

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

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

To: The Commission

COMMENTS OF PERCEPTION
MEDIA GROUP, INC.

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January 24, 2000

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SUMMARY

Perception Media Group, Inc. (“PMG”) urges the Commission to initiate In-Band, On-channel Digital Audio Broadcasting as rapidly as possible. The Commission has a substantial role to play in ensuring that the public interest benefits promised by digital broadcasting come to fruition.

If spectrum efficiency is an important public interest objective, it is clear that IBOC DAB, if it can meet other equally important goals of improved audio quality, greater resistance to interference, improved signal coverage, should be the system adopted. As a practical matter, the Commission has indicated that there is no other spectrum space available to accommodate terrestrial DAB, and that if it is to be implemented at all, the existing spectrum allocated to AM and FM analog broadcasting must be utilized now or later. “Later” can well mean sometime after 2010 if hybrid IBOC is not adopted. This is too long to wait.

The lessons of the past indicate that the Commission must not shirk its responsibility in setting technical standards of transmission. Because the Commission refused to do so in the AM Stereo proceeding, the improved signal quality that was supposed to be the salvation of AM broadcasters never came to fruition. If the Commission deemed it necessary to establish standards in the DTV proceeding, the same rationale applies to DAB.

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**COMMENTS OF PERCEPTION
MEDIA GROUP, INC.**

PERCEPTION MEDIA GROUP, INC. (“PMG”), by Counsel, and pursuant to Section 1.415(a) of the Rules and Paragraph 115 of the above-captioned proceeding, hereby respectfully submits the following Comments to the Commission in response to the *Notice of Proposed Rule Making* released November 1, 1999.¹ In support whereof, the following is shown:

PRELIMINARY STATEMENT

1. On November 1, 1999 the Commission released a *NPRM* in this proceeding, seeking Comments from the public on the establishment of a Terrestrial-based Digital Audio Broadcasting (“DAB”) Service. The *NPRM* was issued in response to a petition for rule making filed by USA Digital Radio, Inc.²

¹ FCC 99-327, released November 1, 1999 (hereafter, “*NPRM*”).

² The petition of USA Digital Radio (“USADR”) was placed on public notice on November 6, 1998.

2. PMG is the Licensee of WWWR (AM), Roanoke, Virginia, WVLR (AM), Moneta, Virginia, and WNVR (AM), Narrows-Pearsburg, Virginia. As the licensee of medium and small market commercial AM radio stations, PMG has a direct and immediate interest in the proposals to establish some form of Digital Audio Broadcasting for Terrestrial Radio Stations, either in-band, on channel (“IBOC”) or on alternate spectrum.

DISCUSSION

I. PURPOSE OF DAB SERVICE.

A. The Commission Should Give Priority for Terrestrial DAB Service to Existing Broadcast Licensees.

3. In its *NPRM*, the Commission acknowledged the importance of the current terrestrial aural broadcast service to the public interest. Unlike other subscription services (including satellite-delivered DAB), terrestrial broadcasting is free, universally accessible, and uniquely able to provide local news, information and public service programming. At the same time, free terrestrial audio broadcasting has faced continuing and greater challenges, as new mass media services have come into existence to compete for listeners and/or advertising revenues.

4. Broadcasters have stood by and watched the Commission create a new digital DBS service to compete with existing terrestrial-based service; have seen the Commission act, with uncharacteristic urgency, to create a new digital audio service (“DARS”) (also delivered by satellite), to compete with existing broadcast service, and have seen proposed improvements for existing audio and video services languish for years in “advisory committees,” or in FCC or private laboratories, instead of being made a priority.

5. While Congressional intervention, in the form of the Telecommunications Act of

1996,³ rescued the radio broadcast industry from financial disaster, FM stations were primarily the beneficiaries of the new policies. Technical problems continue to plague AM radio. “With regard to the AM band, we have recognized that ‘many stations currently experience significant interference and degraded reception[.]’”⁴ Previous measures taken by the Commission have been too little too late, or, in the case of the AM Expanded Band, offered false hope to AM broadcasters of improved service and coverage.

6. Perhaps most irritating has been the Commission’s proclivity to create new services, rather than addressing the existing problems of the industry: Low Powered Television Service (“LPTV”), Direct Broadcast Satellite (“DBS”) television service, Multi-Channel Multiple Distribution Service (“MMDS”), satellite-delivered Digital Audio Radio Service (“DARS”), and most recently, Low Power FM (“LPFM”), where the Commission proposed once again to pass over existing broadcast services in favor of politically popular proposals for low power FM stations to satisfy largely personal agendas and gratify private egos, but which are poorly conceived, impractical and technically unsound.⁵

7. The Commission must use the instant proceeding to address the competitive imbalances it has created by initiating new services (some of which are exempt from the public service obligations imposed on broadcasters) all to compete with broadcasters. There should be no consideration in this proceeding of any proposal to create a new terrestrial broadcast service with digital technology to be auctioned off to anyone who wishes to bid, and giving preference,

³ PUB. L. No. 104-104, 110 Stat. 56 (1996). By *Order*, FCC 96-90, released March 8, 1996, effective March 15, 1996 (61 FED. REG 10689), the Commission amended §73.3555(a) of the Rules to conform to the requirements of the new statute.

⁴ *NPRM*, ¶4.

⁵ See, *Notice of Proposed Rule Making* (MM Docket No. 99-25), FCC 99-6, released February 3, 1999. The Commission adopted an *Order* establishing LPFM Service on January 20, 2000.

in the form of bidding credits to new entrants. It is time to address the problems facing *existing* broadcast services, admittedly less politically appealing than creating yet another new, but unneeded service.

8. Accordingly, PMG urges the Commission to limit participation in DAB to existing AM and FM broadcast licensees and permittees. DAB would apply prospectively to new licensees where additional allotments are available.

B. The Commission Should Institute DAB Service As Soon as Practically Possible.

9. Digital broadcasting was proposed ten years ago. At that time, the Commission chose to create a new service with new spectrum, with delivery of the signal *via* satellite. Terrestrial broadcasters, although uniformly expressing an interest in DAB, were told that other demands on available spectrum precluded use of it for terrestrial digital broadcasting. Now, ten years later, technical reports from USADR and Lucent Technologies indicate that, due to advances in digital compression technology, DAB using the available bandwidth in the existing broadcast bands is not only possible, but it can be broadcast simultaneously with existing analog transmissions without loss of quality or the protection standards presently afforded analog channels.⁶

10. During the ten years that radio broadcasters have waited for the Commission to address their needs, competition for audio listenership has increased dramatically. Satellite-delivered digital service has been initiated, and will soon be available in all parts of the country. Additionally, digital compression technology such as MP3 has made possible “streaming audio” over the Internet with as good or better quality than the audio from compact disks. Accordingly,

⁶ *NPRM*, ¶7.

PMG submits that the Commission should not defer or delay any longer establishing rules and standards for DAB.⁷

II. SPECTRUM EFFICIENCY.

A. In-Band, On-Channel Digital Broadcasting is the Most Efficient Use of the Radio Spectrum.

⁷ PMG agrees that the system should not be launched until IBOC DAB has been demonstrated to be clearly viable in field tests; however, one of the Commission's own criteria is that any approved system be open-ended • so that further technical advances will not be foreclosed.

11. The Commission has stated one of its criteria for a DAB system is spectrum efficiency.⁸ It is clear that utilization of the existing AM and FM bands for digital broadcasting is the most spectrum efficient, since no additional spectrum will be involved. On the assumption that the two major proponents of IBOC DAB are able to demonstrate superior audio quality and robust resistance to interference, IBOC DAB should have everyone's vote. As noted by the Commission, the other system being utilized elsewhere in the world, Eureka-147,⁹ would require a separate allocation of spectrum that presently is not available.¹⁰ The Commission would have to dedicate new spectrum to DAB, which, in the long run, could doom the project to failure, due to the long delay before implementation, piecemeal implementation, and higher capital costs on the industry and the public.

⁸ "Our preference is for DAB systems that use the least spectrum.

It is the Commission's obligation to ensure that the value derived from the superior transmission capabilities of DAB technology is allocated in a manner consistent with the public interest."

NPRM, ¶17

⁹ The Commission has, itself noted that the Eureka-147 system is *not* spectrum efficient. Rather, it is a spectrum-hog, requiring broadband transmission.

¹⁰ The "L" Band, and "Band III," utilized in Canada and Europe for DAB *a lá* Eureka-146, are assigned to other conflicting uses in the United States. *NPRM*, ¶11. Moreover, utilization of VHF TV Channel 6 as an alternative spectrum, is impractical. Only six MegaHertz of spectrum space is available from Channel 6 (82 - 88 MHZ) • obviously insufficient to accommodate all of the existing broadcast stations on the air.

B. The Extra Bandwidth for IBOC DAB required During Transition Should Not be Reclaimed at the End of Any Sunset Period.

12. Moreover, the currently available technical evidence indicates that, after complete conversion of the broadcast bands to IBOC digital mode, greater spectrum efficiency will result, resulting in new service opportunities,¹¹ such as interactive radio, and on-demand programming . The Commission cites this as a public policy objective in paragraph 17 of the *NPRM*, yet later asks whether after complete conversion to digital, broadcasters should be required to surrender the extra bandwidth instead of utilizing it for new services, as suggested above.¹²

13. PMG submits that the Commission's concern about permanent retention of the extra bandwidth by broadcasters being "a fundamental change in spectrum assignment principles"¹³ is disingenuous. Both AM and FM broadcasters presently use sideband technology now to provide for specialized services such as paging, switching, and subscription music services. In principal, the utilization of the additional bandwidth by broadcasters after total DAB conversion is no different.

14. If continued operation poses no interference or audio quality issues upon 100% conversion, the Commission should not require surrender of the bandwidth. As noted by the Commission, the USADR system being proposed would continue to need the spectrum after full

¹¹ *NPRM*, ¶17. During the dual, or "hybrid" operation period, the Commission recognized that spectrum utilization for each channel will need to be doubled, in FM from 200 kHz to 400 kHz, and in AM, from 10 kHz to 20 kHz.

¹² *Id.*, at ¶38. It is not clear, however, if in-band digital broadcasting by AM stations will even be possible without the additional bandwidth.

DAB conversion. Moreover, requiring the surrender of the spectrum would likely mean additional capital costs on broadcasters and the listening public, unless transmitters and receivers are able to be constructed to accommodate such “before” and “after” operation • an additional cost in itself.

C. A Sunset Provision Should be Established for IBOC DAB.

¹³ *Id.*

15. It goes without saying that dual, or “hybrid transmission” for a certain period of time, should be encouraged and permitted. The hybrid transmission period will permit the FCC, the public, and the industry to evaluate the effectiveness of IBOC DAB during its actual utilization. AM and FM analog receivers will not all have to be thrown away at once, and broadcasters will be given time to raise sufficient capital to invest in DAB transmission technology.¹⁴

16. At the same time, a reasonable sunset date for full conversion to digital mode and the discontinuance of analog transmissions is consistent with public interest objectives of improved audio quality, reception, and spectrum efficiency. USADR has recommended a twelve-year period for the complete phasing-in of DAB.¹⁵ While the period seems long, the Commission should understand that, even if the Lucent system were adopted as the single standard, a sunset date needs to be established to achieve the public interest benefits expected from DAB.¹⁶ Moreover,

¹⁴ As a practical matter, small market broadcasters will likely wait until radio receivers capable of dual reception are manufactured and marketed in sufficient numbers to make economic sense. The Commission needs to remember that there still are a number of small market broadcasters who face substantial economic barriers to entry into the digital age, and that not all of them possess the technical and financial resources to convert to digitalization overnight.

¹⁵ *NPRM*, ¶8. It should be acknowledged that a sunset date for analog transmission is necessary if USADR’s proposed IBOC DAB system is adopted as the standard, since the all-digital operation would increase power by ten-fold and cause interference to analog transmissions if they were to continue.

¹⁶ Thus, while, technically, no sunset date is required for the Lucent system, it is necessary

the Commission must keep in mind that small market radio will need more time than large urban radio to make the conversion • both because of the necessary capital costs required by conversion, and because the listening public in smaller markets may move with less alacrity to acquire the necessary new DAB radio receivers.

III. THE COMMISSION SHOULD ESTABLISH A SINGLE TRANSMISSION STANDARD.

for other, public policy reasons.

17. The adage about those who refuse to learn the lessons of history are doomed to repeat it apply here. There can be no question that the FCC's refusal to set a single transmission standard for AM Stereo doomed that proposal to failure. Many of the AM stations that took a risk and invested in AM stereo transmission equipment, chose one¹⁷ that did not survive the market competition amongst manufacturers. They ended up with a technological white elephant, or at best, a system of sideband operation that helped with co-channel AM interference, albeit in monaural mode.¹⁸ With such confusion and conflicting promotions, public demand for AM stereo receivers never took off. The delay of the marketplace to develop a single AM stereo transmission standard for more than ten years effectively destroyed the potential of AM Stereo to improve AM signal quality and listenership.

18. The Commission has stated that it will intervene in the marketplace and set a single standard where two conditions are met:

“[F]irst, there would be a substantial public benefit from a standard; second, private industry either will not, or cannot, achieve a standard because the private costs of participating in the standard-setting process outweigh the private benefits, or a number of different standards have been developed and private industry cannot reach consensus on a single standard.”¹⁹

¹⁷ *E.g.*, the Harris system and the Kahn systems.

¹⁸ The Kahn system was later marketed for this purpose.

¹⁹ *NPRM*, at ¶51

It seems clear, from the lessons learned from AM Stereo, that the first test would easily be met by bringing broadcasting into the twenty-first century, making it competitive with other newer services, and enabling broadcasters, especially AM broadcasters, to provide substantially improved signal quality.²⁰ The Commission has recognized that there is substantial public demand for digital modes of operation, and has committed to establishing a single transmission standard for DTV. The public interest justifications for doing so in the instant proceeding are no different.

19. With respect to the second criteria, the Commission has been presented with at least two systems of IBOC, and an out-of-band DAB system as well. The systems are incompatible, and without government intervention, manufacturers are precluded by anti-trust legislation from colluding to develop a single standard on their own. The Commission has seemed to recognize this dilemma, and PMG can only add its support to those commenters who have previously urged the Commission to adopt a single transmission standard for DAB.

CONCLUSION

²⁰ It is recognized that IBOC DAB for AM will not result in “CD Quality Audio;” however, most existing AM broadcasters would benefit substantially by having sound quality equal to present FM signals, and the elimination of substantial amounts of man-made noise interfering with the signal. Accordingly, it should be understood that “single standard” implies two different standards for the two separate broadcast bands.

20. Broadcasters have been waiting for their turn. The industry that was responsible for the creation of the FCC itself, the development of numerous technological advancements in radio, and establishing a record of service to the public of more than sixty years, has been passed over numerous times in the Commission's rush to adopt "hot" new services that capture headlines and appeal to certain political groups. Faced with a number of public service and operating restrictions not imposed on other newer services, while at the same time being confronted with more and more competition, the broadcast industry has managed to survive because it provides something that newer, more exotic services do not • *local* service. While the Commission has limited its perception of local service to news and public affairs programming, service to the local community by broadcast licensees is much broader: the involvement of broadcasters in community projects, and helping local merchants get their message to the public is often ignored by the Commission as, at best, irrelevant to the public interest, and tainted by crass commercial interest. It is not irrelevant or crass. It is, in the end, what drives the national economy and creates the incentive for new and innovative ideas to satisfy public expectations and demands • including digital broadcasting. It is time for the Commission to recognize the true value of the broadcast industry and provide the kind of support and direction that can only come from, and should be provided by, a government agency.

WHEREFOR, the above premises considered, PMG respectfully urges that the Commission establish standards for the implementation of in-band, on-channel digital audio broadcasting at the soonest possible date, and take all regulatory steps necessary to encourage and assure rapid conversion of broadcast service, both AM and FM, to a digital mode of operation.

Respectfully submitted,

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