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 Services	)	

Additional Comments of Leroy C. Granlund

Order DA 10-208, adopted January 27, 2010, and released January 29, 2010 by the Media Bureau concludes an extensive study of, and an attempt to satisfy the comments and concerns of hundreds who responded in this long and important proceeding. Although Order DA 10-208 is based upon a compromise agreement between iBiquity Digital Corp. with supporting "Joint Parties" and NPR Labs (on behalf of CPB and various independent FM broadcasters), not all parties agree. Comments filed after January 29 indicate that many broadcasters, FM listeners, and other concerned parties strongly object to the terms and conditions of Order DA 10-208 for one or more of the following reasons:

1. **Increased level of digital subcarriers (above -20 dBc) as authorized by DA 10-208 exceeds maximum spectrum occupancy defined by FCC Rules, paragraph 73.317, which is likely to result in harmful interference to licensed adjacent channel analog FM stations.**

2. **Procedures specified in DA 10-208 to identify and resolve digital interference to analog FM signals are unrealistic and impractical. Digital interference is indistinguishable from random noise on a typical analog FM receiver or stereo system. This is a critical factor because 99 percent of all FM listeners can receive only analog FM.**

3. **The original design for IBOC FM is based on a digital subcarrier level of -20 dBc. This level is adequate under ideal conditions, but digital coverage will suffer in cases where multipath causes big variations in received signal strength over short distances. The digital power increase offered by DA 10-208 may not be an effective remedy for inadequate digital coverage when multipath is a contributing cause.**

4. **A digital power increase of 6 dB (or 10 dB) will represent a major expense for most FM stations, and it may be impractical for others, such as those participating in a community antenna system.**

It is noted that additional objections to Order DA 10-208 were filed in MM Docket No. 99-325 after January 29, 2010, based upon legal and/or procedural matters. Each of these additional objections is beyond the scope of this Comment.

In several comments filed in MM Docket No. 99-325 between July 5, 2009, and December 30, 2009, this author proposed an alternative solution for IBOC digital coverage and interference to analog FM services. None of these comments has received a response from the Bureau, the Commission, or any participant in MM Docket No. 99-325. The proposed solution has the following characteristics:

a) It does not conflict with spectrum usage limits of FCC rules, Par. 73.317.
b) Potential for interference to adjacent analog signals is less than -20 dBc.
c) Digital signal coverage is comparable to a level of -14 dBc or greater.
d) Digital coverage and signal quality will exceed that of existing analog.
e) Analog coverage and signal quality will improve by a significant amount.
f) It does not require additional transmitter power or other energy costs.
g) This solution costs less than a power increase or any known alternative.

This proposed solution does not require a license modification or any authorization from the FCC. It makes no changes except replacement of the station's transmitting antenna with an improved single lobe model. This technical improvement has been accomplished for more than a hundred FM stations in the U.S. and elsewhere during the past fifteen years. Of these, at least 95% have reported a major increase in coverage and signal quality, in many cases doubling the area and/or audience served. (Details are available upon request.)

During the past five years, several of these stations have initiated IBOC hybrid technology. All of these have reported good digital coverage of the predicted 60 dBu contour (57 dBu for Class B1; 54 dBu for Class B) at the original -20 dBc level with little or no interference to 1st adjacent analog signals. (Observations indicate that digital power may be increased to -14 dBc without producing harmful interference.)

In order to prove the accuracy of the above statements, a recognized impartial organization (such as NPR Labs) is invited to test the SWR ILLUMITRON antenna on an FM station operating in IBOC hybrid mode. It has been suggested that such antenna tests may be an ideal project for the NAB FASTROAD program.

Respectfully submitted,

Leroy C Granlund