Fayetteville, North Carolina

Long Form Application for New FM Translator

BNPFT-20030314AWG

On Channel 232

by

Bible Broadcasting Network, Inc.

Exhibit 13

Interference Analysis

March 2013

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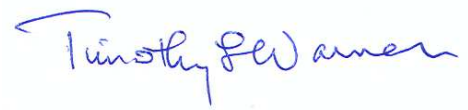
Table of Contents

Declaration

I declare, under penalty of perjury, that I am a technical consultant to broadcasting and other communications systems, that I have over twenty-five years of experience in the engineering of broadcast and other communications systems, that I am familiar with the Federal Communications Commission's Rules found in the Code of Federal Regulations Title 47, that I am a Professional Engineer registered in North Carolina, that I have prepared or supervised the preparation of the attached Exhibit 13, Interference Analysis, for Bible Broadcasting Network, Inc., and that all of the facts therein, except for facts of which the Federal Communications Commission may take official notice, are true to the best of my knowledge and belief.



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20 March 2013

Narrative

This Exhibit supports a long form application in response to a filing window[1] for FM translator file number BNPFT-20030314AWG, CDBS application ID 630865, on Channel 232 in Fayetteville, North Carolina. Allocation details are provided in this exhibit. The application proposes minor modification changes from the tech box filing. Specific changes are a change of the primary station to be rebroadcast, a change of site, a change of frequency to the third adjacent frequency, a change of antenna, reduction in height, and a decrease in Effective Radiated Power.

This proposal creates no new mutual exclusivities with any Auction 83 Tech Box filings.

Figure 1 shows the tech box 60 dBu F(50,50) coverage area, and the proposed 60 dBu F(50,50) coverage area. This application proposed a minor modification of the Tech Box facilities.

Allocations

This application proposes service to Fayetteville, North Carolina, on channel 232. An updated Table 1: Allocations is included in this exhibit with a list of the stations, construction permits, allocations, and applications studied. All are protected by this application, with the exception of facilities which are listed in Table 2 below. Those facilities are protected by the Desired to Undesired (D/U) Ratio method which is described below.

[1] *Public Notice, Media Bureau Announces FM Translator Auction 83 Filing Window and Filing Procedures*, DA13-283, released February 26, 2013. (Singleton Notice)

Table 1: Allocations

Allocation Study
Bible Broadcasting Network, Inc.

REFERENCE — CH# 232D - 94.3 MHz, Pwr= 0.03 kW, HAAT= 38.1 M, COR= 76 M — DISPLAY DATES
35 01 01.0 N. — Average Protected F(50-50)= 4.7 km — DATA 03-20-13
78 48 33.0 W. — Omni-directional — SEARCH 03-20-13

CH CALL / CITY	TYPE ANT / STATE	AZI. <--	DIST / FILE #	LAT. / LNG.	Pwr(kW) / HAAT(M)	INT(km) / COR(M)	PRO(km) / LICENSEE	*IN* (Overlap in km)	*OUT*
232C3 WCMG	LIC CN	224.5	89.80	34 26 20.0	10.500	102.7	37.9	-17.6*	37.1
Latta	SC	44.1	BLH19971113KB	79 29 44.0	153	183	Cumulus Licensing Llc		
From Channel 232A, Marion, SC per D93-47									
234C WQDR-FM	LIC CY	18.6	77.26	35 40 35.0	100.000	12.8	88.3	59.4	-11.4*
Raleigh	NC	198.8	BLH19910411KB	78 32 09.0	512	603	Carolina Media Group, Inc.		
Protected by D/U method, see text and figures.									
232A WZKB	LIC CX	111.0	79.52	34 45 30.0	6.000	85.3	27.2	-10.4*	37.6
Wallace	NC	291.5	BLH20070821ADR	77 59 52.0	100	115	Carolina's Christian Broad		
230C WKSL	LIC ZCX	359.4	77.32	35 42 50.0	100.000	11.3	79.9	60.9	-2.9*
Cary	NC	179.4	BLH20080416AAZ	78 49 04.0	453	557	Capstar Tx Llc		
Protected by D/U method, see text and figures.									
229D 630865	APP C	303.5	7.55	35 03 16.0	0.055	0.5	6.0	2.4	1.2
Fayetteville	NC	123.5	BNPFT20030314AWG	78 52 42.0	37	80	Bible Broadcasting Network		
Tech Box application for which this is the long form application.									
231D W231AB	LIC HN	203.5	45.74	34 38 20.0	0.080	7.9	5.6	32.5	33.2
Lumberton	NC	23.4	BLFT19931122TE	79 00 32.0	38	77	Friends Of Public Radio, I		
Translator For WHQR, Wilmington, NC									
232D 1545986	APP C	4.9	85.75	35 47 13.2	0.099	35.7	10.5	44.9	58.4
Raleigh	NC	185.0	BNPFT20130319ADJ	78 43 37.9		222	Educational Media Foundati		
229D W229BD	LIC C	283.0	54.87	35 07 36.0	0.010	0.2	5.8	50.4	48.6
Southern Pines	NC	102.7	BLFT20070906AAM	79 23 45.0	94	207	University Radio Foundatio		
232A WRHD	LIC CX	61.3	138.41	35 36 25.0	3.900	83.4	27.9	50.5	96.3
Farmville	NC	242.1	BLH20060516AAM	77 28 05.0	124	142	Inner Banks Media, Llc		
231D W231BV	LIC C	173.5	77.47	34 19 23.0	0.080	8.6	6.1	63.2	63.5
Whiteville	NC	353.5	BLFT20070524ADW	78 42 47.0	43	64	Family Radio Network, Inc.		
231C WWLV	LIC DCN	307.1	167.72	35 55 02.0	100.000	90.6	61.9	72.4	99.1
Lexington	NC	126.2	BLH19940909KH	80 17 37.0	309	543	Davidson County Broadcasti		
232D 649290	APP C	7.1	95.47	35 52 15.0	0.010	15.2	4.8	75.1	73.7
Raleigh	NC	187.1	BNPFT20030317FXY	78 40 43.0	77	180	Educational Media Foundati		

Terrain database is NED 03 SEC, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference Zone= East Zone, Co to 3rd adj.
All separation margins (if shown) include rounding
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
"*"affixed to 'IN' or 'OUT' values = site inside protected contour.

Table 2: Facilities Protected by U/D Method

Facility	WQDR Raleigh, North Carolina	WKSL Cary, North Carolina
Relationship	234C, second adjacent	230C, second adjacent
Distance (km)	77.27	77.33
Bearing (degrees)	18.6	359.4
ERP (kW, on azimuth)	100.0	79.7
HAAT (m, on azimuth)	525.7	433.1
Ratio	40	40
Signal Strength (dBu)	64.6	61.0
Translator Signal Strength	104.6	101.0
Translator distance (km)	.226	.342

Undesired to Desired Method

Protection to some facilities is provided through the use of Undesired to Desired Signal Strength Ratio (U/D) calculations. Table 2 lists the parameters studied. The WQDR field strength calculated at ground level at the proposed 630865 site is 64.6 dBu, using the FM Curves calculator on the FCC web site. For the translator interference contour, free space calculations are used. The corresponding 104.6 dBu field strength distance is .226 kilometers in the horizontal plane.

The WKSL field strength calculated at ground level at the proposed 630865 site is 61.0 dBu, using the FM Curves calculator on the FCC web site. For the translator interference contour, free space calculations are used. The corresponding 101.0 dBu field strength distance is .342 kilometers in the horizontal plane.

Figure 2 is a vertical plane plot of the 104.6 and 101.0 dBu contours, calculated using the vertical elevation pattern of the Shively 6812B-3 transmitting antenna. When the vertical elevation pattern is considered, the 101.0 dBu contour remains at least 2.1 meters above ground at all distances beyond 77 meters from the tower base. The 104.6 dBu contour remains

at least 16 meters above ground. Figure 3 is an aerial view of the proposed tower site. A red line indicates an 80 meter distance from the tower base. The only structures within an 80 meter distance from the tower base are the cable television and transmitter buildings at the tower base. There is no population within the predicted interference area and therefore this facility is permitted under §74.1204(d).

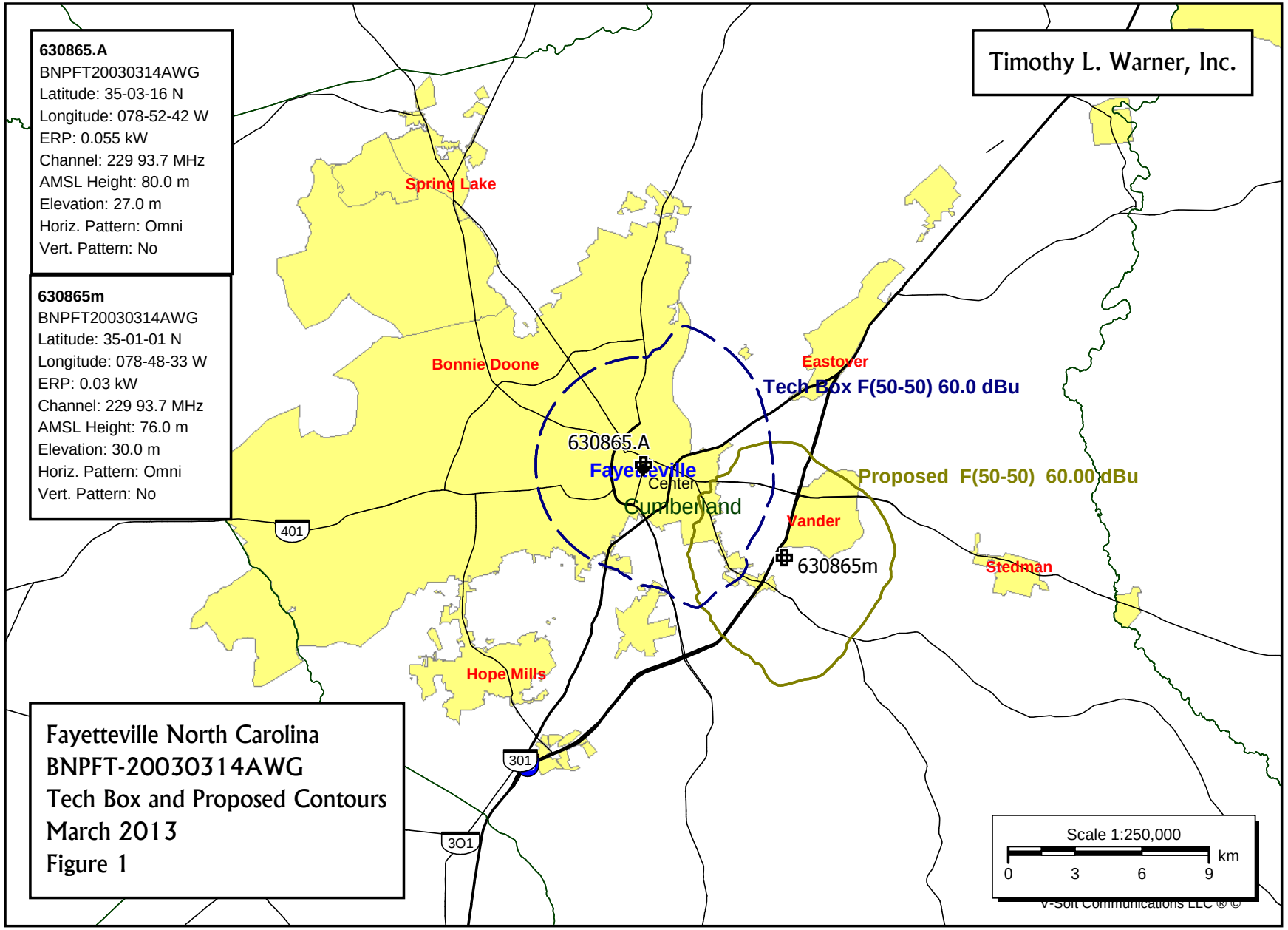
The applicant recognizes that the U/D method is only a tool for predicting likely interference. Should any actual interference be experienced, the applicant will cooperate fully in correcting the interference. Corrective steps may require changes in the transmitting antenna or other steps which would require Commission authorization, may require that the translator cease operation except for brief equipment tests, or may require filtering at the receivers which report interference.

Source of Data

Transmitter location, effective radiated power, directional antenna pattern, and elevation data are extracted from the Commission's CDBS. All contours for existing and proposed facilities are calculated using height above average terrain calculated at one degree horizontal increments.

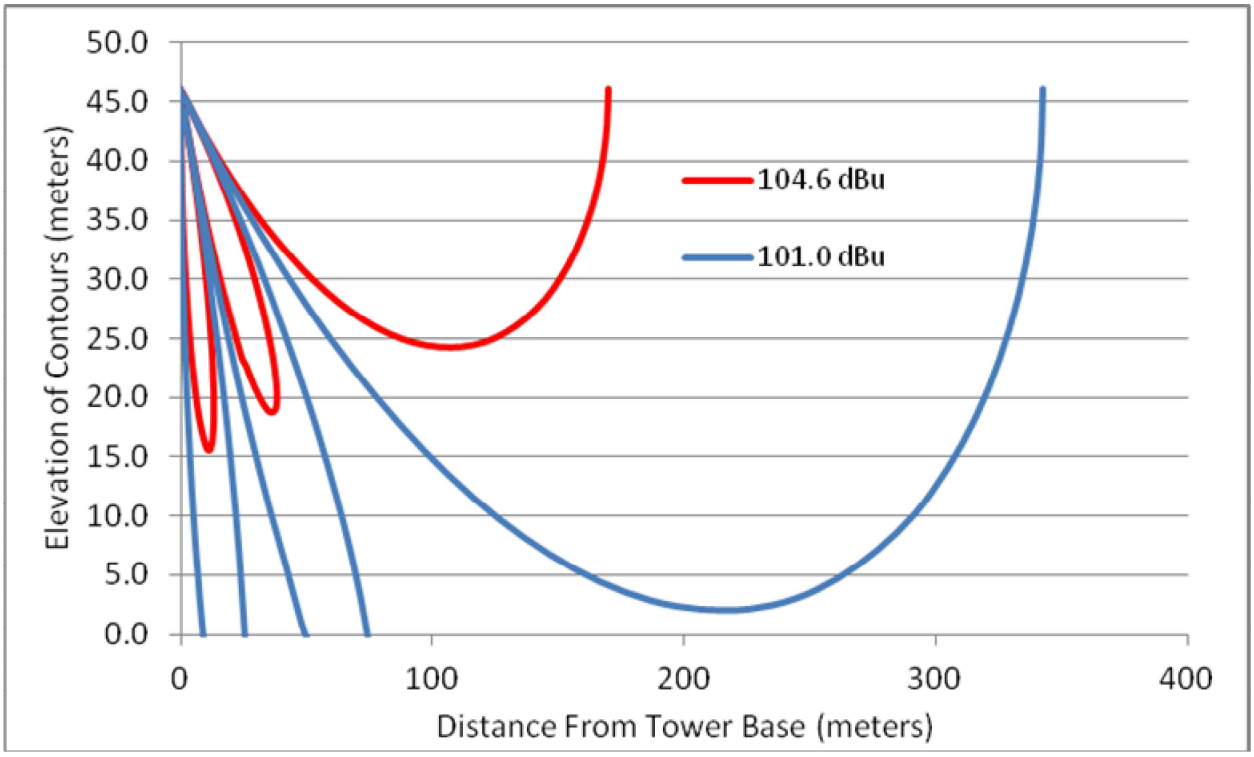
The contours were also evaluated using terrain extracted from the V-Soft Communications NED 03 terrain database. The NED 03 database is derived from the USGS National Elevation Data 30 meter terrain database.

All population data is from 2010 U.S. Census PL data files. Population is counted by considering the location of the centroid of each census block. The data for each block is counted if it falls within the area being counted.


630865.A
BNPFT20030314AWG
Latitude: 35-03-16 N
Longitude: 078-52-42 W
ERP: 0.055 kW
Channel: 229 93.7 MHz
AMSL Height: 80.0 m
Elevation: 27.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
630865m
BNPFT20030314AWG
Latitude: 35-01-01 N
Longitude: 078-48-33 W
ERP: 0.03 kW
Channel: 229 93.7 MHz
AMSL Height: 76.0 m
Elevation: 30.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Timothy L. Warner, Inc.
Spring Lake
Bonnie Doone
Eastover
Tech Box F(50-50) 60.0 dBu
630865.A
Fayetteville
Center
Cumberland
Proposed F(50-50) 60.00 dBu
Vander
630865m
Stedman
Hope Mills
401
301
3O1
Fayetteville North Carolina
BNPFT-20030314AWG
Tech Box and Proposed Contours
March 2013
Figure 1
Scale 1:250,000
km
0
3
6
9
V-Soft Communications LLC ® ©

Vertical Plot of 101.0 dBu Contour

Vertical Plot of 104.6 dBu Contour Also Shown



Free space propagation
Shively 6812B-3 antenna
Center of Radiation 46 meters Above Ground Level
ERP 30 Watts

Aerial View of Proposed Site

Proposed tower site
Red line indicates 80 meter distance