

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

In the Matter of	)	
	)	
Amendment of Service and Eligibility	)	MB Docket No. 07-172
Rules for FM Broadcast Translator	)	RM-11338
Stations	)	

**COMMENTS OF JOHN NATHAN ANDERSON**

**I. Introduction**

"[E]nabling AM stations to use FM translators would be a logical extension of the Commission's long-standing efforts to support and improve the AM service by cleaning up interference on the band."

- National Association of Broadcasters (NAB) Petition for Rulemaking, (RM-11338), July 14, 2006, p. 6<sup>1</sup>

"The idea that hundreds, if not thousands, of additional LPFM stations can be shoe-horned into an overcrowded radio dial without causing considerable interference simply defies the laws of physics."

- Dennis Wharton, NAB Executive Vice President of Media Relations, November 28, 2007<sup>2</sup>

The Federal Communications Commission is staffed by wise and knowledgeable people who do their best to implement policies consistent with the nebulous mandate of upholding the public interest, convenience, and necessity. As such, it should be able to smell a snow job from a mile away; this is why the simple fact that the Commission launched this Notice of Proposed Rulemaking is so troublesome. I am sure many of you remain close acquaintances of Marsha MacBride, Michael Powell's former Chief of Staff who is now head of the NAB's lobbying department and prime instigator of this proposal, but she doesn't work with you anymore, and you've shown more than enough professional courtesy by opening her proposal for public comment. But now is the time to be serious about that public interest mandate you serve.

I correspond with you as a fourth-year doctoral candidate at the Institute of

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1. *Petition for Rulemaking of the National Association of Broadcasters*, (RM-11338), filed July 14, 2006 (otherwise referred to as the "NAB Petition").

2. See

[http://www.nab.org/AM/Template.cfm?Section=Press\\_Releases1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=11113](http://www.nab.org/AM/Template.cfm?Section=Press_Releases1&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=11113) (Accessed January 4, 2008).

Communications Research, located at the University of Illinois at Urbana-Champaign, though I in no way speak for either institution. My primary research interest involves radio policy and, most importantly, the advent and proliferation of digital audio broadcasting. I have been following the development of radio policy and other interesting FCC minutiae, most specifically relating to low power FM radio (both licensed and unlicensed), FM translators, and digital radio, online at <http://www.diymedia.net/> for more than 10 years. I have been a regular commentor or signatory to comments on a variety of FCC rulemakings over the last several years.

There are several reasons why this NPRM should be dismissed, though its concerns not forgotten. Indeed, the desperate suggestion to completely warp the FM translator rules on behalf of AM stations signals that something is deeply wrong with the AM broadcast band, and it is incumbent on the FCC to further investigate and rectify these problems. But the current proposal is not the solution.

## **II. Contravention of Commission Policy and Practice Regarding Translators**

On December 11, 2007, the Commission released its Third Report and Order and Second Further Notice of Proposed Rulemaking with regard to its low-power FM (LPFM) radio service.<sup>3</sup> A major question raised by this document is the relative primacy of LPFM stations to translators.<sup>4</sup> This question came to light after a mishandled application filing window in 2003 led to the speculative licensing of several thousand new translator stations, in many cases precluding the placement of new LPFM stations in the process. At the heart of this question is the notion of whether new, local entrants to a radio market benefit the public more than new, distant entrants do. As a result, the Commission has stated an intent to review its translator rules for possible abuse and other malfeasance.<sup>5</sup>

With regard to this NPRM, the operative word here is “new.” Not only would allowing AM stations use FM translators effectively preclude new market entrants via LPFM stations,

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3. See *Third Report and Order and Second Further Notice of Proposed Rulemaking*, MM --925, December 11, 2007, <http://www.fcc.gov/fcc-bin/audio/FCC-07-204A1.pdf> (Accessed January 4, 2008).

4. *Id.* at p. 19-24, 35.

5. *Id.* at p. 23-24 (paragraphs 55, 56).

especially if the Commission is able to ultimately equalize the channel-spacing regulations between LPFM and translator stations, but it would effectively duplicate programming across two admittedly-scarce broadcast bands. This is a terribly inefficient use of spectrum. In what has been described as a “maxed out” band, how would FM translators for AM stations exacerbate this problem, especially if each AM station is allowed to utilize more than one translator? You can rest assured that many, if not most, AM stations will make a 2003-style rush for FM translators, for reasons further described in Part IV. In sum, the Commission has much more important issues to consider with regard to reforming its translator rules than this NPRM. If the ongoing policy development goal of the Commission is to diminish the abuse of translators in hopes of boosting the proliferation of LPFM stations, this NPRM represents a terrible regression in that regard.

## **II. Fundamentally Altering the Nature of Translator Service**

With clever rationale, the NAB’s argues that, should AM stations be allowed to use FM translators, that those translators be allowed to be programmed independently, especially when their parent AM station is forced to reduce its power or go dark at night. However, doing so would not be considered “prohibited program origination” under current FCC translator guidelines.<sup>6</sup> The Commission has already all but admitted that the technical distinctions between LPFM and translator stations are effectively political ones, save for the program origination rule. If that distinction is eroded, there is no logical reason why other distinctions between LPFM and translator should not also come down. LPFM stations would thus be allowed to broadcast at up to 250 watts, with multiple ownership and the potential for networking as has been seen with translators. To facilitate this, the Commission might consider merging the services, perhaps commingling the LPFM rules under the rubric of the translator service, effectively establishing technical (channel-spacing) parity without the need for legislative intervention. Ironically, this is probably what the Commission should have done in 1999-2000 to most effectively increase diversity on the FM dial, had it not been thwarted by the NAB - which now seeks the same spectrum for its own devices. “Shoehorning” new FM stations onto the dial only seems to apply when your foot’s not involved. Does the Commission really desire to open this can of worms?

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6. NAB Petition at p. 8-9.

### III. Increasing Degradation of the AM Band is Not Directly Addressed

Twice in the last two decades, the Commission has considered allowing AM stations widespread use of FM translators, and in both instances the proposals were wisely denied.<sup>7</sup> It should be noted, in both cases, the FCC alluded to other regulatory goings-on that were underway to help AM broadcasters overcome growing reception problems, all of which involved improvements to the regulation of channel congestion, interference, and low-fidelity receivers. Whatever happened to these regulatory initiatives? The AM Expanded band was adopted, but the other problems are worse than ever before. Why cannot the FCC enforce Part 15 rules on underground traffic-light sensors in Murfreesboro, Tennessee? Electromagnetic interference generated by most if not all of the sources cited by AM broadcasters fall under the FCC's enforcement rubric.

And why are not the FCC and broadcast industry working together to entice receiver manufacturers to build receivers of better quality with more robustness to EMI? An AM broadcaster that proactively worked to tackle interference-related reception problems in their own communities would, in my opinion, be demonstrating more public service than entrusting the broadcaster with more spectrum that does not address the general degradation of the AM band itself. This is a problem that AM broadcasters and the Commission must address together in an active manner going forward if either actually care about preserving it as an effective mass medium. Otherwise, it will be a sad day when the AM band is effectively lost, except for the clear-channel stations. Others have proposed allowing distressed AM stations to trade in their licenses for an upgraded, commercially-viable class of LPFM station;<sup>8</sup> though itself imperfect, this idea is a much more equitable tradeoff than bestowing AM stations with a windfall of FM spectrum. Although there admittedly have been special instances in the past where individual AM stations have been granted FM translators, these were in extreme circumstances, the likes of which do not provide adequate rationale to become the regulatory norm.<sup>9</sup>

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7. NAB Petition at 12-13.

8. Guy Wire, "The Great AM Debate," *RadioWorld*, August 25, 2005, <http://www.rwonline.com/pages/s.0048/t.4160.html> (Accessed January 4, 2008).

9. NAB Petition at 15.

Unfortunately, the implementation of this proposed policy is already taking place. At the National Association of Broadcasters 2007 Radio Show, an unnamed FCC staffer told convention-attendees that AM stations could apply for Special Temporary Authority to operate FM translators, working under the assumption that this NPRM would be formally approved sometime in the future.<sup>10</sup> A cursory search of the Commission's own CDBS Database's Broadcast Station Application forms finds that at least a dozen AM stations have filed for such STAs, and at least one has been approved.<sup>11</sup> This practice is apparently what policy wonks call the "creation of facts on the ground," or the building of evidence to demonstrate regulatory intent before formally approving a rule or rule change. The process, as we see here, always benefits the incumbents. Not only should STA applications for FM translators by AM stations be immediately frozen, reviewed for actual need, and if necessary, revoked, but the member of the Audio Division of the Commission's Media Bureau who facilitated the creation of these "facts on the ground" should be identified and reprimanded. Such practices do not befit an agency that professes to work with integrity.<sup>12</sup>

#### **IV. Effect on the Adoption of Digital Audio Broadcasting**

One important implication of allowing AM stations to utilize FM translators that has, surprisingly, gone undiscussed is the impact this may have on stations' adoption and use of digital audio broadcasting, herein otherwise referred to by its brand name, "HD Radio." The Commission is in the midst of an extensive rulemaking encouraging HD Radio's proliferation,<sup>13</sup>

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10. David Oxenford, "FM Translators for AM Stations - Start Your Engines," *Broadcast Law Blog*, September 30, 2007, <http://www.broadcastlawblog.com/archives/fm-translators-and-lp-fm-translators-for-am-stations-start-your-engines.html> (Accessed January 24, 2008).

11. Visit [http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/app\\_sear.htm](http://fjallfoss.fcc.gov/prod/cdbs/pubacc/prod/app_sear.htm) - Select "FM Translator" under the "Service" menu and "Special Temporary Authority" under the "Application Type(s)" menu, then click "Submit Application Search," and browse for yourselves. Not all results are AM stations asking for FM translators, but you'll find enough to see what I mean, and many applicants reference this particular rulemaking as the primary reason for filing.

12. See General Accounting Office, *FCC Should Take Steps to Ensure Equal Access to Rulemaking Information*, GAO-07-1046, September 2007, <http://www.gao.gov/new.items/d071046.pdf> (Accessed January 4, 2008).

13. See, more generally, MM Docket 99-325.

although it has remained hands-off with regard to the actual testing and technical verification of the HD technology itself. This has resulted in the passage of a Report and Order which has opened up both the AM and FM dials to new interference issues directly related to HD Radio.<sup>14</sup> In a nutshell, because the hybrid analog/digital HD Radio signal has a spectral footprint two to three times larger than its analog-only counterpart, it has a greater potential to interfere with stations on adjacent channels.<sup>15</sup> On the AM band, this interference problem is exacerbated, not only because of an AM-HD station's nearly-30 kHz spectral footprint, but because of the nature of skywave signal propagation. As higher-power digital radio stations have gone on the air, major interference between AM stations have developed that affect entire regions of the country. These interference problems are so extreme that some major broadcast corporations, including members of the HD Radio Alliance, have ceased broadcasting AM-HD signals at night as they and iBiquity try to figure out how to fit three bags' worth of spectral need into a single container.<sup>16</sup>

In addition, the perceived benefits of broadcasting in HD mode on the AM dial are highly outweighed by HD's FM counterpart. For example, the best AM-HD gets out of the technology is improved audio quality and increased robustness to interference - but these benefits only truly accrue when stations go all-digital, at a time yet to be determined. In the interim, the hybrid analog/digital HD signal is causing hash nationwide, some of which has been reported to the

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14. See *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcasting Service, Second Report and Order, First Order on Reconsideration and Second Further Notice of Proposed Rulemaking*, MM Docket 99-325, FCC 07-33, released May 31, 2007, <http://www.fcc.gov/fcc-bin/audio/FCC-07-33A1.pdf> (Accessed January 4, 2008), and *Public Notice*, DA 07-4114, released October 2, 2007, <http://www.fcc.gov/fcc-bin/audio/DA-07-4114A1.pdf> (Accessed January 4, 2008).

15. See John Anderson, "Digital Radio in the United States: Privatization of the Public Airwaves?", *Southern Review*, vol. 39, no. 2 (2006): 5-25. One may argue about the spectral mask, but my central premise holds.

16. See Anderson, "AM Broadcasters Back Away from HD Deployment," *DIYmedia.net*, October 13, 2007, <http://diymedia.net/archive/1007.htm#101307> (Accessed January 4, 2008) and n.a., "Dropping Like Flies," *Stop IBOC Now!*, n.d., <http://www.stopiboc.com/dropping.html> (Accessed January 4, 2008).

Commission, which has yet to act on the complaints.<sup>17</sup> On the other hand, while FM-HD does not suffer as badly from interference problems as does AM (although this may become a larger problem as more and more FM stations begin broadcasting hybrid signals),<sup>18</sup> the platform allows for a larger, more profitable suite of value-added features, the most enticing of which involve multicasting (the broadcast of multiple program streams over a single digital signal) and datacasting (the purveyance of non-audio data for “value-added” broadcast services).

How does this affect the current NPRM? The connection is fairly obvious. Giving AM broadcasters access to the use of FM translators gives them access to the analog/digital HD feature sets they are denied in their parent mode. While AM-HD has further degraded reception conditions on the dial, where only the strongest will survive, most AM stations will effectively change their focus to running chains of FM-HD translators, potentially fully able to originate their own programming. It’s an elegantly ambitious economic rationale to a radically simple problem. It has already been established that so-called in-band, on-channel digital broadcasting contains fundamental design flaws, not the least of which involve interference and additional use of spectrum, with no mandated additional public benefit.<sup>19</sup> Functionally turning AM broadcasters into FM-HD broadcasters via translator is not the answer to this particular problem: the answer lies with the Commission, NRSC and iBiquity sitting down and having a serious, heart-to-heart discussion about the fundamental flaws of the HD protocol itself. This might include radically reconsidering its current rulemaking trajectory with regard to DAB itself, up to and including the consideration of alternate DAB protocols.

Giving AM broadcasters a back door to the goodies of FM-HD via translator is not the

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17. See Leslie Stimson, “WYSL Claims Nighttime Interference From WBZ; May Be First Official AM IBOC Nighttime Complaint,” *RadioWorld*, October 31, 2007, <http://www.rwonline.com/pages/s.0121/t.9436.html> (Accessed January 4, 2007), and Stimson, “WYSL Files Second IBOC Complaint,” *RadioWorld*, December 12, 2007, <http://www.rwonline.com/pages/s.0121/t.10187.html> (Accessed January 4, 2008).

18. See Anderson, “HD Interference: Not Just For AM Anymore,” *DIYmedia.net*, December 23, 2007, <http://diymedia.net/archive/1207.htm#122307> (Accessed January 4, 2008).

19. See New America Foundation, Prometheus Radio Project, Benton Foundation, and Free Press, Petition for Reconsideration, MM 99-325, filed September 14, 2007, [http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6519724188](http://fjallfoss.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6519724188) (Accessed January 4, 2008).

way to ultimately advance the practical and best-interest public use of AM broadcast spectrum. Stations will not just apply for fill-in translators for areas where their AM coverage fades; they will apply for as many translators as they can to duplicate and/or maximize their existing coverage area with an FM-HD signal. It is one of the ways by which AM broadcasters will be placated for getting the shaft when the IBOC protocol itself was ordained as radio's future. In essence, what this NPRM facilitates is the gradual abandonment of the AM dial while the FM spectrum is further saturated by incumbents; "a blatant tactical artifice designed to divert the Commission's attention and resources from existing policy objectives,"<sup>20</sup> which presumably include the promotion of new voices and ownership diversity. We can stop this fallacy at any time; now would be nice. However, if the Commission were serious about repurposing the AM band to allow for new uses while incumbents migrated to FM multiplexes, that would definitely be worth further exploration.

## **V. Conclusion**

In order to move forward and beyond the proposed NPRM the Commission should take the following steps:

1. Terminate the current NPRM, but file away its concerns about the degradation of the AM band to use as the basis for policy development to actively reverse this process. A Notice of Inquiry about the problem would be a good place to start, at minimum.
2. In the interim, increase enforcement with regard to "garden variety" EMI which devastates so many AM broadcasters which are within the Commission's jurisdiction; actively work with broadcasters to identify and eliminate these sources en masse, if possible.
3. Conclude its proceeding on LPFM (MM 99-25), including the issues addressed therein about the relative primacy of translators, before even thinking about further modifying the FM translator service from something other than a purely secondary-status outlet.

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20. Prometheus Radio Project, "Comments in Opposition to Petition for Rulemaking," August 24, 2006, p. 2.

4. In the case of individually currently-distressed AM broadcasters whose coverage concerns cannot be addressed in any other manner, work with them to move them to alternate spectrum (i.e., some sort of FM service) to alleviate these problems.
  
5. More closely examine MM 99-325, the Commission's ongoing rubber-stampage of HD Radio, and actively engage with iBiquity and the National Radio Systems Committee to fix HD Radio's fundamental design flaws. This should involve the assessment of alternatives to the proprietary HD protocol.
  
6. Consider the ways by which the ability of FM-HD multicasting may provide secondary outlets or outright replacements for AM stations themselves.

Respectfully Submitted,

/s/

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