

**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 Broadcast)
Service)
)

**COMMENTS
OF THE
CONSUMER ELECTRONICS ASSOCIATION**

The Consumer Electronics Association (“CEA”),¹ pursuant to Section 1.415 of the Commission’s Rules,² respectfully submits these comments in response to the Commission’s Public Notice seeking comment on the National Radio Systems Committee DAB Subcommittee’s *Evaluation of the iBiquity Digital Corporation IBOC System, Part 1 – FM IBOC* (“NRSC FM IBOC Report”).³ CEA and the National Association of Broadcasters are the co-sponsors of the National Radio Systems Committee.⁴

I. INTRODUCTION

The NRSC’s evaluation of iBiquity Digital Corporation’s FM IBOC system found that “the performance of the iBiquity FM IBOC system as tested represents a significant improvement over today’s existing analog services.”⁵ CEA concurs with the conclusions in the

¹ CEA is the principal trade association of the consumer electronics industry. CEA members design, manufacture, distribute, and sell a wide variety of consumer electronics and information technology equipment.

² 47 CFR Section 1.415.

³ *Public Notice*, MM Docket No. 99-325 (DA 01-2932), December 19, 2001.

⁴ The NRSC serves as an industry-wide standards-setting body for technical aspects of terrestrial over-the-air radio broadcasting systems in the United States.

⁵ NRSC FM IBOC Report, page 9.

NRSC FM IBOC Report, and urges the Commission to act swiftly to adopt a single technical standard for FM IBOC technology. CEA further urges the Commission to ensure that all receiver manufacturers will have fair and reasonable access to IBOC DAB technology, and to ensure the prompt correction of any limited interference that might occur when FM IBOC DAB is introduced. CEA believes that, by permitting the introduction of FM IBOC DAB technology, the Commission will enable receiver manufacturers, broadcasters, and the general public to enjoy the benefits of improved radio service in the FM band.

II. A SINGLE FM IBOC DAB STANDARD MUST BE ADOPTED BY THE COMMISSION

For FM IBOC DAB technology to be as successful and ubiquitous in the marketplace as analog FM technology, the Commission must adopt a single FM IBOC DAB standard. The NRSC FM IBOC Report on which CEA is commenting here is only a report on the performance of iBiquity Digital Corporation's FM IBOC DAB system. It is not an FM IBOC DAB standard. The Commission must specify the technical parameters of the IBOC DAB signal to be transmitted by FM broadcasters in order for all receiver manufacturers to have confidence that the equipment they build will work for anyone listening to an FM IBOC DAB signal anywhere in the country. The NRSC is available to provide the Commission whatever assistance it may need in the development of a single IBOC DAB standard, should the Commission desire such assistance.

Receiver manufacturers, broadcasters and consumers need the certainty that an FCC-mandated single standard provides in order to have enough confidence in the long-term usefulness of IBOC DAB equipment to invest in it. Furthermore, the Commission should mandate that an FM station's main audio program material be broadcast over the IBOC DAB signal. If some broadcasters were to forgo audio programming and use their IBOC DAB signals

to transmit non-audio content, then consumers would have little reason to purchase IBOC DAB audio receivers, and receiver manufacturers would therefore have little reason to produce them. This would severely slow the implementation of IBOC DAB, and perhaps threaten the transition to terrestrial digital audio broadcasting altogether.

The FM radio broadcasting service is an audio service established by the Commission for the public's "convenience, interest, or necessity."⁶ In the transition to IBOC DAB this service must retain its principal characteristic – audio broadcasting.

III. ACCESS TO FM IBOC DAB TECHNOLOGY MUST BE AVAILABLE TO ALL MANUFACTURERS UNDER REASONABLE AND NON-DISCRIMINATORY TERMS

The FM IBOC standard that the Commission adopts must meet the same criteria with respect to intellectual property as the open standards that are developed by CEA and other standards development organizations. All intellectual property included in the standard must either be available free of charge to those wishing to use it, or it must be licensed under reasonable terms in a non-discriminatory manner to anyone who wishes to use it.

CEA administers open standards setting committees that develop technical standards for the consumer electronics industry. Some standards developed by CEA are ultimately published by the American National Standards Institute ("ANSI") through CEA's affiliation with the Electronic Industries Alliance ("EIA"), an ANSI-accredited standards setting body. During the development of a CEA standard any company or person aware of or participating in the standard-setting process that is known to hold patent rights required to implement the standard is asked to supply a statement indicating that either a) a license shall be made available without charge to applicants desiring to use the patent for the purpose of implementing the standard, or b)

⁶ 47 U.S.C Section 303.

a license shall be made available to applicants under reasonable terms and conditions that are demonstrably free of any unfair discrimination.

Because the Commission, itself, will (*i.e.*, in CEA's view should) adopt the standard for FM IBOC DAB, it should require any entities who hold patent rights to any technology required to implement the standard to provide a statement similar to that which CEA and ANSI require for patent rights holders whose technology is incorporated into CEA and ANSI standards. Receiver manufacturers must be assured that they will have access to this technology under reasonable terms, and in a non-discriminatory manner. The FM IBOC DAB implementation opportunities that are available to one manufacturer must be available to all manufacturers.

IV. FM BROADCASTERS WHO COMMENCE IBOC DAB TRANSMISSIONS SHOULD BE SUBJECT TO THE SAME INTERFERENCE RESOLUTION REQUIREMENTS AS FM BROADCASTERS WHO COMMENCE ANALOG TRANSMISSIONS WITH NEW OR MODIFIED FACILITIES

Because the IBOC DAB signal of one station uses some of the spectrum assigned to the analog signals of adjacent stations there is the potential for new interference to occur to the analog reception of adjacent channel stations when a station begins IBOC DAB transmissions. The NRSC has concluded that this type of interference will have no significant impact inside the protected contours of FM stations.⁷ However, although the NRSC expects this interference to be insignificant, it does not expect it to be non-existent. The few listeners who may find themselves negatively impacted by this interference deserve a remedy.

Currently, when an FM station begins operations with a new or modified facility it is required to resolve new complaints of interference within its blanketing contour (115 dBuV/m)

⁷ NRSC FM IBOC Report, page 55.

that are received within one year after the start of operations.⁸ The station must resolve these complaints at no cost to the complainant.

CEA notes that any limited interference that may result from the commencement of FM IBOC DAB broadcasts would not necessarily fit the definition of “blanketing interference,” and that the Commission may prefer to reword 47 CFR Section 318 as it sees fit to address this fact, and to incorporate a remedy for listeners who experience new interference inside the protected contour as a result of the commencement of IBOC DAB broadcasting. Should a listener inside the protected contour of an FM station be suddenly unable to receive an interference-free signal from that station as a result of another station commencing IBOC DAB transmissions, the radio station that initiated IBOC DAB transmissions should be required to take whatever steps are necessary to resolve the listener’s problem.

The Commission will have to determine whether or not to require prior authorization for the commencement of IBOC DAB transmissions. Currently, for example, prior authorization is required to begin operating with increased power,⁹ but not required to begin transmitting an FM subcarrier signal.¹⁰ If the Commission elects to permit broadcasters to turn their IBOC DAB signals on and off without prior authorization, similar to the way it treats FM subcarriers today, then it should take whatever steps are necessary to ensure that each broadcaster remains responsible for any new interference that may occur as a result of its IBOC transmissions. One way it could do this would be to require that FM IBOC DAB broadcasters correct any limited interference that their IBOC signals may cause to analog reception indefinitely.

⁸ 47 CFR Section 73.318(b).

⁹ 47 CFR Section 1690(b)(7).

¹⁰ 47 CFR Section 73.319(e).

IV. CONCLUSION

CEA concurs with the conclusions in the NRSC FM IBOC Report, and urges the Commission to act swiftly to adopt a single technical standard for FM IBOC technology. CEA further urges the Commission to ensure that all receiver manufacturers will have fair and reasonable access to IBOC DAB technology, and to ensure that any limited interference that might occur when FM IBOC DAB is introduced is promptly corrected. By taking these actions, CEA believes that the Commission will enable receiver manufacturers, broadcasters, and the general public to fully realize the benefits of improved radio service in the FM band.

Respectfully submitted,

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