

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In The Matter Of)
)
Digital Audio Broadcasting Systems And) MM Docket No. 99-325
Their Impact On The Terrestrial Radio)
Broadcast Service)

OPPOSITION OF
IBIQUITY DIGITAL CORPORTATION

iBiquity Digital Corporation (“iBiquity”), by its attorneys, hereby submits this Opposition to the two Petitions for Reconsideration submitted in this proceeding¹ and recently published in the Federal Register for public comment.² Neither the Petition for Reconsideration of New America Foundation, et al. (“NAF Petition”) nor the Petition for Reconsideration of Jonathan E. Hardis (“Hardis Petition”) provides any new evidence or legal justification to make changes to the Commission’s *Second Report and Order* in this proceeding. In fact, the petitions merely repeat arguments each Petitioner presented earlier in this proceeding, which arguments the Commission consistently has rejected. Commission’s precedent, the record in this proceeding and the public interest all demand that the Commission dismiss the petitions and uphold the *Second Report and Order*.

A. Background Statement

iBiquity is the sole developer of the HD Radio™ system for In-Band On-Channel (“IBOC”) broadcasting and its interest in this proceeding is a matter of record before the

¹ *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, MM Docket No. 99-325, *Second Report and Order, First Order on Reconsideration and Second Further Notice of Proposed Rulemaking*, FCC 07-33 (May 31, 2007) (“Second Report and Order”).

² Petitions for Reconsideration of Action in Rulemaking Proceeding, 73 Fed. Reg. 4,572 (Jan. 18, 2008).

Commission. During its review of the NAF Petition and Hardis Petition, it is important for the Commission to take into account the widespread adoption of HD Radio broadcasting throughout the United States. The Petitioners would lead the Commission to believe that HD Radio broadcasting is something that will be implemented in the future and that a reassignment of FM spectrum to new entrants or a substitution of the audio compression technology used in the system could be seamlessly implemented. This is not accurate. As of February 1, 2008, there were more than 1,600 AM and FM stations broadcasting HD Radio signals in the United States. These broadcasters serve listeners in all 50 states, the District of Columbia and Puerto Rico with a digital simulcast of existing analog programs as well as 800 new audio programs that have been introduced without the allocation of new FM spectrum. Currently, there are more than 50 receiver models available to consumers that receive HD Radio broadcasts. These models include OEM automobile, aftermarket automobile, tabletop, home HiFi and car converter products. They are sold by big box electronics retailers, online retailers and numerous local and regional electronics outlets. iBiquity has invested more than \$200 million dollars in the development, commercial implementation and rollout of HD Radio technology. Broadcasters and equipment manufacturers have invested several hundred million dollars of additional funds to develop HD Radio products and to convert radio stations to digital broadcasting. HD Radio broadcasting is not a development in the future; it is happening today.

B. The NAF Petition is Based on Distortions and Factual Misstatements and Must Be Denied

The NAF Petition argues that the Commission's authorization for stations to broadcast digitally using the HD Radio system represents a new license for broadcasters. It further argues that the Commission should make those licenses available to new entrants in the FM band, such as low power FM ("LPFM") broadcasters. These arguments, however, are based on a

misreading of the Commission's rules and a fundamental misunderstanding of the technical parameters of the HD Radio system. As is discussed below, broadcasters converting to digital broadcasting have not been assigned new spectrum, and neither hybrid nor all-digital mode HD Radio operation creates the opportunity for the Commission to license new entrants in the AM or FM band. Additionally, the NAF Petition's policy argument that LPFM broadcasters should receive a windfall through the digital transition in the form of new LPFM licenses or a tax on existing broadcasters ignores the investment made by existing broadcasters and the public interest benefits of their transition to HD Radio broadcasting. iBiquity encourages the Commission to recognize the benefits of HD Radio broadcasting for the listening public and all broadcasters, and to deny the NAF Petition.

The NAF Petition is inaccurate when it characterizes the Commission's authorization of HD Radio broadcasting as the grant of "initial licenses." The HD Radio system inserts digital carriers on either side of an FM station's existing analog signal in the region between 102 and 200 kHz from the center carrier. Although the digital carriers are adjacent to the 200 kHz analog signal, which occupies the region 1 to 100 kHz from the center carrier, they occupy a region on either side of the analog signal that has been set aside for the existing analog broadcast to ensure the technical integrity of the broadcast signal.³ The NAF Petition incorrectly claims broadcasters do not currently use these sidebands.⁴ A review of the Commission's rules for analog broadcasting and the technical parameters of the HD Radio system demonstrates the invalidity of this argument. The Commission's existing FM rules specify:

³ As the Commission is aware, the allotment plan for FM radio stations is very delicately designed to minimize adjacent channel interference. The HD Radio system was carefully developed to maintain the integrity of this balance.

⁴ NAF Petition at 13.

(a) FM broadcast stations employing transmitters authorized after January 1, 1960, must maintain the bandwidth occupied by their emissions in accordance with the specification detailed below. . . .

(b) Any emission appearing on a frequency removed from the carrier by between 120 kHz and 240 kHz inclusive must be attenuated at least 25 dB below the level of the unmodulated carrier. Compliance with this requirement will be deemed to show the occupied bandwidth to be 240 kHz or less.⁵

Even if the FM broadcaster's license does not specify the right to add emissions beyond 100 kHz from the center carrier, the Commission's FM rules unambiguously grant FM licensees the right to use this spectrum. Moreover, the Commission's detailed technical rules and protections from co-channel and adjacent channel interference effectively preclude anyone else from using this spectrum. These rules are carefully designed to maintain the technical integrity and operating viability of all licensed stations. What the NAF Petition characterizes as the "guard bands" are an integral part of this design. A plain reading of the Commission's rules directly contradicts the Petitioners' assertion that the Commission has not previously assigned the right for broadcasters to use the spectrum occupied by the digital sidebands and that HD Radio broadcasts constitute a new license. Based on its own rules, the Commission must reject the NAF Petition.

The NAF Petition's reliance on *Fresno Mobile Radio*⁶ is similarly deficient. In *Fresno Mobile Radio*, the Commission issued new licenses to new entities seeking to use Specialized Mobile Radio spectrum. The question presented to the D.C. Circuit was how to classify those new licenses the Commission had issued. The D.C. Circuit upheld the Commission's classification of the license grants as "initial licenses." The court deferred to the Commission's expertise and acknowledged nothing in the Communications Act "forecloses" the FCC from its

⁵ 47 C.F.R. § 73.317.

⁶ *Fresno Mobile Radio, Inc. v. FCC*, 165 F.3d 965 (D.C. Cir. 1999).

classification.⁷ But, the D.C. Circuit never implied anything in the Communications Act mandated a classification as an initial license, as the NAF Petition seeks in this case.

Unlike the situation in *Fresno Mobile Radio*, the Commission has not issued new licenses for HD Radio broadcasts. It merely adopted technical rules to enable existing FM radio licensees to broadcast digital signals in a manner consistent with the existing analog license allotment system. The Commission has acknowledged existing broadcast licenses include the right for broadcasters to transmit the digital sidebands – it has not issued new licenses. In *Fresno Mobile Radio* the D.C. Circuit clarified that the Commission has the authority to make this determination, as it has already done in this case. In light of these facts, the NAF Petition’s arguments concerning the applicability of *Fresno Mobile Radio* to digital radio must be rejected. NAF’s subsequent arguments about mutual exclusivity and auctions are moot because they are wholly dependent upon a finding that the Commission has issued a new license, a finding that cannot be upheld in this case.

The NAF Petition also ignores the public interest benefits of HD Radio broadcasting. These Petitioners that have argued vociferously before the Commission for new public interest and community broadcasting requirements but refuse to acknowledge that HD Radio broadcasting is being used to satisfy this demand. The introduction of multicasting has allowed broadcasters to offer new community services and public interest programming, as well as locally oriented programming that serves particular communities or interest groups. For example, C-SPAN radio at 90.1 MHz in Washington, D.C. offers three audio streams using HD Radio broadcasting. In addition to its mixture of Congressional hearings, presidential speeches, Campaign 2008 coverage, House and Senate proceedings, and public affairs programs offered on its HD1 channel, C-SPAN now is able to offer gavel-to-gavel coverage of the House and Senate

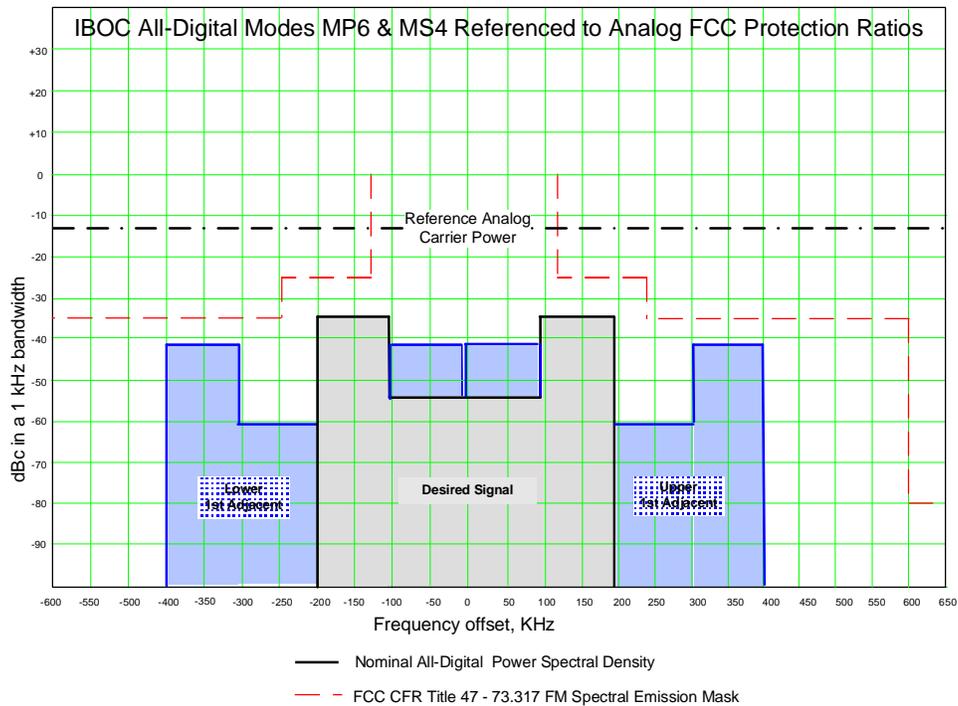
⁷ *Id.* at 970.

on its HD2 and HD3 streams. Before the introduction of HD Radio multicasting, no radio station offered full coverage of these government proceedings. WAMU-FM in Washington has used its HD2 channel to return bluegrass to the Washington airwaves and its HD3 channel to offer a new range of news and public affairs programming. National Public Radio, Harris Corporation and Towson State University recently announced an “accessible radio” initiative using HD Radio multicasting channels. The initiative will use multicasting to “enable hearing-impaired people to ‘see’ live radio content on specially equipped receivers by applying television closed-captioning processes to radio broadcasts. The technology also will provide audio cues and voice prompts, as well as advanced radio reading services, for those visually impaired and blind.”⁸ Clear Channel Radio has used its multicast channels at many stations across the country to introduce Pride Radio, music entertainment and discussions geared for the gay community. Greater Media’s WRIF-FM offers “Detroit Local” on Tuesday nights featuring local bands and music on its HD2 channel. The Commission should not accept the NAF Petition’s view that the introduction of new entrants is the only means to secure this type of locally oriented or public interest programming.

Finally, iBiquity notes the NAF Petition has completely mischaracterized the implications of an eventual transition to all-digital broadcasting. The Commission should recognize the eventual authorization of all-digital operations will not free any spectrum for reallocation. In the all-digital mode, the area currently occupied by the analog signal remains occupied by the digital carriers of the adjacent channel stations after the analog signal is turned off. In the figure below, the gray figure represents the primary and secondary digital carriers of

⁸ NPR, Harris Corporation and TU launch global effort to make radio accessible to hearing and sight impaired, Press Release dated Jan. 8, 2008 available at <http://www.towson.edu/main/abouttu/newsroom/radiofordisabled010908.asp>.

an all-digital FM station. The blue figures on either side represent lower and upper first adjacent all digital stations.



As can be seen in the figure, the region between 0 and 100 kHz that was formerly occupied by the analog signal of the desired station is now occupied by the upper digital sideband of the lower first adjacent station and the lower sideband of the upper first adjacent station. The digital sidebands take on an interleaved pattern; however, there is no unoccupied spectrum available for reassignment or auction. Any assignment of the 0 to 100 kHz region to another service would create harmful interference to the digital sidebands of the first adjacent stations. Thus, the Commission must reject the NAF Petition’s assertion that somehow there will be spectrum available for reassignment.

NAF and its co-petitioners have developed creative arguments in an attempt to bolster their desire to find spectrum for Low Power FM and other community services. iBiquity applauds their goal of ensuring radio broadcasting continues to meet the needs of local communities and the overall public interest. However, the NAF Petition’s misinterpretation of

the Commission's rules and HD Radio technology, as well as its strained arguments about spectrum licensing, cannot be used to overturn the *Second Report and Order*.

C. The Hardis Petition Fails to Raise Any New Issues and Should Be Dismissed

The Hardis Petition merely repeats old arguments that have been rejected by the National Radio Systems Committee ("NRSC") and the FCC for many years. The essence of the Hardis Petition appears to be his claim that iBiquity has somehow failed to disclose sufficient information about its HD Radio system. The Hardis Petition ignores the procedural status of this proceeding, the commitment iBiquity has made to the broadcast industry and the FCC and the realities of the HD Radio marketplace. As is discussed below, the Commission should dismiss summarily the Hardis Petition.

Mr. Hardis' arguments about the NRSC standard setting process ignore the fact that the *Second Report and Order* does not adopt or endorse a regulatory standard. Mr. Hardis' complaints are irrelevant to the rules the Commission has adopted in the *Second Report and Order*. Moreover, his arguments have been presented repeatedly and exhaustively to both the NRSC and the Commission. Notwithstanding Mr. Hardis' complaints that the Commission failed to directly address all of his comments when writing the *Second Report and Order*, the essence of Mr. Hardis' petition appears to be his view that it was arbitrary and capricious that the Commission did not adopt *his* point of view.

iBiquity has demonstrated repeatedly that it is meeting its responsibilities to the industry and the Commission. iBiquity has made extensive patent disclosures and licensing commitments to the NRSC and the Commission. iBiquity has licensed all transmission equipment to manufacturers and broadcasters that have sought access to iBiquity's HD Radio technology. In fact, iBiquity's licensing practices are so transparent that iBiquity posts publicly its standard

Station License Agreement for broadcasters.⁹ Contrary to Mr. Hardis' assertions¹⁰ concerning manufacturers of studio equipment, iBiquity has invested years and significant expense developing software to enable the industry to process and format data before it reaches a digital exciter. iBiquity has worked at its own expense with manufacturers of audio processing equipment to optimize digital performance and has provided free software to equipment manufacturers to enable the processing of data for multicasting, program associated data and datacasting. iBiquity derives no revenue from any of these efforts. iBiquity believes it is very significant that the complaints about access to information from perennial critics such as Mr. Hardis have never been backed up by any complaints from the equipment manufacturers and broadcasters that use HD Radio technology. The range of transmission and receiver equipment in the marketplace alone should give the Commission comfort that there has been sufficient disclosure of technical information.

Finally, iBiquity points out Mr. Hardis' baseless claims of trespass ignore the fact that adoption of HD Radio technology is purely voluntary. The Commission has not imposed any mandatory adoption requirements on the broadcast industry.

Mr. Hardis has demonstrated through many years of participation at the NRSC that he will never be satisfied with the design to the HD Radio system or the level of disclosure iBiquity has provided. Ironically, while he criticizes iBiquity for imposing its vision of the HD Radio system on the industry, he seeks a regulatory mandate to impose his vision of a different codec for digital broadcasting. It is unclear how substitution of his individual vision for an industry sanctioned standard could advance the public interest. iBiquity also notes that throughout his many years of participation at the NRSC, Mr. Hardis never voted to oppose adoption of NRSC-5

⁹ <http://www.ibiquity.com/broadcasters/licensing>.

¹⁰ Hardis Petition at 14.

or NRSC-5A. His subsequent complaints to the Commission amount to nothing more than bitterness for industry rejection of his views.

D. Conclusion

Based on the foregoing, iBiquity Digital Corporation requests that the Commission reject the NAF and Hardis Petitions and uphold the *Second Report and Order*.

Respectfully submitted,

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