

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

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

**OPPOSITION OF THE NATIONAL ASSOCIATION OF BROADCASTERS
TO THE PETITION FOR RECONSIDERATION
OF JONATHAN E. HARDIS**

The National Association of Broadcasters (NAB)¹ hereby files in opposition to the Petition for Reconsideration of the Commission's *Second Report and Order*² on digital audio broadcasting for America's terrestrial radio broadcast service, filed by Jonathan E. Hardis.³ As demonstrated below, the Petition is insufficient to cause reconsideration or modification of the Commission's decisions in the *Second Report and Order* and, most certainly, is insufficient to justify an abrupt delay in the continued implementation of digital radio, as Petitioner requests.

¹ The National Association of Broadcasters is a trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and the Courts.

² *Second Report and Order* in MM Docket No. 99-325, FCC 07-33 (rel. May 31, 2007) (*Second Report and Order; Second R&O*).

³ Petition for Reconsideration of Jonathan E. Hardis, MM Docket No. 99-325, filed July 9, 2007 (Petition; Hardis Petition).

I. Introduction

In the *Second Report and Order*, the Commission has taken a second important step in defining the service and operational rules for interim “hybrid” digital audio broadcasting (DAB), as radio stations across the country continue the rollout of DAB within their existing spectrum and in conjunction with their analog broadcast service.

The continued implementation of digital technology will allow radio broadcasters to compete in a digital world, to upgrade dramatically the quality of their FM and AM audio offerings, to present exciting new additional services for their audiences and to re-vitalize the AM broadcasting service – all to the great benefit of the listening public.

Evaluation of digital technologies and systems for DAB has been conducted primarily by the National Radio Systems Committee (NRSC), the joint industry technical body administered by NAB and the Consumer Electronics Association (CEA). This organization, comprised of engineers from radio broadcast companies, consumer electronics manufacturers and a diverse cross section of other companies interested in the development of DAB, has strived to achieve consensus as it has moved DAB forward.

In the mid-1990s, the NRSC narrowed its focus to consideration of so-called in-band, on-channel (IBOC) technology, which allows side-by-side “hybrid” transmission of digital and analog broadcast signals within the existing spectrum occupied by analog broadcasters. This extraordinary technological advance

permits radio broadcasting to be both analog and digital, to use no additional spectrum and to preserve the installed base of radio receivers. Meanwhile the American public is being introduced to new, hybrid IBOC radios that receive both digital and analog signals, with increased fidelity, digital displays and additional services.

System proponents of this IBOC technology eventually merged into one company, which became iBiquity Digital Radio, the sole remaining developer of IBOC DAB technology and the system known today as HD Radio. iBiquity's predecessor company filed the Petition for Rulemaking that began this FCC proceeding in 1998.

The Commission has evaluated various alternatives to bring terrestrial radio into the digital age, and ultimately settled on IBOC as the digital technology to best do the job.⁴ In its *First Report and Order* in this proceeding, the FCC selected the iBiquity systems as *de facto* standards for interim digital operation and authorized stations, on an interim basis, to begin IBOC broadcasting. *Id.* at 41, 44. In the *Second Report and Order*, the Commission took another important step by adopting technical, service and operational rules for interim IBOC broadcasts and by permitting AM IBOC nighttime broadcasts.

As we discuss below, however, the FCC's recent action is not the final authorization of IBOC broadcasting that Petitioner claims has improperly disregarded his concerns and comments.

⁴ See *First Report and Order* in MM Docket No. 99-325, FCC 02-286, (rel. October 11, 2002) (*First R&O*).

II. Petitioner's Complaints Do Not Present Sufficient Reason to Reconsider the Second Report and Order, Much Less to Delay the Deployment of IBOC.

The complaints presented in the Hardis Petition are not sufficient to cause reconsideration the *Second Report and Order's* decisions.⁵ Nor do they provide any basis for delay of the deployment of IBOC, which Petitioner requests.

First, as a procedural matter, Petitioner has not shown why he did not take the opportunity to present his views to the Commission in response to the instant *Further Notice*.⁶ The FCC's April 2004 *Further Notice* called for comments on operational requirements and on rule changes to establish a regulatory framework for IBOC DAB operations, which were due on June 16, 2004, with reply comments due on August 2, 2004. NAB filed extensive comments and replies, calling on the Commission to make permanent the interim authorization of IBOC operations made in the *First Report and Order*. Mr. Hardis did not file comments in this phase of the proceeding. The gravamen of Mr. Hardis' complaint, non-disclosure of the details of the HD Radio audio codec (HDC) by iBiquity, was well-known to NRSC participants, and had been a subject of discussion within the committee (including Mr. Hardis) for some time before comments on the *Further Notice* were due.⁷ Thus, while he had full opportunity to

⁵ NAB notes that Petitioner files the instant Petition for Reconsideration as an individual, whereas his long-standing participation in the NRSC during the development of NRSC-5 was on behalf of a government agency, National Institute of Standards and Technology.

⁶ *Further Notice of Proposed Rulemaking* in MM Docket No. 99-325 (rel. April 20, 2004) ("*Further Notice*").

⁷ In May of 2003 the NRSC suspended consideration of iBiquity's IBOC systems because of the unacceptable performance of the codec then included in those systems. After iBiquity demonstrated a new codec (HDC) in August of 2003, the NRSC resumed its evaluation and documentation of iBiquity's IBOC systems at a September 2, 2003 working group meeting. At that meeting, iBiquity announced

present his argument, Petitioner presents no reason for failing to raise his arguments before the Commission in response to the *Further Notice*, but now makes those arguments in a Petition for Reconsideration. As mentioned above, the facts Mr. Hardis' Petition relies on were known to him at the time comments were due on the *Further Notice* in 2004. It is not sufficient that Mr. Hardis filed his complaints in comments on the NRSC standard in 2005, when he could have filed comments in response to the *Further Notice*.⁸

Second, the Petition is mistaken in maintaining that the Commission must consider all related issues and comments in resolving its *Further Notice* in the *Second Report and Order*. While Petitioner's comments on NRSC-5 were pending when the *Second R&O* was adopted,⁹ the Commission need not have resolved the issues relating to NRSC-5 before considering the questions at issue

that there would be no public disclosure of the technical details of its new proprietary codec, for internal business reasons, and that this decision of iBiquity's Board of Directors was not subject to further consideration. Mr. Hardis objected, suggesting that this was in conflict with the FCC's October 2002 IBOC Report and Order which endorsed a public and open standards-setting process. *National Radio Systems Committee, Minutes of the September 2, 2003 meeting of the IBOC Standards Development Working Group (ISDWG)* at 2. (NAB notes that the NRSC process itself was a public and open process.)

At the subsequent NRSC working group meeting of February 17, 2004, iBiquity again stated its non-disclosure policy on the HDC codec, and Mr. Hardis again objected and argued for disclosure. After discussion, the Chairman of the working group called the question of whether it was the group's consensus to move forward with development of an IBOC standard with the understanding that the audio codec would not be disclosed. Mr. Hardis abstained from the consensus which was obtained within the working group on this issue. *National Radio Systems Committee, Minutes of the February 17, 2003 meeting of the IBOC Standards Development Working Group (ISDWG)* at 7.

⁸ Comments of Jonathan E. Hardis, in MM Docket No. 99-325, filed July 14, 2005.

⁹ Comments were solicited on NRSC-5 by *Public Notice* in MM Docket No. 99-325, June 16, 2005.

in the *Further Notice*. As the *Second R&O* states, while the Commission’s “consideration of the NRSC-5 IBOC standards is continuing, [it] find[s] that it is in the public interest to adopt certain policies, rules, and requirements for digital radio before [it has] completed [its] evaluation of the standards.”¹⁰

Third, the *Second R&O* did not grant “permanent” and final authorization of the use of iBiquity’s IBOC technology and systems, as Petitioner contends.¹¹ Rather, as can be seen in the title and text of the rule adopted by the *Second R&O*, § 73.404, the Commission established “*Interim* Hybrid DAB Operation” rules and requirements (emphasis added). (*Second R&O* at Appendix B). While, as mentioned above, NAB had asked in its comments that the Commission grant permanent authorization for IBOC operations using the iBiquity systems, the FCC instead retained the “interim” authorization granted in the *First R&O*, and provided for same in its rules. *Id.*

In addition to being only interim in nature, hybrid digital/analog IBOC operation is purely voluntary, and the Commission specifically declined to set a timetable for broadcasters to institute digital operations.¹² As such, IBOC at this point is more of a voluntary enhancement of the existing radio service, rather than a “permanent” step to an all digital broadcast service. The Commission has given no consideration to eliminating analog broadcasting and requiring all-digital operation.¹³ While there are several statements about an all-digital future in

¹⁰ *Second R&O* at ¶ 12.

¹¹ *Petition*, *passim*.

¹² *R&O* at 13, 15.

¹³ While the Commission sought comment on “the pace of the analog to digital radio conversion and the possibility of an all-digital terrestrial radio system in the

Commission notices and orders over the years, this has not been considered, or proposed. NAB notes that, given the marketplace transition to hybrid IBOC operation, authorization of all-digital broadcasting would not be considered, if at all, for many years, if not decades.

Finally, the Petition errs in asserting, as a prime basis of its request for reconsideration, that “HD Radio is nonconforming” to the rule adopted in the *Second R&O*, § 73.404, which requires interim IBOC operation to conform to the technical specifications specified for hybrid DAB operation in the *First Report and Order*. *Petition* at 7 *et seq.* The facts are contrary to Petitioner’s claims that these specifications define an earlier audio codec (AAC) and thus operation with the HDC codec now in iBiquity’s systems is nonconforming. In point of fact, the technical specifications that the newly-adopted rule and Petitioner refer to, contained in Appendix B and C of the *First Report and Order*, describe only the transmission and modulation schemes of iBiquity’s IBOC systems, without any specification of an audio codec.¹⁴ For this reason alone, Petitioner’s arguments fail.

future,” *Further Notice* at 15, it explicitly rejected mandatory conversion stating that “stations may decide if, and when, they will provide digital service to the public,” *Second R&O* at 15, and rejected consideration of policies and rules for an all-digital mode of operation, noting that “there are many unresolved technical issues . . . and radio stations do not plan to offer all-digital service in the near future,” *id.* at 22. NAB’s reply comments, at 3, to the *Further Notice* on this point cited iBiquity’s initial comments, at 5, that its IBOC system was “designed to allow indefinitely, analog and digital broadcasts to co-exist.”

¹⁴ *First Report and Order* at Appendix B and C. Absent a defined codec in the FCC’s rules, or in NRSC-5, parties are free to use another codec if they wish, without buying a license for HDC from iBiquity. Additionally, the Consumer Electronics Association (CEA) states in its reply comments on the NRSC-5 standard that adoption of NRSC-5 as is would not prohibit the Commission from

III. The IBOC Standard Was Carefully Adopted and Deployment of Digital Radio Should Not Be Delayed.

NAB has shown above that Petitioner has failed to present a case sufficient to cause reconsideration of the Commission's *Second Report and Order*, much less to halt to deployment of digital radio as the Petition requests. The iBiquity system has enabled broadcasters to offer the public digitally-enhanced, high-quality fidelity sound, "scalable" extra channels of entertainment and information and additional data services, all of which make free, over-the-air radio broadcasting competitive in the new digital world. Today, the rollout of IBOC is continuing at a faster and faster pace, with over a thousand stations adding digital capability. More and more IBOC receivers are becoming available at lower and lower cost, new car models are incorporating the technology and AM stations are beginning to experiment with unimpaired nighttime broadcasts having audio quality never before experienced by AM listeners.

The NRSC IBOC standard submitted to the Commission followed years of NRSC evaluation of digital radio technologies. The NRSC DAB Subcommittee and its working groups were comprised of representatives from a wide cross-section of diverse entities with wide-ranging interests in DAB. NRSC work on IBOC has been open, inclusive, lengthy, exhaustive and conducted under rigorous due process procedures. The process of specifying and documenting iBiquity's IBOC systems spanned nearly 2-1/2 years with over 30 working group meetings. Participating in this effort were broadcasters, consulting engineers, receiver manufacturers, government participants, integrated circuit

specifying an audio codec in the future. Reply Comments of CEA, MM Docket No. 99-325, filed August 17, 2005.

manufacturers, and data service providers and many others. The draft NRSC-5 Standard was then submitted to the full DAB Subcommittee for review during which time comments submitted by NRSC participants were fully vetted by the group. A vote to adopt NRSC-5 as an NRSC standard (without specifications of an audio codec) was passed with strong support and not a single “no” vote. While many would have preferred to have iBiquity’s codec specified in the standard, the considered judgment of the committee was that, though not ideal, it was acceptable to publish the standard without a codec specification.

iBiquity’s system, and its codec, is in the marketplace as the *de facto* standard, and is available for licensing independently or with iBiquity’s implementation software. Parties are not required to use iBiquity’s HDC codec. The FCC, in its review of NRSC-5, has not ruled that a codec specification is needed. Indeed, the Commission’s acceptance of the earlier-submitted IBOC specifications without a codec, suggests that it believes it need regulate only the modulation and transmission schemes.¹⁵

In any event, halting the deployment of IBOC, after several years of operation and now with substantial adoption not only by the radio industry but by receiver and car manufacturers, would clearly not be in the public interest.

Conclusion

For the above-stated reasons, the National Association of Broadcasters respectfully requests that the Commission deny the instant Petition for

¹⁵ See *fn. 14* and accompanying text, *supra*.

Reconsideration and find that the public interest would not be served by delaying deployment of digital audio broadcasting in the terrestrial radio broadcast service.

Respectfully submitted,

**NATIONAL ASSOCIATION OF
BROADCASTERS**

1771 N Street, NW
Washington, DC 20036

A handwritten signature in black ink, appearing to read "Valerie Schulte". The signature is fluid and cursive, with a long horizontal stroke at the end.

Lynn D. Claudy
John Marino
David H. Layer
NAB Science and Technology

Marsha J. MacBride
Jane E. Mago
Valerie Schulte

February 11, 2008

CERTIFICATE OF SERVICE

I, Michael J. Geissinger, Director of Operations for the National Association of Broadcasters Legal Department, hereby certify that a true and correct copy of the foregoing Opposition Of The National Association Of Broadcasters To The Petition For Reconsideration Of Jonathan E. Hardis was sent this 11th day of February, 2008 by first-class mail, postage prepaid, to the following:

Jonathan E. Hardis
356 Chestertown St.
Gaithersburg, MD 20878-5724

A handwritten signature in black ink, appearing to read "Michael J. Geissinger". The signature is written in a cursive style with a large initial "M".

s/
Michael J. Geissinger