

FILE 0231-EX-ST-2007: EXHIBIT A

Interference Analysis for TV Channels 28 and 29 (554-566 MHz)

The STA application seeks temporary access to two television channels in 554-560 MHz (TV channel 28) and 560-566 MHz (TV channel 29) for purposes of the experiments described in the application.

All testing in these frequencies will take place at Shared Spectrum Company's (SSC) office location in Vienna, VA. This testing location is located in an office complex outside of the immediate residential area and well outside of the protected service contours of all nearby licensed TV stations as specified in the Commission's database at <http://www.fcc.gov/mb/databases/cdbs> (Table 1 and Figures 1-7), except for one. The only exception is the service contour of WFPT located in Frederick, MD. The SSC office is located on the edge of the 41 dBu service contour as shown in Figures 2 and 4. However, measurements performed by SSC show that the Channel 28 digital pilot's power, measured both indoors and outdoors in the vicinity of SSC office, falls below the power levels -110 dBm (see Figure 8), indicating that a viewable signal is extremely unlikely (41 dBm at 560 MHz is equivalent to -89 dBm) at this location.

In addition, during the subject experiments, low power (1 W) transmitters and low (3 meters) antenna heights will be utilized. The tests will be conducted approximately once a week for a 90 day period. Each test round will last for 5-6 hours. The transmissions in these TV channels will only take a fraction of this time. Accordingly, any harmful interference caused by the tests in these TV channels will be non-existent.

**Table 1. The area TV (Channel 28, Channel 29) license holders summary
(search radius 200 km – see Figure 1 for details)**

Station	Channel	Type	License Status	ID	Power (kW)	Dist. (km)	Location
WBPB	28	TV	Licensed	40616	2190	156	Salisbury, VA
WFPT	28	DT	Licensed	40626	30	38	Frederick, MD
WFZF-CA	28	CA	Licensed	57907	60	86	Winchester, VA
W28BF	28	TX	Licensed	70299	8	145	Harrisonburg, VA
WMPB	29	DT	Constr. Permit	65944	14	70	Baltimore, MD
WMPB	29	DT	Constr. Permit	65944	14	70	Baltimore, MD
NEW	29	LD	Applic.	167271	5	190	Salisbury, MD
WVIR-TV	29	TV	Licensed	70309	5000	150	Charlottesville, VA
NEW	29	LD	Applic.	168768	10	200	Bridgewater, VA
W54BG	29	TX	Applic.	69762	0.6	144	Moorefield, WV

Moreover, even if there were any interference to WFPT's signal because of SCC's transmissions, such interference would not cause any harm to either the broadcaster or to television viewers. WFPT, a Maryland Public Television (MPT) station, is not regularly viewed within Fairfax County, Virginia. For example, Cox Communications (Cox), the incumbent, local franchised cable TV operator that serves the area surrounding SSC's offices, does not even carry WFPT's signal within either Cox's analog or digital channel lineup. Rather, Cox carries the signal of another MPT affiliate, WMPT – Annapolis-

Crownsville, Maryland,¹ to Cox's Fairfax County subscribers. The same holds true for Verizon's FIOS® digital video service. Verizon, which is the newest entrant to the video programming service market in Fairfax County also carries only WMPT as the local MPT television signal.

Commission rules (47 C.F.R. §§ 76.51 *et seq.*) require cable TV operators to carry the signals of local public television stations, under certain circumstances and conditions, but where more than one public television station serves an area with substantially duplicative programming, cable TV operators need carry only one such signal. If WFPT were the more heavily viewed MPT station in Fairfax County, on an over-the-air basis, one would expect that both Cox and Verizon would be carrying its signal, instead of that of its sister station, WMPT. To do otherwise, would be to risk frustrating subscribers by broadcasting the less-familiar MPT station. Cox's and Verizon's carriage of WMPT, instead of WFPT, is strong evidence that the latter station is not viewed by those residents of Fairfax County living near SCC's offices.²

In sum, SCC's transmission of a signal at 554-560 MHz, as proposed in SCC's application to the Commission, will not have any negative impact on MPT or its viewers in Fairfax County. SCC demonstrates herein that its signal would not cause any actual interference. Moreover, even if such interference were to occur, it would not affect the broadcast signal of WMPT, which is the MPT station normally viewed by Fairfax County residents.

¹ WMPT broadcasts on Channels 22 (analog) and 42 (digital).

² Even in Loudoun County, Virginia, which is closer to Frederick, Maryland (and WFPT's broadcast signal) than is Fairfax County, Virginia, the local cable TV operator, Comcast, carries WMPT, and not WFPT, as its MPT station. WFPT is simply not viewed on any significant basis in Northern Virginia.

Fri Jun 11 11:47:23 2007 Eastern time

Search Parameters

Record type:

Search radius: 200.00 km

Center lat / lon: N 38 55 33.00 W 77 14 43.00

Lower Channel 28

Upper Channel 29

Freq Offset (NTSC analog TV only)

WCPB	28	-	TV	LIC	SALISBURY	MD	US	BLET-19950629KE	-	40618	2190.	kW	157.	m	155.86	km	96.85	mi	112.19°	MARYLAND PUBLIC BROADCASTING COMMISSION
WFPT	28	DT	LIC	FREDERICK	MD	US	BLEDT-20050302AEG	-	40626	30.	kW	159.	m	37.58	km	23.35	mi	351.19°	MARYLAND PUBLIC BROADCASTING COMMISSION	
WAZF-CA	28	CA	LIC	WINCHESTER/FRONT ROY	VA	US	BLTTL-19940422IK	-	57907	60.	kW	0.	m	86.22	km	53.58	mi	290.74°	JLA MEDIA AND PUBLICATIONS, LLC	
W28BF	28	-	TX	LIC	HARRISONBURG	VA	US	BLTT-19951011IA	-	70299	7.79	kW	0.	m	145.33	km	90.30	mi	246.36°	VIRGINIA BROADCASTING CORPORATION
WMPB	29	DT	CP	LIC	BALTIMORE	MD	US	BPEDT-20000501AHG	-	65944	14.	kW	309.	m	70.47	km	43.79	mi	34.52°	MARYLAND PUBLIC BROADCASTING COMMISSION
WMPB	29	DT	LIC	BALTIMORE	MD	US	BLEDT-20031029ACG	-	65944	14.	kW	309.	m	70.47	km	43.79	mi	34.52°	MARYLAND PUBLIC BROADCASTING COMMISSION	
NEW	29	LD	APP	SALISBURY	MD	US	BDCCDTL-20070427ACR	-	167271	5.	kW	0.	m	190.05	km	118.09	mi	107.98°	LAURIE MINTZ	
WVIR-TV	29	-	TV	LIC	CHARLOTTESVILLE	VA	US	BLCT-19930210KE	-	70309	5000.	kW	363.	m	150.31	km	93.40	mi	226.16°	VIRGINIA BROADCASTING CORPORATION
NEW	29	LD	APP	BRIDGEWATER, ET. AL	VA	US	BDCCDTT-20061030AOP	-	168768	10.	kW	0.	m	199.05	km	123.68	mi	245.47°	VIRGINIA BROADCASTING CORPORATION	
W54BG	29	TX	APP	MOOREFIELD	WV	US	BDISTT-20070123ABN	-	69762	0.6	kW	0.	m	144.32	km	89.68	mi	273.03°	VALLEY TV COOPERATIVE, INCORPORATED	

Figure 1. List of the area's TV station licensed to transmit on Channel 28 and Channel 29.

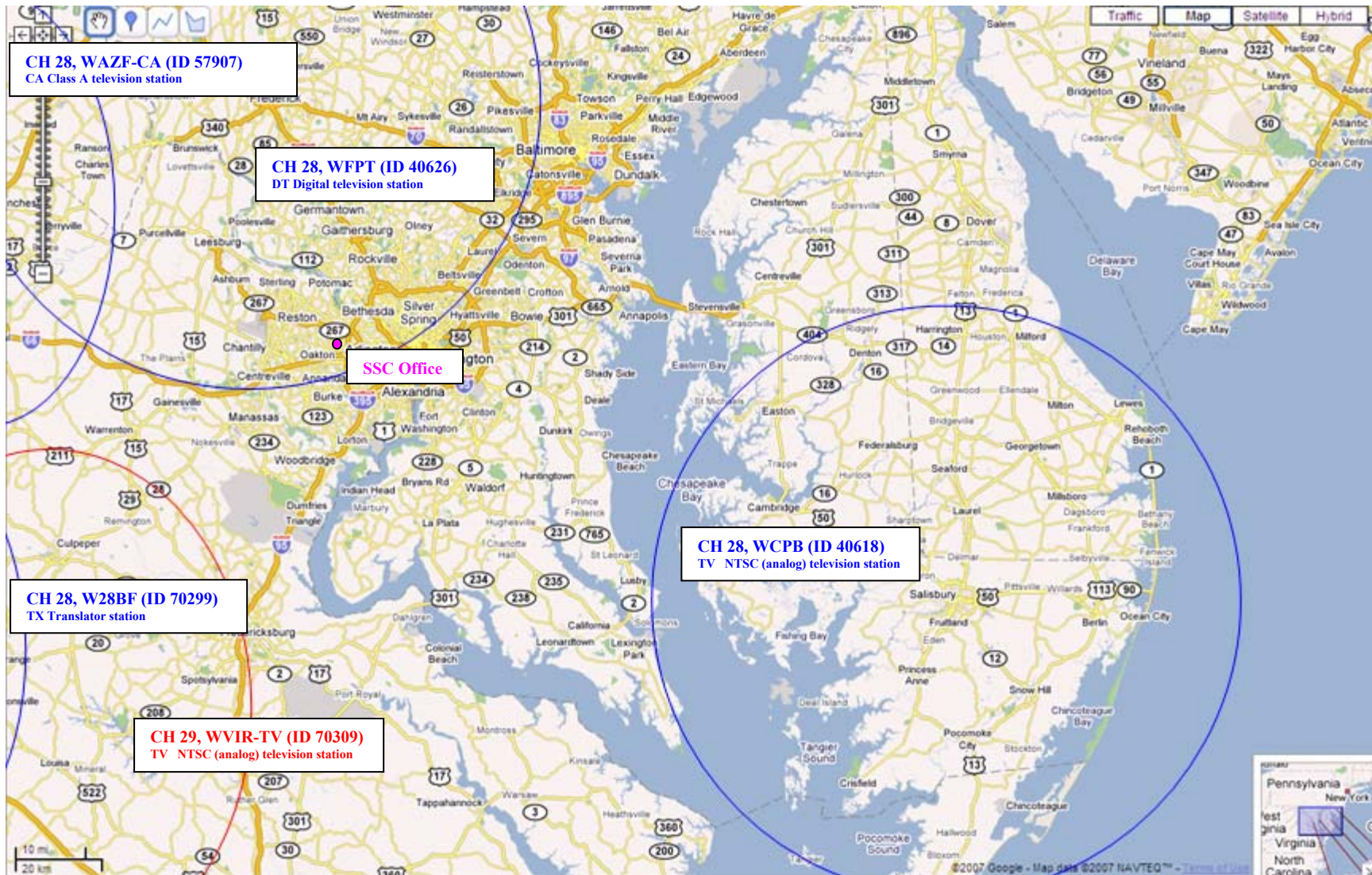


Figure 2. Summary of service contours of area's TV stations for Channel 28 and Channel 29 (see Figures 3-7 for details)

1. WCPB CH 28 TV NTSC (analog) television station

<http://www.fcc.gov/fcc-bin/FMTV-servicearea?x=TV210836.html>

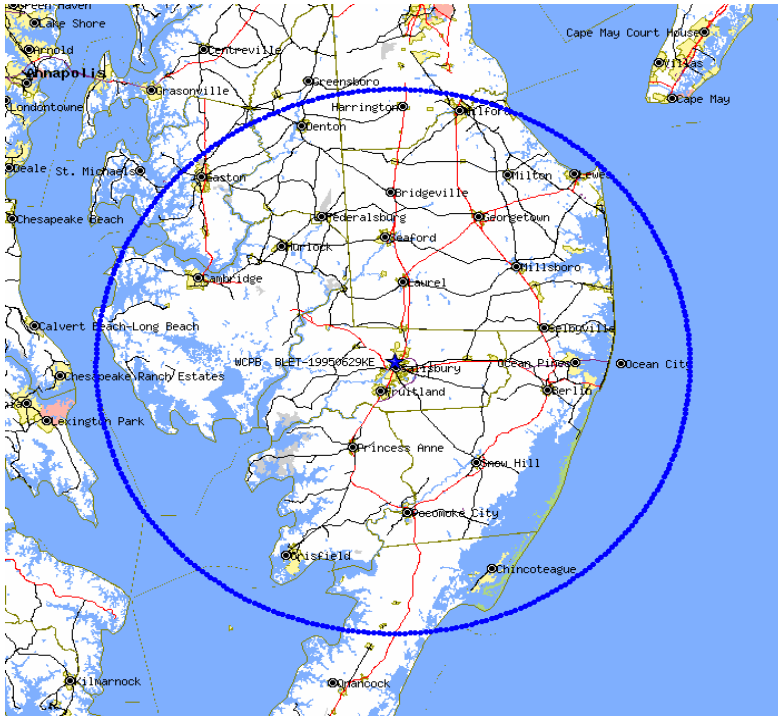


Figure 3. WCPB (Ch 28, TV)

2. WFPT CH 28 DT Digital television station

<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=40626>

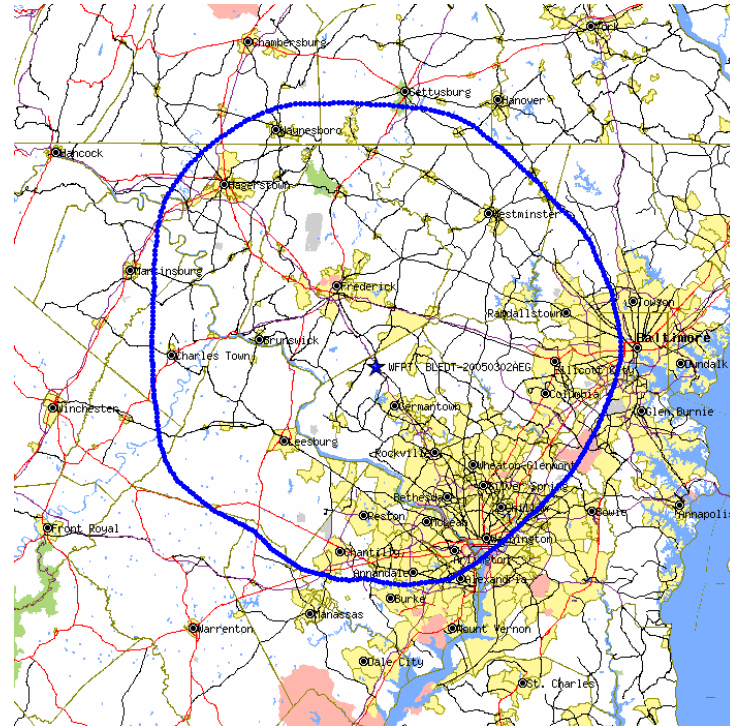


Figure 4. WFPT (Ch 28, DT)

3. WAZF-CA CH 28 CA Class A television station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=57907>

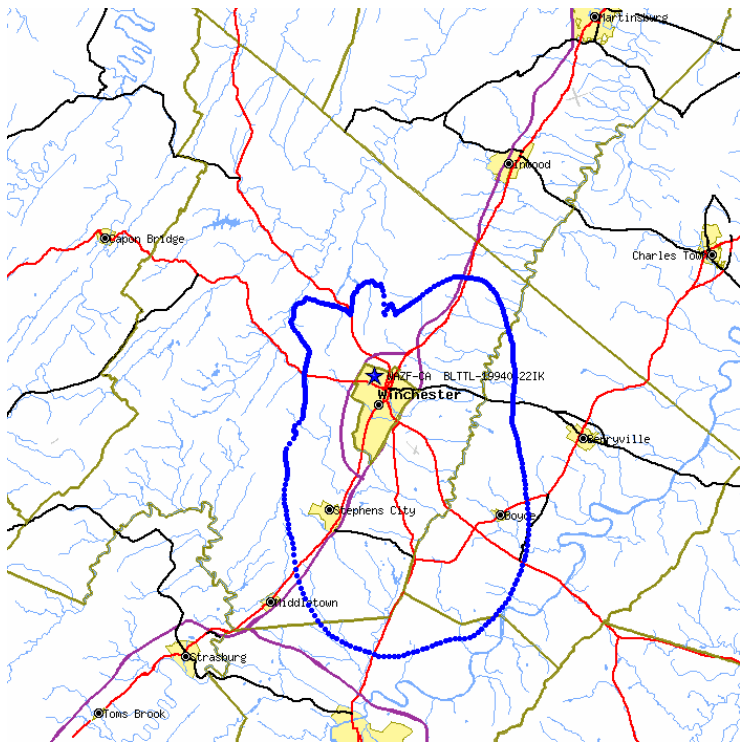


Figure 5. WAZF-CA (Ch 28, CA)

4. W28BF CH 28 TX Translator station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=70299>

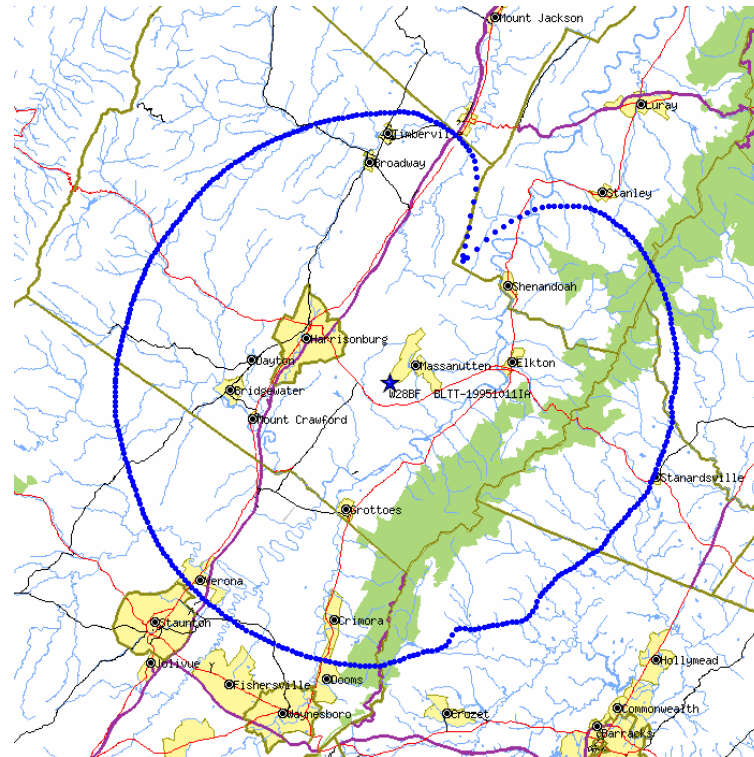


Figure 6. W28BF (Ch 28, TX)

5. WMPB CH 29 DT Digital television station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=65944>
 CONSTRUCTION PERMIT

6. WMPB CH 29 DT Digital television station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=65944>
 CONSTRUCTION PERMIT

7. NEW CH 29 LD Digital Low Power Television station
 (Digital LPTV)
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=16727>
 APPLICATION

9. NEW CH 29 LD Digital Television Translator station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=168768>
 APPLICATION

10. W54BG CH 29 TX Translator station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=69762>
 APPLICATION

8. WVIR-TV CH 29 TV NTSC (analog) television station
<http://www.fcc.gov/fcc-bin/tvq?list=0&facid=70309>

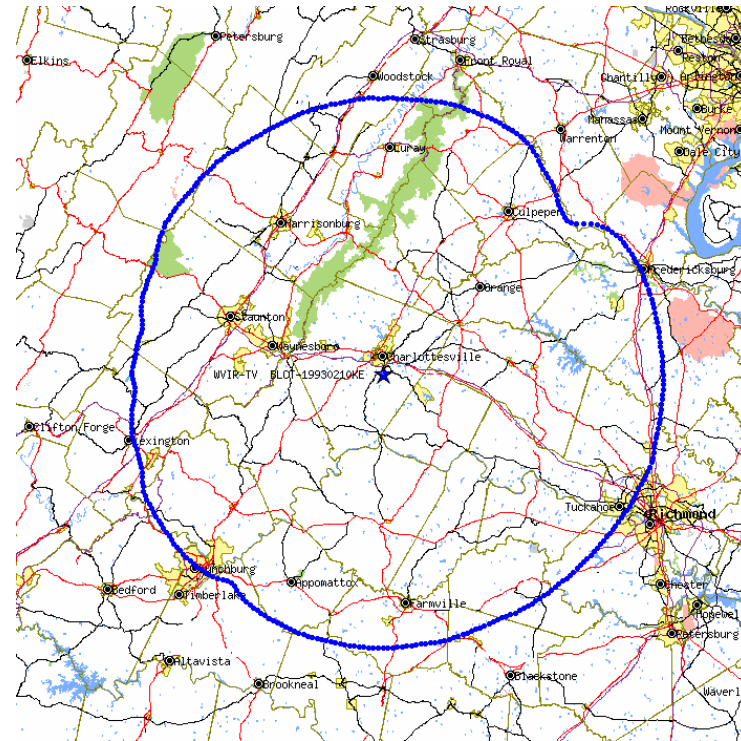


Figure 7. WVIR-TV (Ch 29, TV)

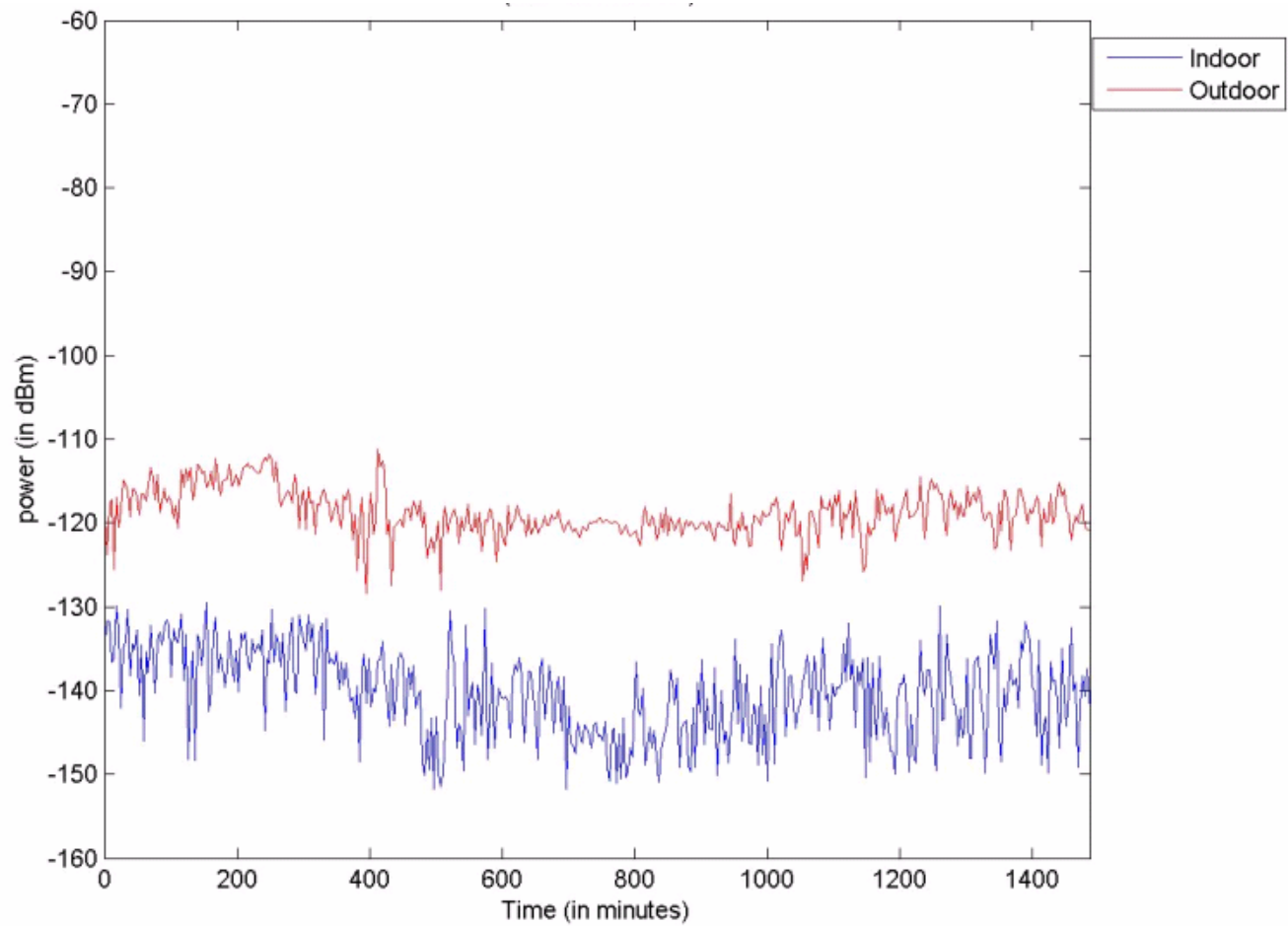


Figure 8. Channel 28 digital pilot power measured near SSC location (January 2007)