

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Creation of a)	MM Docket No. 99-25
Low Power Radio Service)	RM-9208
)	RM-9242

To: The Commission

PETITION FOR RECONSIDERATION

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March 16, 2000

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Pursuant to Section 1.429 of the Commission's Rules, 47 C.F.R. § 1.429, National Public Radio, Inc. ("NPR") hereby petitions for reconsideration of the Report and Order in the above-captioned matter.¹

Introduction and Summary

NPR is a non-profit membership corporation that produces and distributes noncommercial educational programming through more than 600 public radio stations nationwide. In addition to broadcasting award winning NPR programming, including *All Things Considered*[®], *Morning Edition*[®], *Talk Of The Nation*[®], and *Performance Today*[®], NPR's Member stations originate significant amounts of news, informational, and cultural programming. NPR also operates the Public Radio Satellite Interconnection System and provides representation and other services to its Member stations.

¹ Creation of Low Power Radio Service, Report and Order, MM Docket 99-25, RM-9208, RM-9242, 65 Fed. Reg. 7616 (Feb. 15, 2000) [hereinafter "Report and Order"].

Given its substantial interest in radio broadcasting during the thirty years of its existence, NPR fully participated in the instant proceeding² and, therefore, is an interested party.³

Throughout this proceeding, NPR has consistently supported the goal of increased diversity of programming and ownership and some form of low power broadcasting as a means to that objective. NPR has done so because LPFM and public radio can be complementary means of promoting the dissemination of public telecommunications and advancing the public interest. Where we have taken issue with the Commission's specific proposals, it has been to avoid authorizing LPFM in a way that undermines public radio and the important public policies it furthers.

NPR recognizes that the service set forth in the Report and Order constitutes a somewhat more modest proposal than what the NPRM described. We appreciate the Commission's efforts to reduce the threat of harm to existing services. Nonetheless, the Commission's proposed implementation of an LPFM service is significantly flawed. Simply put, it does not assure the initiation of LPFM service in a way that complements, without causing interference to, existing services. While we believe that both commercial and non-commercial FM stations are adversely affected by the Report and Order, public radio stations are especially vulnerable to the likely interference.

The Commission's rules should be revised to permit individual licensees to obtain redress

² See Comments of National Public Radio, Inc., MM Docket No. 99-25, filed Aug. 2, 1999 [hereinafter "NPR Comments"]; Reply Comments of National Public Radio, Inc., MM Docket No. 99-25, filed Sept. 17, 1999 [hereinafter "NPR Reply Comments"]; Further Reply Comments of National Public Radio, Inc., MM Docket No. 99-25, filed November 15, 1999.

³ See 47 C.F.R. § 1.429.

from the Commission in the event specific 3rd adjacent LPFM applications and stations create interference for existing listeners within a full power, translator, or booster station's 1.0 m/Vm (60 dBU) protected service contour. In addition, the Commission must afford greater protection to radio reading services given the importance of such services to the print-disabled and the susceptibility of such services to interference. The protection afforded translator and booster stations is also insufficient both because the rules fail to expressly protect translator input signals and because they do not protect future translator service. Finally, the Commission must not simply assume the transition to digital audio broadcasting ("DAB") will occur unimpeded by LPFM but should affirmatively assure the protection of that transition.

I. The Record In This Proceeding Establishes The Need For Additional Measures To Avoid and Ameliorate Interference To The Services Of Existing Full Power, Translator, and Booster Stations

The Commission's decision to authorize LPFM stations by revising and reducing longstanding interference protections is based on two premises. First, interference to existing radio broadcast services is unlikely to occur to any meaningful extent.⁴ Second, any interference that does occur is justified by the benefits associated with the proposed new service.⁵ Neither these premises nor the decision to weaken existing interference protections are supported by the record in this proceeding.

The Commission has justified its decision by disregarding those laboratory tests that

⁴ Report and Order at ¶ 93 ("We find that the record in this proceeding thus far, including the technical data and other studies submitted, supports a conclusion that any risk of interference from LPFM stations of 100 watts or less is small and, on balance, is outweighed by the benefits of this new service.")

⁵ Id.

demonstrated a likelihood of interference and by relying instead on its own analysis.⁶ In so doing, the Report and Order fails to address the numerous fundamental flaws in the Commission's testing and analysis.

First, the Commission established no benchmark against which to determine what, if any, new interference might be acceptable.⁷ It is not enough simply to critique the internationally accepted benchmark proposed by others.⁸ Without any point of reference of acceptability, it is meaningless to say that any new interference is acceptable.

Second, the Commission failed to include any category I radios⁹ -- clock radios, shower radios, and other small, inexpensive receivers with internal antennas -- in its testing, even though such radios constitute a substantial percentage of all radio receivers sold annually.¹⁰ It is ironic that the Commission proposed the LPFM service in part to empower those with limited means,¹¹ but failed to consider the likelihood of interference to what are among the most inexpensive and

⁶ See id. at ¶¶ 93-104.

⁷ See NPR Reply Comments at 8.

⁸ The NAB testing used an SNR of 50 dB, based on the International Telecommunications Union-Radiocommunications (ITU-R) Recommendation 641. As we explained in our Reply Comments, the 50 dB RMS (root-mean-square) audio SNR targeted by NAB is equivalent to the 45 dB weighted quasi peak (WQP) SNR used in the NPR/CEMA/CPB testing. NPR Reply Comments at 7 n.7. The Commission's belief that the two benchmarks are materially different is therefore incorrect. See Report and Order at ¶¶ 95-96.

⁹ Technical Research Branch, Laboratory Division, Office of Engineering and Technology, Federal Communications Commission, Second and Third Adjacent Channel Interference Study of FM Broadcast Receivers, Interim Report at 3 (July 1999) [hereinafter "Interim Report"].

¹⁰ See Comments of the Consumer Electronics Manufacturers Association, filed August 2, 1999, at 10.

¹¹ Creation of Low Power Radio Service, Notice of Proposed Rulemaking, MM Docket 99-25, RM-9208, RM-9242, at ¶ 12 (rel. Feb. 3, 1999) [hereinafter "LPFM NPRM"]

commonly used radios. In any event, the assertion that any new interference is acceptable is not credible when the Commission has failed to consider the likelihood of interference to tens of millions of radio receivers sold each year.

Third, the Commission's belated examination of the interference issues¹² was, by its own admission, an "interim" study:

This report presents the results of the first phase of a study intended to produce independently developed data for the public record in Mass Media Docket No. 99-25 and other proceedings affecting FM broadcast service. Because of the need to develop some information quickly, this phase of the study is limited in scope to issues of second and third adjacent channel interference performance of analog FM receivers with respect to analog FM interferers. Additionally the study was limited in size to a fairly small sample of 21 receivers. Follow-on work is anticipated to expand the study sample as well as to broaden the scope to include digital interferer issues and investigation of the effectiveness of additional proposed methods to mitigate interference.¹³

Yet, despite the desire "to get some objective data into the record as quickly as possible, [the] fairly narrow limits . . . imposed on the scope of the initial study effort, both in the size of the sample of receivers tested and in the range of tests performed,"¹⁴ and the representations of and obvious need for further study, the Commission conducted no further laboratory tests and no field tests of the potential interference issues prior to issuing the Report and Order. In an attempt to help clarify the interference issues, NPR has now undertaken to conduct field tests, which we expect to complete by mid-July.

¹² The Commission proposed the wholesale elimination of both the 2nd and 3rd adjacency protection, plus the intermediate frequency protections, without conducting any engineering analysis. See NPRM at ¶ 46. The Commission's first and only testing, the self-styled "interim report," was conducted some six months after the NPRM was issued. See note ⁹, supra.

¹³ Interim Report at 2.

¹⁴ Id. at 3.

Fourth, the Report and Order summarily redefined and reduced the area in which full power stations are entitled to protection, while purporting only to eliminate the 3rd adjacency protection. As set forth in the NPRM, full and low power stations were to receive protection to their 1.0 mV/m contour.¹⁵ Indeed, the discussion in the NPRM of interference protection standards plainly states: "The reference coverage area of each class of FM station is considered to be the area bounded by the 1 millivolt-per-meter (1 mV/m) signal strength contour from the station."¹⁶ Yet, while the Report and Order states that LPFM stations are obligated to protect the service contours of existing full power, translator, and booster stations, the actual rules provide far less protection.¹⁷ Moreover, the LPFM rules require future translator stations to protect 100 watt LPFM stations to the LPFM station's 1.0 mV/m contour.¹⁸ The Commission cites no laboratory testing, technical analysis, or notice and comment to justify this fundamental change in its long-standing interference protections or preferential treatment for LPFM stations.

Fifth, the Commission authorized an entire new category of service -- LPFM travel advisory services -- without any consideration of the technical or other issues particular to that proposed service. Indeed, the Report and Order adopts a suggestion by a handful of initial

¹⁵ LPFM NPRM at ¶¶ 23, 30, 34 (proposing a 1.0 mV/m protected service contour for 1000 watt, 100 watt and 1-10 watt LPFM stations).

¹⁶ Id., Appendix A, at ¶ 1.

¹⁷ Under new Section 73.514, "[p]ermittees and licensees of NCE FM stations are not protected from interference which may be created by the grant of a new LPFM station or of authority to modify an existing LPFM station, except in instances where the NCE FM station would receive interference from an LPFM station within the 3.16 mV/M (70 dBu) contour. Report and Order, Appendix A, at 83. See also id. (codifying comparable rule for all other FM stations).

¹⁸ Id. at 105 (codifying new Section 74.1204).

commenters as though no countervailing considerations existed or were raised. Despite the superficial appeal of such a service, there are significant issues of need, feasibility, and harm to existing services that the Commission failed even to acknowledge.¹⁹

Finally, as addressed more fully below, the Commission failed to consider the likely interference to radio reading services for the print-disabled.²⁰

Equally flawed is the second premise to the Commission's decision to relax existing interference protection standards: the Commission's determination that "any . . . interference that may occur in individual cases would be outweighed by the benefits of new low power FM service."²¹ First, this "finding" is belied by the lack of any actual balancing of costs and benefits.²² The Report and Order simply asserts that LPFM will be beneficial²³ and then strives to minimize the technical evidence of countervailing interference costs.²⁴

Second, assuming a meaningful connection between the Commission's stated goal -- "creat[ing] a class of radio stations designed to serve very localized communities or underrepresented groups within communities" -- and the specific manner in which it has devised the LPFM service,²⁵ the Report and Order wholly fails to account for the significant harm that is

¹⁹ See NPR Reply Comments at 17-23.

²⁰ See Section I.B., infra.

²¹ See Report and Order at ¶ 104 (emphasis supplied).

²² See id.

²³ See id. at ¶¶ 3-5.

²⁴ See id. at ¶¶ 93-104.

²⁵ The issue is not beyond dispute. Indeed, one cannot help but question the effectiveness of

likely to occur to existing radio services, and, in particular, to public radio services, whether in individual cases or in the aggregate.

As NPR sought in its Comments to recount, public radio broadcasting stands apart as a shining achievement in Twentieth Century communications policy.²⁶ Since its origins as an outreach of higher learning in the first part of the century, public radio has pursued a mission of producing and disseminating news, information, and cultural programming to serve the needs of audiences unserved and underserved by commercial media. The inherent public value of this mission, and public radio's successful pursuit of it, first fostered and then reinforced a sustained Federal effort to promote the development and expansion of locally-oriented public radio.²⁷ Congress first provided direct Federal financial support to public broadcasting in 1962²⁸ and has since devoted substantial federal resources to funding the construction of radio stations to serve as local outlets of community expression.²⁹

the proposed service in achieving any useful end, given the Commission's decision to permit LPFM stations to cause significant interference to each other. See Report and Order at ¶ 65 ("[W]e will not require LPFM applicants to meet minimum distance separation requirements to protect their service areas against interference received.")

²⁶ See NPR Comments at 4-9.

²⁷ Thus, the Commission first reserved channels for noncommercial educational broadcast use in 1940, following an examination of the need for a noncommercial service mandated by the Communications Act of 1934. The Commission reserved additional channels several years later in the process of permanently allocating the lower 20 channels of the FM band for noncommercial educational broadcast use. See generally NPR Comments at 4-5.

²⁸ Educational Television Facilities Act, Pub. L. No. 87-447, 76 Stat. 65 (1962).

²⁹ See NPR Comments at 5-6. See also S. Rep. No. 221, 102d Cong., 2d Sess. 2, 7, *reprinted in* 1992 U.S. Code Cong. & Admin News 834, 835, 840 (1992) (advancing "a policy of broad access to public broadcast services in order to advance the compelling governmental interest in increasing the amount of educational, informational, and local public interest programming available to the Nation's citizens.").

Given the substantial Federal interest and investment in public radio, and the important role of public radio stations in their respective communities, there is no justification, and the Report and Order attempts none, for the blanket claim that "any . . . interference that may occur in individual cases would be outweighed by the benefits of new low power FM service."³⁰

The Report and Order also fails to account for the particular susceptibility of public radio services to interference, especially in the case of reserved FM spectrum stations.³¹ There are numerous reasons why reserved spectrum public radio stations are particularly likely to be affected by low power interference.

First, stations operating on reserved FM-band spectrum are more tightly "packed" together. While the Commission has proposed to license LPFM stations based on the assumption that full service stations operate with maximum height and power for their class,³² the "greater protection" afforded to stations not operating with maximum height and power does nothing to protect those stations that are operating with maximum facilities. Thus, the Commission's proposal does not adequately address the congestion in the reserved portion of the FM band.

Second, public radio stations are particularly vulnerable to interference because their signals are "lightly processed."³³ NPR's technical facilities and those of its Member stations

³⁰ See Report and Order at ¶ 104 (emphasis supplied).

³¹ While public radio stations are permitted to, and do, operate throughout the FM band, as well as in the AM band where there are no reserved frequencies, approximately 90 percent of NPR affiliated stations operate on reserved FM band frequencies.

³² Report and Order at ¶ 58.

³³ NPR Comments at 13 & n.34.

typically utilize minimum loudness processing to preserve the natural dynamic range of the programming, particularly in the case of jazz and classical music, news/talk, and special programming that is rich in natural, on-location sound recordings. Heavily processed Top 40 stations limit the dynamic range to emphasize loudness, and this processing tends to mask the effect of the interfering signals. Lightly processed signals are much more vulnerable to interference.

Third, the Commission failed to address the potential harm to statewide public radio networks.³⁴ Statewide networks are common in public radio because many public radio stations are licensed to state governments and such networks provide an efficient means of providing services throughout the state. Individual stations in a statewide network are typically sited to achieve maximum signal coverage to the maximum population based on actual receipt of a quality signal rather than predicted contour overlap. Notwithstanding the Commission's desire to "find" enough spectrum to justify authorizing LPFM service,³⁵ introducing new LPFM stations, particularly in the reserved portion of the FM band, is likely to pose significant interference to existing public radio service. Such an outcome is contrary to the Commission's longstanding support for statewide public radio networks.³⁶

Fourth, interference from and the need to avoid interference to adjacent television channel

³⁴ Id. at 18-19.

³⁵ LPFM NPRM at ¶ 44.

³⁶ See NPR Comments at 18 n.56 ("The Commission's rules historically have encouraged and supported such networks. Since 1963, the Commission's rules have required consideration of the extent to which each application seeking assignment of a channel for a noncommercial educational FM broadcast station meets the requirements of any state-wide plan for such stations.") (citing 47 C.F.R. § 73.502).

6 stations reduces the amount of reserved FM-band spectrum that might otherwise be available. As the Commission is well aware,³⁷ adjacent channel interference between noncommercial FM stations and analog channel 6 TV stations is a long-standing problem. While LPFM stations would have to avoid causing interference to television channel 6 stations,³⁸ the Report and Order introduces new sources of interference in a portion of the FM spectrum that is already significantly compromised.³⁹

Finally, the Commission's redefinition of the protected service area is especially harmful to noncommercial stations whether operating on reserved or non-reserved spectrum. The Commission's justification for addressing LPFM interference only within a full power station's 3.16 m/Vm (70 dBu) contour is that "FM stations have a core responsibility to service their principal communities."⁴⁰ In the case of noncommercial FM stations, however, the Commission has long "recognize[d] that many noncommercial educational stations cannot cover their entire

³⁷ See Memorandum Opinion and Order on Reconsideration of Sixth Report and Order in MM Docket No. 87-268, 13 FCC Rcd 7418, 7435 (1998).

³⁸ Report and Order at ¶ 114.

³⁹ The Commission has not even addressed the issue of television channel 6 to reserved FM band radio interference, and, in particular, such interference in the case of DTV channel 6 stations. See NPR Comments at 20-21. NPR commissioned a laboratory analysis of this issue and submitted the resulting test report in the Advanced Television proceeding. That report details the potential for increased interference between noncommercial FM and new digital television ("DTV") Channel 6 stations. According to the DTV Channel 6 Interference To FM Band Reception Report, the mask density of a DTV signal presents an even greater risk of interference to noncommercial FM stations sharing the lower FM channels. Thus, adding LPFM stations to the reserved band is likely to increase the interference potential between analog TV/DTV and noncommercial FM stations.

⁴⁰ Report and Order at ¶ 66.

community of license [even] with a [1.0 m/Vm] 60 dBu strength signal"⁴¹ and has exempted such stations from this obligation.⁴² By now denying noncommercial stations interference protection outside their 3.16 m/Vm, the Commission may be foreclosing the ability of stations to serve their actual communities of license.⁴³

A. Additional Safeguards, Including A Complaint Process, Are Essential

Based on the foregoing, greater protection of existing full power stations is essential. NPR continues to believe that retention of the 3rd adjacency for all FM broadcast stations is amply justified, but particularly to protect the public interest in public radio services. At a minimum, however, the Commission must amend its rules to incorporate a process to identify and ameliorate interference to full power, translator, and booster stations that results from the initiation of LPFM service.

In particular, the Commission should implement a process that permits the challenge and denial of an LPFM application on a 3rd adjacent channel at the initial processing stage to avoid the construction of facilities that are likely to cause harmful interference within the 1.0 m/Vm contour of any existing or then-proposed full power, translator, or booster station.

⁴¹ 1998 Biennial Regulatory Review -- Streamlining of Radio Technical Rules in Parts 73 and 74 of the Commission's Rules, Notice of Proposed Rulemaking and Order, MM Docket No. 98-93, at ¶ 58 (rel. June 15, 1998).

⁴² By proposing, and subsequently adopting, a requirement that noncommercial station serve "at least a portion of the community of license" in the event of a proposed facilities modification, the Commission sought to "give NCE FM applicants significant flexibility to locate technical facilities, consistent with the Commission's statutory licensing requirements." Id.; 1998 Biennial Regulatory Review -- Streamlining of Radio Technical Rules in Parts 73 and 74 of the Commission's Rules, First Report and Order, MM Docket No. 98-93, at ¶ 8 (rel Mar. 30, 1999).

⁴³ Compare 47 U.S.C. § 307(b) (requiring a fair, efficient, and equitable distribution of radio service to States and communities).

Thus, even when a proposed LPFM station's interfering contour is not predicted to overlap the protected contour of a full power, translator, or booster station, an existing station licensee could petition to deny the LPFM application on the grounds that "the proposed station would be likely to interfere with the reception of a regularly received off-the-air existing service."⁴⁴ This evidence might take several forms, including Arbitron ratings, proof of listeners, and news advertisements.⁴⁵ The Commission's basic query in these matters would be whether the evidence provided is sufficient to support the threshold showing of possible interference resulting from operation of the proposed station.⁴⁶ Far from administratively burdensome, a comparable process already exists.⁴⁷

In addition to addressing instances of interference at the application stage, the Commission rules should permit a licensee of a full power, translator, or booster station to file an interference complaint at any time after final licensing of the facility LPFM operation.⁴⁸ Such a complaint, in turn, should trigger the dispute resolution procedures already established for interference to new or newly modified full power station within such station's 3.16 mV/m contour.⁴⁹ Thus, a complaint based on actual interference would obligate the LPFM station to eliminate the

⁴⁴ 47 C.F.R. § 74.1204(f).

⁴⁵ See Calvary Chapel of Twin Falls, Inc., 13 FCC Rcd. 25286 (1998) (Mass Media Bureau).

⁴⁶ See id.

⁴⁷ See 47 C.F.R. §§ 73.1203-1204.

⁴⁸ 47 C.F.R. § 73.1620. Section 73.1620 is already applicable to LPFM stations. See Report and Order, Appendix A, at 84 (codifying new Section 47 C.F.R. § 73.801.).

⁴⁹ See Report and Order at ¶ 66.

interference or suspend operations until the interference can be ameliorated.⁵⁰

We believe the foregoing assures opportunities to address instances of harmful interference in individual cases without either reducing the scale of the proposed LPFM service or imposing significant administrative burdens on the Commission. The existence of such safety valves will only affect where, not whether, LPFM service may be established, and, even then, only modestly. Moreover, the Commission has, by its own initiative, already undertaken an increased administrative role by establishing an LPFM service with significant content, technical, and other regulatory obligations. The Commission's staff will already be addressing LPFM interference issues on a case-by-case complaint basis. While therefore modest, the additional measures we propose are nonetheless essential to assuring the compatibility of LPFM and existing services.

B. The Particular Susceptibility Of SCA Receivers To Interference, And The Corresponding Harm To Radio Reading Services For The Print-Disabled, Requires Greater Protection For Stations That Offer Radio Reading Services

It is impossible to reconcile authorizing new LPFM service to promote the interests of underserved audiences while undermining a critical service to the approximately 3 million print disabled Americans.⁵¹ Yet, in its zeal to expand service to underserved groups, the Commission has undermined a life-line service to one of the most vulnerable segments of the radio broadcast audience.⁵² These listeners depend on radio reading services to provide access to basic news and information. Radio reading services, in turn, are transmitted via radio station subcarriers --

⁵⁰ See id., Appendix A, at 91 (codifying the complaint process as new Section 73.809).

⁵¹ Supplemental Comments of the International Association of Audio Information Services at 3 (filed August 2, 1999) [hereinafter "IAAIS Supplemental Comments"].

⁵² See NPR Comments at 13, 23.

typically those of public radio stations.⁵³

These services are threatened by the Report and Order for two reasons. First, interference to the subcarriers of public radio stations will make it even more difficult for the print-disabled to receive an unimpaired signal. As demonstrated above, public radio stations, particularly operating on reserved FM band frequencies, are uniquely susceptible to interference from new LPFM stations. Since public radio stations provide the primary means by which radio reading services are transmitted, the radio reading services are especially susceptible to new interference. Second, SCA receivers are even more vulnerable to interference than are mass marketed equipment.⁵⁴ SCA receivers are designed for wide-band reception, which makes them inherently less selective in rejecting unwanted adjacent channel signals. Because SCA receivers are also designed to be modest in cost to meet the needs of a disabled constituency, their manufacture necessarily uses components that offer limited overload rejection and IF selectivity.

The Commission's response to the issue is twofold. First, since radio reading services are transmitted via subcarrier along with a radio station's primary signal, they are equally protected from interference.⁵⁵ As outlined above, however, public radio station signals are particularly vulnerable to interference. Second, with regard to the reception characteristics of SCA receivers, the Commission's response is that it "cannot consider whether additional interference might affect SCA reception" because it does not set technical standards for radio receivers⁵⁶ and, otherwise, it

⁵³ See IAAIS Supplemental Comments at 4.

⁵⁴ Id. at 9.

⁵⁵ Report and Order at ¶ 115.

⁵⁶ Id.

has not examined the issue.⁵⁷ The Commission's candor aside, the failure to examine the issue hardly justifies the Commission's course of action.

We appreciate, therefore, the Commission's recent willingness to conduct tests of various SCA receivers provided by a number of public radio stations across the country. We are hopeful, although by no means certain, that the Commission will revise its rules to safeguard the important services on which the print-disabled community depend.

While we await this testing, we believe the Commission should revise its Report and Order to maintain the existing 3rd adjacency protection for those radio stations that offer radio reading services. The Commission has maintained the 3rd adjacency distance separations equivalent, at least for Canadian and Mexican stations,⁵⁸ so it can simply revise the distance separations table for U.S. broadcast stations to reflect the additional protection for stations that offer a radio reading service.⁵⁹

Finally, the Commission should revise its rules to require LPFM stations to ameliorate interference to a radio station signal in the vicinity of a cable television headend. Many public radio stations are retransmitted via cable systems pursuant to the cable compulsory license.⁶⁰ Such retransmissions include any radio reading services being transmitted by the radio station subcarrier. Station listeners, including the print-disabled, who receive a service via their cable

⁵⁷ According to the FCC's Interim Report, it did not test any SCA receivers. See Interim Report at 3-4.

⁵⁸ Report and Order, Appendix A, at 86-91 (codifying new Section 73.807).

⁵⁹ To the extent this change would encourage radio stations to offer new radio reading services, such a consequence is hardly adverse to the public interest. This relief should also extend to translator and booster stations that retransmit radio reading services.

⁶⁰ 17 U.S.C. § 111.

hook-up should not lose that service as a result of interference caused by an LPFM station operating in the vicinity of the cable system headend.

II. The Substantial Public Interest And Financial Investment In Translator and Booster Service Requires Greater Protection Than The Report and Order Affords

The Report and Order threatens to undermine an important means by which millions of rural Americans receive public radio service. Indeed, while we appreciate and support efforts to bridge the "digital divide,"⁶¹ more than 9 million Americans depend on translator and booster facilities to receive public radio services.⁶² These facilities typically serve sparsely populated areas which often lack a sufficient economic base to support a full service station. In addition, the establishment of translator or booster service often results from a community's request to an existing full power public radio station to extend its signal to reach the community's residents.

Because these services are so important to the extension of public radio service to all Americans, the Federal and state governments historically have contributed a large percentage of the funds to construct translator and booster facilities. As part of NPR's initial comments in this proceeding, we submitted a summary of recent Federal grants for translator and booster station construction provided through the Public Telecommunications Facilities Program ("PTFP") by the Commerce Department's National Information and Telecommunications Administration ("NTIA").⁶³ These grants were as varied as a \$74,964 grant to provide first public radio service

⁶¹ See National Telecommunications and Information Administration, United States Department of Commerce, Public Meeting, Digital Divide Summit, 64 Fed. Reg. 60,427, 60428 (Nov. 5, 1999) ("The digital divide threatens to impede the health of our communities, development of a skilled workforce, and the economic welfare of our nation.")

⁶² NPR Comments, Attachment E, at 1.

⁶³ Id., Attachment F.

to 500 people in King Cove and Pedro Bay, Alaska and a \$144,766 grant to provide first public radio service to 411,882 people in Pennsylvania and New Jersey.⁶⁴

In some cases, state funding has been instrumental in helping stations to establish translator service to unserved and underserved areas. In the case of KUNM-FM, Albuquerque, New Mexico, state funds amounting to \$10,000 were made available, via the station's state university licensee, to offset the difference between the amount of the PTFP grant and the project cost.⁶⁵ Likewise, since 1973 the Florida Department of Education has maintained a policy of providing matching funds for PTFP grants received by affiliates of the state's public broadcast network.⁶⁶

Many stations also fund the construction of translator and booster facilities through other, community-based means. In NPR's initial comments, we offered the following examples:

Capital campaigns conducted in four different communities in Oregon enabled KSOR-FM, Ashland, Oregon to establish translators to provide first public radio service to 32,000 people in Port Orford, Brookings, Gold Beach and Coos Bay.⁶⁷

A subsequent fund drive raised \$6,300 to fund the construction of two translators that brought public radio to approximately 8,000 people in adjacent communities in Northern California.⁶⁸

In the case of WNMU-FM, Marquette, Michigan, a grant of \$11,174 from an area philanthropic organization enabled the station to establish a translator to enhance

⁶⁴ Id., Appendix F, at 1, 6.

⁶⁵ See id., Attachment I.

⁶⁶ See id., Attachment J.

⁶⁷ See id., Attachment G.

⁶⁸ See id.

reception within the station's coverage area.⁶⁹

Because of the substantial public interest in the service provided by translator and booster stations, NPR contended that the authorization of a new service of primary LPFM stations would be contrary to the Federal interest in extending public telecommunications services to as much of the public as possible.⁷⁰ Furthermore, NPR demonstrated the inadequacy of merely grandfathering existing translator and booster facilities, as the Commission had suggested.⁷¹ In particular, the establishment of new full service stations inevitably dislocates existing translators and boosters, thereby eviscerating any grandfathered status accorded the translator or booster facility and, more importantly, the area served.⁷²

The Commission disregarded these considerations, merely noting, without elaboration, NPR's "conten[tion] that LPFM stations should not be permitted a higher priority than FM translator stations."⁷³ The Commission determined, instead, that both the 100 watt LPFM stations and the 10 watt LPFM stations would have preclusive effect over new translator or booster stations, no matter the circumstance.

A. LPFM Stations Should Protect Future Translator Service As Well As Existing Translators

The Commission should revisit its decision to make translator service secondary to LPFM

⁶⁹ See id., Attachment H.

⁷⁰ See, e.g., 47 U.S.C. § 396(a)(7) ("[I]t is necessary and appropriate for the Federal Government to complement, assist, and support a national policy that will most effectively make public telecommunications services available to all citizens of the United States.")

⁷¹ LPFM NPRM at ¶ 13.

⁷² NPR Comments at 26.

⁷³ Report and Order at ¶ 61 n.113.

service. While we recognize the importance of establishing origination services in areas that may not be capable economically to support full power stations, such services should not be established at the expense of translator service and, in particular, translator service that is already serving the area. The grandfathering of existing translators does not assure the continuation of all or any particular translator service in existence today because such services may be dislocated at any time by a new or newly modified full power station.

If the Commission is unwilling to protect all future translator and booster service, NPR proposes to protect translator service in two, more specific ways. First, an existing translator service should be permitted a restoration process in the event of dislocation by a new or newly modified full power station. Thus, to avoid the loss of translator service due to (1) dislocation by full power stations and (2) the presence of LPFM stations, the Commission's rules should afford special status to those translator applications proposing to reestablish a recently displaced translator service. Such translator applications would be granted even though they would interfere with an LPFM station. To avail oneself of this grandfathering treatment, (1) a translator applicant would have to file its application within one some maximum time period, such as hundred and eighty (180) days of having discontinued service; and (2) at least some percentage, such as fifty (50%) percent, of the new translator's coverage area must include area formerly served by the displaced translator.

Second, any application that is the subject of a PTFP grant should be grantable notwithstanding the presence of an LPFM station. The PTFP program constitutes a joint undertaking by the Executive and Legislative Branches to "extend delivery of public

telecommunications services to as many citizens of the United States as possible."⁷⁴ An LPFM station should not stand in the way of an NTIA determination that translator service is appropriate "to extend service to areas currently not receiving public telecommunications services,"⁷⁵ or even for the "expansion of the service areas of existing public telecommunications entities."⁷⁶ It certainly should not obstruct a Federally supported initiative to "to provide public telecommunications services . . . to underserved audiences such as . . . blind and visually impaired individuals."⁷⁷

B. The Commission's Rules Should Expressly Protect Translator Input Signals

As a distinct matter, and while the Report and Order purports to protect existing translator and booster stations,⁷⁸ it does not expressly protect the input signals of translators. The omission is potentially significant because, as the Commission is aware, a translator station receives the signal of a primary FM station and rebroadcasts the FM programming on a different frequency.⁷⁹ Unless the input signal is protected at the translator location, an obligation to protect the translator station's output signal may be meaningless. In addition to the service of that translator, moreover, the service of every other translator in a "daisy chain" translator network may be lost. Accordingly, since the Commission proposed to protect the service of existing

⁷⁴ 47 U.S.C. § 390.

⁷⁵ 47 U.S.C. § 393(b)(1).

⁷⁶ 47 U.S.C. § 393(b)(2).

⁷⁷ 47 U.S.C. § 393(b)(3).

⁷⁸ Report and Order at ¶62.

⁷⁹ LPFM NPRM at ¶ 29 n.42.

translator stations, it is only appropriate to protect both the input and output signals of translator stations, and the Commission's rules should be revised to afford the express protection.⁸⁰

III. The Commission Should Assure Compatibility Between Low Power And Digital Audio Broadcast ("DAB") Services, As It Previously Proposed To Do

In the NPRM in this proceeding, the Commission expressed "concern[] that our understanding of future [In-Band, On-Channel] IBOC systems is preliminary and that we may not be fully aware of any negative impact or restrictions that authorization of low power radio service would have on the transition to a digital IBOC technology for FM stations."⁸¹ The interrelationship between LPFM and IBOC is manifest: relaxing existing interference protections to authorize new classes of low power FM stations could undermine efforts to establish a DAB system predicated on using the existing spectrum to simultaneously broadcast both analog and digital signals during a long-term transition to eventual all-digital operation. The authorization of substantial numbers of new LPFM stations might also frustrate a non-IBOC, new spectrum to DAB.

In light of these considerations, the Commission proceeded with appropriate caution as it developed the record in the LPFM proceeding. Thus, the Commission extended the initial comment filing deadline in part to accommodate laboratory testing of the proposed IBOC systems.

⁸⁰ While noncommercial educational translators operating on reserved-frequency spectrum may be "fed" by alternative means, such as microwave or satellite transmission, 47 C.F.R. § 74.1231(b), such flexibility is no substitute for protecting the reception of over-the-air signals by translator inputs. Such flexibility is not available to public radio translators operating on non-reserved spectrum, and, more generally, the cost of utilizing such transmission alternatives is prohibitively expensive for many stations.

⁸¹ LPFM NPRM at ¶ 49.

[T]he laboratory testing, along with data and analysis that digital radio proponents can make available prior to the completion of field tests, may enable the Commission to identify the range of potential digital radio design parameters and the viability of design options that could ensure compatibility between low power and digital radio services. In addition, we expect that the parties conducting further technical studies will keep us apprised of relevant developments that we may need to consider as we analyze the record in the low power radio proceeding. Finally, we take this opportunity to state our intention to launch a rulemaking proceeding regarding digital radio this summer. We believe doing so at the same time we are considering proposals in the low power radio proceeding will help focus issues regarding the compatibility of the two services.⁸²

When the Commission did not initiate a DAB rulemaking in the summer 1999 as it had promised, it extended the deadline for LPFM reply comments until after the DAB NPRM was issued.⁸³

The Commission's reasoned, and reasonable, caution in approaching the interrelationship between LPFM and IBOC abruptly ended with the issuance of the Report and Order four days before the filing of initial comments in the DAB proceeding. The only apparent basis for the Commission's decision to proceed without regard for IBOC, and DAB generally, is the statement of one IBOC proponent contained in its November 1998 petition for rulemaking touting adoption of that proponent's system as the official standard for DAB.⁸⁴

While the two week overlap between the issuance of the DAB NPRM and the filing of LPFM reply comments afforded interested parties some opportunity to comment on the interrelationship between the two matters -- at least as they existed at that point in time -- it did

⁸² Creation of Low Power Radio Service, Order Granting Extension of Time, MM Docket No. 99-25; RM-9208; RM-9242, 14 FCC Rcd 11096, at ¶ 6 (rel. May 20, 1999) [hereinafter "May 20 Extension Order"].

⁸³ Creation of Low Power Radio Service, Order Granting Extension of Time, MM Docket No. 99-25; RM-9208; RM-9242, at ¶ 7 (rel. September 17, 1999).

⁸⁴ Report and Order at ¶ 93 & n.145.

not, and could not, "enable the Commission to identify the range of potential digital radio design parameters and the viability of design options that could ensure compatibility between low power and digital radio services."⁸⁵ After all, in the DAB NPRM, the Commission again posed the basic question of "the compatibility of IBOC systems and the proposed low power FM ("LPFM") service."⁸⁶ The Commission also inquired whether to allocate new spectrum for DAB purposes, such as the spectrum currently allocated to television channel 6, and whether, in particular, to "give preference[] to LPFM licensees in assigning this Channel 6 spectrum."⁸⁷

The Commission appears now to have assumed that, however and whenever the DAB transition occurs, LPFM will not be an issue. This approach is inadequate and unjustifiable. With virtually every other means of electronic mass media transitioning to or otherwise deploying digital technology, it is essential for public radio broadcasters, in particular, to be able to exploit the benefits of digital technology to further their Congressionally sanctioned, public interest mission.⁸⁸ Indeed, if and when the final digital television transition occurs, it will have taken at least 20 years and intensive Commission and industry coordination to achieve.⁸⁹

Accordingly, pending additional testing of the IBOC systems, including field testing, the

⁸⁵ May 20 Extension Order at ¶ 6.

⁸⁶ Digital Audio Broadcasting Systems And Their Impact On the Terrestrial Radio Broadcast Service, Notice of Proposed Rulemaking, MM Docket No. 99-325, at ¶ 25 (rel. Nov. 1, 1999).

⁸⁷ Id. at ¶ 49.

⁸⁸ See 47 U.S.C. § 396(a).

⁸⁹ See Fifth Report and Order in MM Docket No. 87-268, 12 FCC Rcd 12809, at ¶¶ 1 n.1. & 99 (1997) (listing all the notices and further notices of proposed rulemaking, reports and orders, tentative decisions, and notices of inquiry since the Commission initiated the Advanced Television proceeding 1987; setting a target of 2006 for the cessation of analog television

only prudent course is either to maintain the existing interference protections or to clarify that LPFM stations are authorized on a secondary basis to all full power, translator, and booster stations operating pursuant to a DAB authorization.

Conclusion

For the foregoing reasons, NPR urges the Commission to reconsider and revise its Report and Order in the manner set forth above.

Respectfully Submitted,

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March 16, 2000

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