculating the RSS of Class II and Class III stations is contained in Appendix B of this *Notice*. It is similar to the "power sum method" described in Report 945-1 in Volume X - Part 1, Recommendations and Reports of the CCIR (International Radio Consultative Committee).

⁹ The current first adjacent channel ratio prescribed in §73.182(t) is 1:5 (desired to undesired). However, potential changes in co-channel and adjacent channel protection ratios are currently under consideration in MM Docket No. 87-267, and may be further addressed in a subsequent rule making proceeding.

¹⁰ The proscriptions in Section 73.37(a), however, would continue to apply.

¹¹ For example, if an existing station has an RSS of 4 mV/m and a new station is proposed on a frequency which is a second adjacent channel to the existing station, 30 mV/m skywave field strength would have to be produced by the proposed station at the site of the existing station before the interfering contribution would have to be taken into account (this assumes that the applicable protection ratio is 1:30 (desired to undesired). This is a level of field strength that exceeds the radiation capabilities of stations licensed in the United States.

¹² In *E. Weaks McKinney-Smith*, 22 FCC 2d 211 (1957) the Commission ruled that in the case of groundwave protection it is incorrect to apply the single-signal method, and that multiple interferences to groundwave services should be taken into account.

¹³ Because we have attempted to narrowly focus this proceeding on consideration of what we believe are improved methods of computing interference, it is not intended to be a forum for debating unresolved issues associated with any other ongoing proceeding. Thus, the question of whether Class II daytime-only stations should be allowed to operate on Class I clear channels at night (see *Report and Order, Unlimited-Time Operation by Existing Daytime-Only AM Stations, Discontinuance of Authorization of Additional Daytime-Only Stations; and Minimum Power of Class III Stations*, FCC 87-356, 2 FCC Rcd 7113 (1988), 52 Fed. Reg. 48268, December 21, 1987) is outside the scope of this proceeding.

¹⁴ Where the protected contour (groundwave or skywave) extends across the border of the U.S. into another country, or over water, the field strength calculated along the border or the shoreline of the water becomes the protected contour. The permissible interfering signal would be the calculated field strength divided by the applicable co-channel or adjacent channel protection ratio, or the signal permitted by the RSS calculation using 25% exclusion, whichever is greater.