

**Before the
Federal Communications Commission
Washington, DC 20554**

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

To: Secretary
Attention: Chief, Media Bureau

**PETITION FOR
RECONSIDERATION**

Peter and John Radio Fellowship, Inc. (“Peter and John”), by its attorneys, hereby petitions for reconsideration of the Media Bureau’s *Order* in MM Docket 99-325, rel. January 29, 2010 (“*Order*”),¹ which would, *inter alia*, permit FM stations to increase FM hybrid digital effective radiated power without having been granted prior authority by the FCC or having given prior notice to the FCC. *Order*, par. 16. In support, the following is stated:

1. Peter and John is the licensee of WRBS-FM, Baltimore, Maryland. WRBS-FM is a Class B pre-1964 grandfathered short-spaced FM station. The details of WRBS-FM’s multiple short-spacings are contained in its Petition for Relief from IBOC Interference (“Petition for Relief”), filed with the Commission May 7, 2010. The Petition for Relief is attached hereto and incorporated herein.

2. The Petition for Relief shows a technical relationship between two FM stations, WRBS-FM and WRBT (FM), Harrisburg, Pennsylvania, which Peter and John submits was not

¹ *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, Order, DA 10-208* (rel. January 29, 2010).

anticipated by the Bureau when it adopted the *Order*. The technical relationship between WRBS-FM and WRBT (FM) will lead, if WRBT (FM) increases its digital ERP, to the destruction of WRBS-FM's ability to provide interference-free service to a substantial portion of the presently interference free area within its 54 dBu and 60 dBu contours. See Petition for Relief's Engineering Statement at Figure 1 and Tables 1.0 and 1.1.

3. The factual record underpinning the *Order*, as analyzed in the Petition for Relief's Engineering Statement at p. 1, n. 2, had extremely little information concerning interaction between grandfathered short spaced FM stations. There was so little information that the record would not have permitted a valid conclusion to be reached about the impact on a station in the position of WRBS-FM when a station in the position of WRBT (FM) increases digital ERP. On such a slight record, a decision should not have been made to treat grandfathered short spaced FM stations like all other (except super power) FM stations when adopting par. 16 of the *Order*.

4. Peter and John does not know that the technical relationship between WRBS-FM and WRBT (FM), particularly including the magnitude of their short-spacing, is duplicated by many other pairs of stations, but it does exist between these stations. If not addressed by the FCC, this technical relationship will lead to substantial destruction of WRBS-FM's ability to serve persons who are now receiving the WRBS-FM signal without interference. The *Order* shows clearly that the Commission did not recognize or anticipate this set of facts.

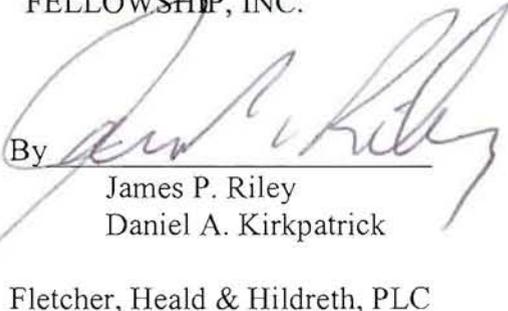
5. There is, for example, this statement in the *Order*: "Based on our analysis of these documents and data, as well as five years of interference-free FM hybrid digital operations by approximately 1500 stations, we are convinced that an immediate voluntary 6 dB increase in FM Digital ERP is appropriate for all FM stations except super-powered FM stations."²

² *Order*, par. 15, footnote omitted.

6. There can be no doubt, as demonstrated by the Petition for Relief, that in certain technical combinations, as exists between WRBS-FM and WRBT, the interference problem is so great that the Commission cannot ignore it. Moreover, the Commission should not simply rely upon the “Interference Protection and Complaint Remediation” policy and procedure set out in the *Order* (*Order*, par. 24, *et seq.*), when the evidence of predicted interference is as substantial and credible as that in Peter and John’s Petition for Relief. Peter and John lacks the resources to fully examine all short-spacing situations and does not propose a particular rule amendment. Instead, it urges the Bureau, during the time it is studying petitions for reconsideration of the *Order*, to utilize its resources, including its engineering databases, to examine the occurrence of predicted IBOC interference among grandfathered short-spaced stations, and to determine whether there is a not yet adopted procedural or technical approach to eliminating such interference.

Respectfully submitted,

PETER AND JOHN RADIO
FELLOWSHIP, INC.

By 

James P. Riley
Daniel A. Kirkpatrick

Fletcher, Heald & Hildreth, PLC
1300 North 17th Street, 11th Floor
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703-812-0400

May 10, 2010

Its Attorneys

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

In the Matter of)
)
WRBS-FM, Baltimore, Maryland)
)
WRBT(FM), Harrisburg, Pennsylvania)
)
To: The Secretary)
For transmission to: Chief, Audio Division)

FILED/ACCEPTED

MAY - 7 2010

Federal Communications Commission
Office of the Secretary

PETITION FOR RELIEF FROM IBOC INTERFERENCE

1. Peter & John Radio Fellowship, Inc. ("Peter & John"), licensee of WRBS-FM, Baltimore, Maryland, hereby petitions the Media Bureau for waiver of Section 73.404(a) of the Commission's rules, or for such other special relief as may be necessary to protect WRBS-FM from interference.¹ In support of this Petition, the following is shown.

2. As detailed below and in the attached Engineering Statement, WRBS-FM, due in large part to the existence of a number of grandfathered short-spacings, is subject to substantial existing harmful interference within its protected contour. That situation would be dramatically compounded by any increase in power in the digital operation of radio station WRBT(FM), Harrisburg, Pennsylvania.² WRBS-FM's unique position means that it already receives substantial interference within its protected contour not only from the analog operation of its short-spaced stations but also from WRBT(FM)'s digital operation at one percent of

¹ 47 C.F.R. §73.404(a). This Petition is filed pursuant to Section 1.41 of the Commission's Rules (47 C.F.R. §1.41).

² Engineering Statement with Regard to Interference Resulting from Increased Digital Power, attached as Attachment 1 hereto, at 2-3 and Fig. 1.

WRBT(FM)'s analog power.³ If WRBT(FM) is allowed to increase digital power upon notice to the Commission, as contemplated by the recently-adopted change to the Commission's rules, WRBS-FM will receive significantly increased interference within its protected contour, resulting in harm to the station and its listeners.⁴ Any increase in WRBT(FM)'s digital power upon notice to the Commission will also lead to the expenditure of substantial resources by WRBS-FM, WRBT(FM), and the Commission in resolving such interference through the complaint remediation procedures adopted in the *Order*. Accordingly, Peter & John hereby requests that the Commission waive the provisions of Section 73.404(a) and grant such other special relief as may be necessary to permit WRBT(FM) to increase digital power only after submission of a demonstration that such operation will not increase interference to WRBS-FM within its protected contour, rather than pursuant to the notification procedures outlined in the *Order*.

3. WRBS-FM is a grandfathered short-spaced station with three co-channel short-spacings, two second-adjacent channel short-spacings, one IF short-spacing, and one first-adjacent channel short spacing -- the last a short-spacing of almost 50 kilometers to WRBT(FM). As shown in the attached Engineering Statement, due to these short-spacings, WRBS-FM currently receives significant predicted interference within what would otherwise be its protected 54 dBu contour.⁵ The analog operation of the stations currently short-spaced to WRBS-FM, as well as one fully-spaced station, cause substantial interference within the northern, eastern, and

³ *Id.* at 3-4 and Fig. 1.

⁴ Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, *Order*, DA 10-208 (rel. Jan. 29, 2010) (the "*Order*"), amending 47 C.F.R. §73.404. Engineering Statement at 4-5.

⁵ Engineering Statement at 2-3 and Fig. 1.

western portions of WRBS-FM's 54 dBu contour. WRBS-FM is subject to predicted interference within the western edge of even its 60 dBu contour.

4. At the currently authorized power level of -20 dBc, WRBT(FM)'s existing digital operation already causes increased predicted interference to WRBS-FM, including interference within the station's protected 54 dBu contour and its 60 dBu contour as well. As shown in the attached Engineering Statement, the area of predicted interference caused by WRBT(FM)'s digital operations at -20 dBc covers over 525 square kilometers within WRBS-FM's 54 dBu contour, including more than 120,000 persons.⁶ More than 150 square kilometers of this area of predicted interference is located within WRBS-FM's 60 dBu contour, including almost 11,000 persons.⁷ As noted in the Engineering Statement,⁷ these population data are based on the 2000 U.S. Census; as a result, they likely underestimate the number of affected persons, as the areas in which predicted interference occurs (primarily Harford and Baltimore counties) have experienced significant population growth since 2000.⁸

5. Interference to WRBS-FM's signal is also exacerbated by atmospheric conditions in the Baltimore area. Particularly in spring and autumn, the Baltimore area is prone to experiencing atmospheric inversions, during which a layer of cooler air becomes trapped near the earth's surface beneath a layer of warmer air. When such inversions occur, signals from distant stations, particularly those at higher altitudes than the coastal city of Baltimore, can carry for greater distances in the warmer upper layers of atmosphere and can cause interference beyond the normally predicted areas of interference. In recent years, WRBS-FM has experienced

⁶ *Id.* at Table 1.1.

⁷ *Id.* at Table 1.0.

⁸ See Maryland Department of Planning, *2008 Maryland Statistical Handbook* (June 2009), available at http://www.mdp.state.md.us/msdc/md_statistical_handbook08.pdf. Conversely, Baltimore City, at the heart of WRBS-FM's service area, has lost population since 2000. *Id.*

significant interference and received increased complaints from listeners during such events. Predicted interference from WRBT(FM)'s digital operation is likely to be exaggerated during such events, which intensify the interfering signal from WRBT(FM) beyond that predicted using standard FCC prediction techniques.⁹

6. The Commission first adopted rules authorizing digital radio broadcasting in 2002.¹⁰ Acting on a request by iBiquity, the Commission adopted a permissible digital operating power level of one percent of analog power, or 20 decibels below carrier (-20 dBc).¹¹ Certain stations that had commenced digital operations expressed concerns that the -20 dBc power level did not allow for full analog replication and, as a result, the Commission beginning in 2006 began to issue authorizations to individual stations to operate at a higher digital power level for testing purposes.¹² In 2008, a group of broadcasters and equipment manufacturers filed a petition requesting that the Commission allow almost all stations to increase digital operating power.¹³ After receiving a report by National Public Radio suggesting that a blanket digital power increase could result in substantial interference to first and second-adjacent stations, the Commission sought comment on whether to allow FM stations to operate with increased digital power.¹⁴ The Commission received numerous comments supporting and opposing the proposed power increase, as well as the results of additional studies conducted by NPR on over-the-air mobile reception of four analog stations potentially affected by digital operation by nearby

⁹ See Engineering Statement at n. 11.

¹⁰ Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, *First Report and Order*, 17 FCC Rcd 19990 (2002).

¹¹ See *Order* at ¶ 3.

¹² *Id.* at ¶ 4.

¹³ *Id.* at ¶ 5.

¹⁴ *Id.* at ¶ 6.

stations.¹⁵ The stations tested included one grandfathered short-spaced station, which was short-spaced by 13 kilometers.¹⁶

7. In response to these submissions, as well as the experiences of the limited number of stations granted experimental authorization to increase digital power, on January 29, 2010, the Media Bureau released the *Order*, in which it adopted changes to its digital broadcasting rules to allow FM radio stations to operate their digital facilities with increased effective radiated power (ERP).¹⁷ When the rule changes adopted in the *Order* become effective, most FM stations will be allowed to increase digital ERP to -14 dBc by simply filing a notification with the Commission. Many stations will be allowed to increase digital ERP even further, to a maximum level of -10 dBc, or ten percent of analog power, by application in the form of an informal request.¹⁸ In addition to authorizing increased power operations, the *Order* adopted a detailed, multi-stage interference complaint remediation procedure.¹⁹

8. Any increase in digital operating power by WRBT(FM) beyond one percent of analog power will only exacerbate the interference already received by WRBS-FM. Under the procedures set forth in the *Order*, WRBT(FM) would, like other stations, be allowed to increase its digital operating power to -14 dBc upon notification to the Commission.²⁰ In adopting this procedure, the Bureau relied on a conclusion that, in the vast majority of situations, increased digital operating power would not lead to unacceptable increases in interference to the analog

¹⁵ *Id.* at 11, Report to the FCC on the Advanced IBOC Coverage and Compatibility Study, filed Nov. 4, 2009 by National Public Radio in MM Docket No. 99-325 (“*AICCS Project Report*”).

¹⁶ *AICCS Project Report* at 11.

¹⁷ *Order*.

¹⁸ *Id.* at ¶¶ 16-20.

¹⁹ *Id.* at ¶¶ 27-30.

²⁰ *Order* at ¶ 16.

operations of other stations.²¹ Because of the unique circumstances of WRBS-FM, however, this assumption is demonstrably false when applied to a digital power increase by WRBT(FM). As shown in more detail in the attached Engineering Statement, an increase in digital power by WRBS-FM to the -14 dBc level specified in the Order would cause significantly increased predicted interference and would harm WRBS-FM and its listeners.

9. Operation by WRBT(FM) at a digital power of -14 dBc would cause predicted interference to an additional 388 square kilometers within WRBS-FM's protected 54 dBu contour, including over 40,000 people.²² The vast majority of this increased predicted interference would be within WRBS-FM's 60 dBu contour, with 318 square kilometers and almost 36,000 people within that contour affected.²³ As with the population estimates described above for the -20 dBc operation of WRBT(FM), it is likely, due to significant population growth in the affected areas, that these figures underestimate the number of persons who will receive interference.

10. As demonstrated herein, WRBS-FM already experiences more interference from WRBT(FM)'s digital operation than the Commission could have anticipated in adopting its *Order* authorizing increased digital power. If WRBT(FM) increases its digital power, this interference will rise significantly, harming WRBS-FM and its listeners. For the foregoing reasons, Peter & John respectfully requests that the Division restrict WRBT(FM)'s digital operations to the presently authorized -20 dBc power level. Peter & John requests that the Division require WRBT(FM) to submit a request for specific authority prior to permitting any increase in digital power above one percent of analog power. WRBT(FM)'s request, which

²¹ See *Order* at ¶ 15.

²² Engineering Statement at Table 1.1.

²³ *Id.* at Table 1.0.

WRBS-FM should be given the opportunity to review and, if warranted, contest, should include a demonstration that any increase in digital power operation will not cause additional interference within WRBS-FM's protected 54 dBu contour.

Respectfully submitted,

PETER & JOHN RADIO FELLOWSHIP, INC.

By



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Its Attorneys

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Arlington, VA 22209
(703) 812-0400

May 7, 2010

DECLARATION OF STEVE LAWHON

I, Steve Lawhon, General Manager of WRBS-FM and Vice-President of Peter and John Radio Fellowship, Inc., hereby declare, under penalty of perjury, the following:.

1. I have reviewed the Petition for Relief from IBOC Interference to which this Declaration is attached, and hereby confirm that the facts contained therein are true and correct.

2. As General Manager of WRBS-FM, I receive notice of telephone calls, e-mails, and other contacts from members of the public regarding interference to their reception of the signal of WRBS-FM.

3. For a number of years, WRBS-FM has received complaints from listeners in all portions of the station's service area regarding interference during the occurrence of atmospheric inversions. Such events, which occur most frequently during late summer/early fall and late spring/early summer, typically lead to increased complaints of interference in the morning hours and diminish later in the day.

4. Since 2007, the time at which WRBT(FM) is believed to have commenced digital operation, WRBS-FM has received a substantial number of calls from listeners reporting interference to their reception of WRBS-FM in the northern and northeastern portions of the station's service area. The areas from which complaints have been received, including Bel Air, Fallston, Forest Hill, Jarrettsville, Aberdeen, and the Route 40 corridor south toward Joppatown, are located primarily within the area identified in blue in Figure 1 to the Engineering Statement attached to the Petition for Relief from IBOC Interference. Listeners in this area report hearing interference on their receivers rather than receiving WRBS-FM's programming. WRBS-FM has received interference complaints from listeners in this area both during the occurrence of atmospheric inversions and at other times, and it is believed that such complaints are caused by interference from WRBT(FM)'s digital operation.

5. Beginning in 2008, in response to listener complaints about interference, WRBS-FM began publishing an explanation of the problem prominently on its web site during periods of interference. It was made a permanent feature of the web site in 2009. This action was taken to provide a public service to our listeners and as a means to manage negative public perceptions about the station caused by the signal interference. The link to the publication is found here: <http://www.951shinefm.com/dynamic/DynCon.aspx?cid=203&fs=contact>.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 7, 2010.



Steve Lawhon

ATTACHMENT 1
ENGINEERING STATEMENT

**ENGINEERING STATEMENT WITH REGARD
TO INTERFERENCE RESULTING FROM
INCREASED DIGITAL POWER
WRBS-FM - BALTIMORE, MD
Peter & John Radio Fellowship, Inc.
Baltimore, MD**

May 6, 2010

**Prepared For: Peter & John Radio Fellowship, Inc.
3600 Georgetown Road
Baltimore, MD 21227**

CARL E. SMITH CONSULTING ENGINEERS

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Roy P. Stype, III
Ronald W. Coffman

Engineering Statement

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(60 dBu Contour)

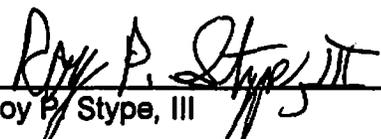
Table 1.1 - WRBS-FM Area and Population Data
(54 dBu Contour)

ENGINEERING AFFIDAVIT

State of Ohio)
) ss:
County of Summit)

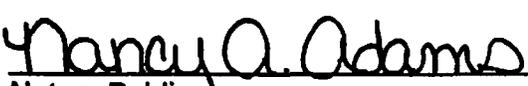
Roy P. Stype, III, being duly sworn, deposes and states that he is a graduate Electrical Engineer, a qualified and experienced Communications Consulting Engineer whose works are a matter of record with the Federal Communications Commission and that he is a member of the Firm of "Carl E. Smith Consulting Engineers" located at 2324 North Cleveland-Massillon Road in the Township of Bath, County of Summit, State of Ohio, and that the Firm has been retained by Peter & John Radio Fellowship, Inc. to prepare the attached "Engineering Statement With Regard To Interference Resulting From Increased Digital Power - WRBS-FM - Baltimore, MD".

The deponent states that the Exhibit was prepared by him or under his direction and is true of his own knowledge, except as to statements made on information and belief and as to such statements, he believes them to be true.



Roy P. Stype, III

Subscribed and sworn to before me on **May 6, 2010**.



Notary Public

/SEAL/

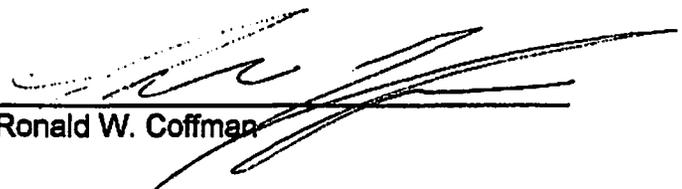
NANCY A. ADAMS, Notary Public
Residence - Cuyahoga County
State Wide Jurisdiction, Ohio
My Commission Expires Sept. 22, 2010

ENGINEERING AFFIDAVIT

State of Ohio)
) ss:
County of Summit)

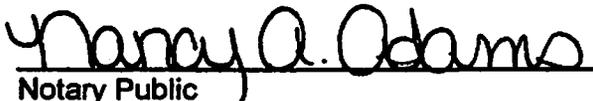
Ronald W. Coffman, being duly sworn, deposes and states that he is a qualified and experienced Communications Consulting Engineer whose works are a matter of record with the Federal Communications Commission and that he is a member of the Firm of "Carl E. Smith Consulting Engineers" located at 2324 North Cleveland-Massillon Road in the Township of Bath, County of Summit, State of Ohio, and that the Firm has been retained by Peter & John Radio Fellowship, Inc. to prepare the attached "Engineering Statement With Regard To Interference Resulting From Increased Digital Power - WRBS-FM - Baltimore, MD".

The deponent states that the Exhibit was prepared by him or under his direction and is true of his own knowledge, except as to statements made on information and belief and as to such statements, he believes them to be true.



Ronald W. Coffman

Subscribed and sworn to before me on **May 6, 2010**.



Notary Public

/SEAL/

NANCY A. ADAMS, Notary Public
Residence - Cuyahoga County
State Wide Jurisdiction, Ohio
My Commission Expires Sept. 29, 2010

ENGINEERING STATEMENT

This engineering statement is prepared on behalf of Peter & John Radio Fellowship, Inc., the licensee of Radio Station WRBS-FM - Baltimore, Maryland. It outlines the interference which is predicted to WRBS-FM as a result of the implementation of digital HD Radio operation by short spaced first adjacent channel station WRBT(FM) - Harrisburg, Pennsylvania¹ and the additional interference which WRBS-FM will be predicted to receive if WRBT increases their digital power as permitted by FCC's January 29, 2010 *Order* permitting higher power digital operation by FM stations.²

WRBS-FM operates on FM Channel 236B with a maximum effective radiated power of 50 kilowatts at 152 meters above average terrain utilizing a directional antenna. WRBT operates on FM Channel 235B with a maximum effective radiated power of 25 kilowatts at 213 meters above average terrain, also using a directional

¹WRBS-FM has received multiple complaints of interference from locations within the area predicted to receive interference as a result of WRBT's present digital operation at -20 dBc. Because this interference appears only as digital noise on an analog receiver, it was originally thought to be the result of the atmospheric ducting phenomenon which is common in the Baltimore area during the spring and fall and it was only recently that it was possible to associate this interference with digital operation by WRBT.

²Paragraph 14 of the FCC's January 29 *Order* indicates that the decision to permit a blanket 6 dB increase in digital power, even for grandfathered short spaced stations, was based on the results of testing by 15 stations which were granted experimental authority to operate at a digital power level of -10 dBc and the fact that no complaints of actual interference were received by the FCC, either from other stations or from the general public, as a result of this testing. A review of the allocation situation for the 15 stations which were involved in these tests, however, determined that only two of them were Class B stations which have first adjacent channel grandfathered short spacings of close to the same magnitude as the short spacing between WRBS-FM and WRBT and that only one of these first adjacent channel short spacings (the one between WKCI-FM - Hamden, Connecticut and WCBS-FM - New York, New York) will result in the increased digital power being predicted to cause substantial interference to another station within the boundaries of its home metro market. Furthermore, digital interference to an analog signal is so insidious that unless the listener is aware of what is going on it will be perceived on an analog receiver as an increase in the noise level, which is almost impossible for a typical listener to identify. As a result, it is not surprising that the FCC received no listener interference complaints since it would be necessary for a listener to understand the nature and source of the interference before they would be likely to register such a complaint.

antenna.³ Although Section 73.207 of the FCC Rules requires that Class B stations operating on first adjacent channels be separated by 169 kilometers, the separation between the transmitter sites of WRBS-FM and WRBT is only 120.0 kilometers. Since this is a pre-1964 grandfathered short spacing, it is governed by Section 73.213(a) of the FCC Rules, which, among other things, permits either station to modify their facilities only if the modifications will not result in increased interference to the other station.

WRBS-FM also has substantial pre-1964 grandfathered short spacings to co-channel stations WAYV(FM) - Atlantic City, New Jersey (short spaced by 48.7 kilometers), WZZO(FM) - Bethlehem, Pennsylvania (short spaced by 48.9 kilometers), and WIKZ(FM) - Chambersburg, Pennsylvania (short spaced by 125.8 kilometers) and second adjacent channel stations WIAD(FM) - Bethesda, Maryland (short spaced by 24.6 kilometers) and WPGC-FM - Morningside, Maryland (short spaced by 23.3 kilometers). Furthermore, WRBS-FM also has a grandfathered IF short spacing of 6.8 kilometers (out of the 20 kilometer requirement) to WJZ-FM - Catonsville, Maryland. Based on these seven substantial grandfathered short spacings, it appears that WRBS-FM has one of the worst (if not the worst) grandfathered short spacing situations of any FM station in the country.

As a result of these short spacings, WRBS-FM is already predicted to receive substantial interference at locations within its 54 dBu protected contour and, as shown below, has suffered additional interference from the commencement of digital operation by first adjacent channel WRBT, which will be aggravated if WRBT increases its digital

³WRBT's presently licensed facilities are equivalent to the maximum permitted Class B facilities of 50 kilowatts effective radiated power at 150 meters above average terrain.

power above the present -20 dBc level. Figure 1.0 is a map exhibit depicting the predicted 60 dBu and 54 dBu contours for WRBS-FM's presently licensed operating facilities. These contours were projected utilizing the FCC's F(50, 50) curves and terrain data extracted from the NGDC 30 second terrain database. This map exhibit also depicts (shaded in green) the areas which are predicted to receive interference from the authorized analog operating facilities of WAYV, WZZO, WIKZ, and WRBT, as well as WKDB(FM) - Laurel, Delaware (Channel 237A) which is predicted to cause analog interference to WRBS-FM within its protected contour in spite of the fact that its transmitter site is fully spaced to WRBS-FM's transmitter site.⁴ These areas of interference were determined by projecting the predicted signals for each of these interfering stations using the FCC's F(50,10) curves, the authorized facilities for each interfering station from the CDBS, and terrain data extracted from the NGDC 30 second terrain database. Interference was considered to occur at any location where the WRBS-FM signal failed to exceed a co-channel station's interfering analog signal by at least 20 dB or an adjacent channel station's interfering analog signal by at least 6 dB.⁵

This map exhibit also depicts the area⁶ (shaded in blue) where the commencement of digital operation by WRBT at a digital power level of -20 dBc was predicted to

⁴Interference from WPGC-FM and WIAD was not considered in these studies since it wouldn't be a factor in most newer receivers and, when it did occur, would be limited to areas in the immediate vicinity of the interfering station's transmitter site. No consideration was given to interference resulting from the IF short spacing to WJZ-FM since the interference associated with IF short spacings impacts the entire FM band, not just the short spaced stations.

⁵These interference determinations were made individually on a single signal basis for each interfering station and do not include any cumulative effect for areas where more than one station is predicted to cause interference to WRBS-FM.

⁶As noted above, WRBS-FM has recently received a substantial number of listener complaints regarding interference to the reception of WRBS-FM in this area.

cause additional interference to the reception of WRBS-FM.⁷ This additional interference area was defined by the area where the predicted WRBS-FM F(50, 50) signal strength fails to exceed the WRBT analog F(50,10) signal strength by at least 12 dB.⁸ Similarly, this map exhibit also depicts the additional area (shaded in yellow) which would be predicted to receive interference if WRBT's digital power is increased to -14 dBc.⁹ This further interference area was defined by the area where the predicted WRBS-FM F(50, 50) signal strength fails to exceed the WRBT analog F(50,10) signal strength by at least 16.8 dB.¹⁰ There don't appear to be any major terrain obstructions between the WRBT transmitter site and the WRBS-FM service area which would substantially attenuate the magnitude of the interfering signal from WRBT.¹¹

Table 1.0 presents a summary of the land area and population for the predicted service and interference within the 60 dBu contour depicted in this map exhibit, while Table 1.1 presents similar area and population data for the service and interference

⁷Since WRBT is the only first adjacent channel station which is short spaced to WRBS-FM, it appears to be the only station which could have a substantial impact on WRBS-FM as the result of digital operation.

⁸This 12 dB D/U ratio was extracted from the data included on Page 5 of *NPR Labs November 24, 2009 Report to the CPB and FCC on the Advanced IBOC Coverage and Compatibility Study*. (<http://www.nprlabs.org/publications/reports/20091218AICCSreport.pdf>).

⁹This is the maximum digital power which will be permitted for WRBT under the procedures adopted in the January 29 FCC Order. Any higher level of digital power would be precluded by WRBS-FM pursuant to the protection requirements adopted in this order.

¹⁰This 16.8 dB D/U ratio was interpolated from the data included on Page 5 of *NPR Labs November 24, 2009 Report to the CPB and FCC on the Advanced IBOC Coverage and Compatibility Study*.

¹¹Furthermore, it appears that the magnitude of this interference will be increased substantially during periods when the ducting phenomena which is common in the Baltimore area (particularly during fall and spring) results in the interfering signal from WRBT substantially exceeding the value predicted using the standard FCC prediction technique.

associated with WRBS-FM's 54 dBu protected contour.¹² As shown by this information, the commencement of -20dBc digital operation by WRBT resulted in predicted new interference to WRBS-FM for 121,447 persons within its predicted 54 dBu protected contour, 10,894 of whom are located within the station's predicted 60 dBu contour. An increase of WRBT's digital power to -14 dBc, as permitted by the FCC's January 29 *Order*, would result in additional interference to 40,334 persons within the WRBS-FM 54 dBu protected contour, 35,954 of whom are located within the WRBS-FM predicted 60 dBu contour.

Based on the above information, the implementation by WRBT of the blanket 6 dB minimum increase in digital power authorized for all except super power grandfathered FM stations in the FCC's January 29 *Order* will have a substantial additional adverse impact on the coverage of WRBS-FM beyond the adverse impact which WRBS-FM has already experienced as the result of WRBT's commencement of digital operation at -20 dBc.

¹²All population data included in this engineering statement is based on the 2000 U.S. Census.

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 BATH, OHIO 44210-0807
 330/659-4440

- PREDICTED ANALOG INTERFERENCE
- ADDITIONAL PREDICTED INTERFERENCE FROM WRBT (-20 dBc HYBRID DIGITAL OPERATION)
- FURTHER PREDICTED INTERFERENCE FROM WRBT (-14 dBc HYBRID DIGITAL OPERATION)

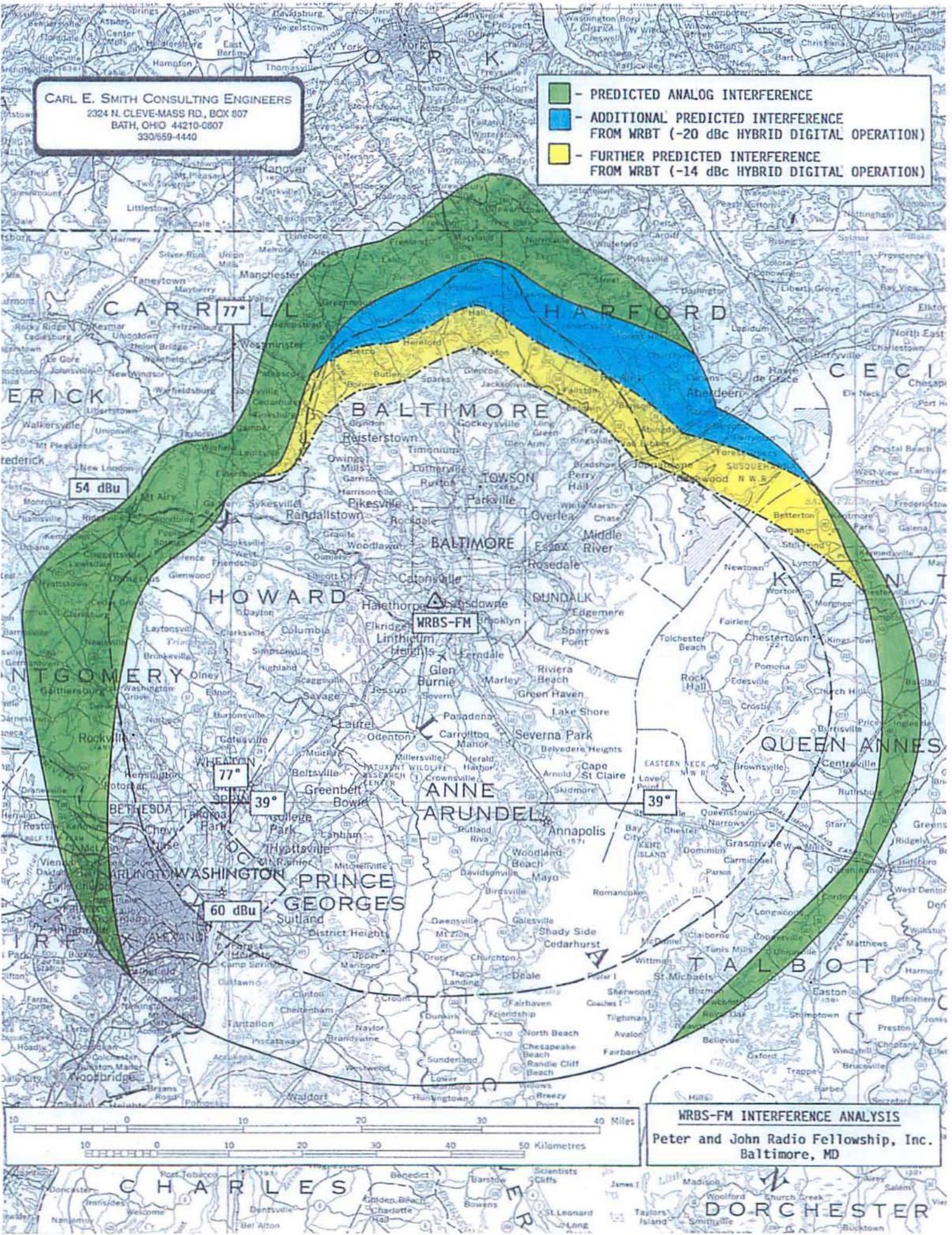


TABLE 1.0

WRBS-FM AREA AND POPULATION DATA
(60 DBU CONTOUR)

Peter and John Radio Fellowship, Inc.
 Baltimore, MD

	<u>Land Area</u> <u>(Square Kilometers)</u>	<u>Population</u> <u>(2000 Census)</u>
Total	5,636.4	4,123,570
Loss(Analog Interference)	103.5	43,200
Interference Free (Analog)	5,532.9	4,080,370
Additional Loss (Digital Interference -20dBc)	153.6	10,894
Interference Free (-20dBc)	5,379.3	4,069,476
Further Loss (Digital Interference -14 dBc)	318.6	35,954
Interference Free (-14 dBc)	5,060.7	4,033,522

TABLE 1.1
WRBS-FM AREA AND POPULATION DATA
(54 DBU CONTOUR)
 Peter and John Radio Fellowship, Inc.
 Baltimore, MD

	<u>Land Area</u> <u>(Square Kilometers)</u>	<u>Population</u> <u>(2000 Census)</u>
Total	9,241.6	5,414,067
Loss(Analog Interference)	1,991.6	522,231
Interference Free (Analog)	7,250.0	4,891,836
Additional Loss (Digital Interference -20dBc)	525.6	121,447
Interference Free (-20dBc)	6,724.4	4,770,389
Further Loss (Digital Interference -14 dBc)	388.6	40,334
Interference Free (-14 dBc)	6,335.8	4,730,055

CERTIFICATE OF SERVICE

I, Emily Borkholder, a secretary in the law firm of Fletcher, Heald & Hildreth, P.L.C., do hereby certify that a true copy of the foregoing *Petition for Relief from IBOC Interference* was sent this 7th day of May, 2010, by e-mail where indicated and by first-class mail upon the following parties:

Clear Channel Broadcasting Licenses, Inc.
Attn: Troy Langham
2625 S. Memorial Dr., Suite A
Tulsa, OK 74129-2623

Peter Doyle, Chief, Audio Division*
James Bradshaw, Deputy Chief, Audio Division*
Federal Communications Commission
The Portals
445 12th Street, SW, Third Floor
Washington, D.C. 20554



Emily Borkholder

* via e-mail.