

ENGINEERING STATEMENT

Request for Waiver of Transition Phase Assignment

prepared for

Hearst Properties Inc.
WXII-TV Winston-Salem, NC
Facility ID 53921

This statement is prepared on behalf of *Hearst Properties Inc.* (“Hearst”), licensee of digital television station WXII-TV, Facility ID 53921, Winston-Salem NC, in support of *Hearst’s* request for waiver of WXII-TV’s transition phase assignment. Reassignment of WXII-TV from Channel 31 to Channel 16 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice* (DA 17-317, released April 13, 2017). WXII-TV has been assigned to make the transition to Channel 16 at phase 9 (testing period start date March 14, 2020 and phase completion date May 1, 2020). *Hearst* proposes to transition WXII-TV to its reassignment facility early, at phase 5 (testing period start date August 3, 2019 and phase completion date September 6, 2019). This statement provides engineering details to support the waiver request.

WXII-TV is within the Greensboro – High Point – Winston-Salem, NC market. The six stations in this market that were reassigned to new channels are assigned to phases 5 and 9 (listed below).

Station	Location	Fac ID	Lic Ch	To Ch	Phase
WXII-TV	NC, WINSTON-SALEM	53921	16	31	9
WGPX-TV	NC, BURLINGTON	65074	26	14	5
WMYV	NC, GREENSBORO	25544	28	33	5
WGHP	NC, HIGH POINT	72106	31	35	9
WUNL-TV	NC, WINSTON-SALEM	69360	33	32	5
WFMY-TV	NC, GREENSBORO	72064	35	51	9

As described separately in the waiver request, WXII-TV can be ready to commence operation in 2019 and seeks to change to phase 5 in order to facilitate certain efficiencies in completing the transition and to avoid lengthy operation with the reduced facility that would be provided by an interim antenna.

The WXII-TV reassignment facility Construction Permit (“CP”, file# 0000034697) authorizes operation at 1000 kW effective radiated power (“ERP”) with a directional antenna at 572 meters antenna height above average terrain (“HAAT”). *Hearst* proposes to implement WXII-TV’s reassignment Channel 16 facility at phase 5 with the technical parameters as authorized in the reassignment CP and summarized in Table 1.

According to the FCC’s transition data files,¹ there are no upstream linked stations and two downstream linked stations that involve WXII-TV at phase 9. This means that, at phase 9, WXII-TV’s transition would have to occur before or simultaneous with that of WGHP (Facility ID 72106, High Point NC), which in turn is upstream of WFMY-TV (Facility ID 72064, Greensboro NC). A fourth station, WUBX-CD (Facility ID 70423, Durham NC) is part of the same linked station set and is also upstream of WGHP. The data files show that the only station upstream of WXII-TV is WGGs-TV (Facility ID 9064, Greenville SC), which is to transition at phase 5.

The WXII-TV CP facility specifies parameters different from the *CCRPN* reassignment facility of 580 kW ERP nondirectional at 572 m HAAT. Since the proposed early transition facility for WXII-TV may have a different interference impact with other stations than the WXII-TV reassignment parameters, and many other stations have similarly achieved an expanded facility and/or alternate channels, additional analysis is provided herein to determine if any additional dependencies now exist.

Interference study per FCC TVStudy (OET Bulletin 69) shows that the proposal complies with the 2.0 percent limit of additional interference permitted during the reassignment transition period with respect to pertinent nearby full service and Class A television stations that may receive interference from WXII-TV. The TVStudy report is supplied in Table 2 and considers stations that are presently operating (*i.e.*, on their current channels, not repack channels). The analysis was conducted using a 2 km cell size and 0.1 km terrain profile increment. Therefore, the phase change of WXII-TV’s transition to Channel 16 will comply with the interference

¹ http://data.fcc.gov/download/incentive-auctions/Current_Transition_Files/

protection requirements to other stations for operation during the transition, and will not create any new linked station set on the basis of interference caused to any station operating on its pre-auction channel.

The proposed WXII-TV Channel 16 early transition facility would provide increased interference-free service from that of the licensed Channel 31 operation. Tables 3 and 4 supply a summary of the WXII-TV predicted coverage and incoming interference for both scenarios, based on TVStudy analysis (as conducted using a 2 km cell size and 0.1 km terrain profile increment). The licensed Channel 31 facility experiences 1.76 percent incoming interference and achieves an interference-free service population of 3,054,339 persons. During the interval between phase 5 and phase 9, the proposed early transition Channel 16 facility would provide interference-free service to 3,272,491 persons and experience 1.38 percent incoming interference. These scenarios are depicted in Figures 1 and 2, which are maps showing the locations of interference-free service, terrain blocked areas, and locations subject to incoming interference. After phase 9 the incoming interference will change slightly as other stations in the region make their transitions at that time.

A comparison of the resulting service area gains and losses is provided in Figure 3, according to TVStudy analysis. Of the areas that currently receive interference-free service from WXII-TV's licensed Channel 31, a population of 23,359 persons would lose service. The loss is 0.76 percent of the WXII-TV's existing interference-free population of 3,054,339 persons. The proposed early transition Channel 16 facility would result in new service to 241,511 persons (a 7.91 percent gain), which includes some areas that presently receive interference or are terrain-blocked on Channel 31. Therefore, the individual service losses are well below a 2 percent threshold for operation during the transition, and are outweighed by a gain of 7.91 percent.

Finally, analysis of incoming interference that may exist during the phase 5 testing period is summarized in Table 5. This analysis was also conducted using a 2 km cell size and 0.1 km terrain profile increment. Potential interfering stations include all stations that will be transitioning to their new channels at phase 5 or before, as well as those that are still on their pre-auction channel that will transition at phase 5 or later, for a worst-case analysis. In particular, for

the stations that will still be on their pre-auction channel affecting WXII-TV's Channel 16 facility, none of the individual contributions to interference to WXII-TV during the phase 5 testing period exceeds 2.0 percent. Since interference caused to and received from any other station does not exceed 2.0 percent, no linked station set is created and WXII-TV will not need to coordinate its phase 5 transition with any station.

As discussed earlier WGGs-TV is listed in the FCC's transition data files as being upstream of WXII-TV and would potentially require coordination by WXII-TV at phase 5. Table 5 shows that the unique interference received from WGGs-TV is within the 2.0 percent limit, therefore eliminating the upstream dependency with WXII-TV (in conjunction with Table 2 which shows interference caused to WGGs-TV is less than 2.0 percent). Table 5 also provides supplemental analysis regarding interference received from WGGs-TV, based on the interference that would occur to WXII-TV's Channel 16 facility at locations which are limited to those that presently receive interference-free service from the licensed WXII-TV Channel 31 facility. Under this scenario the amount of interference caused to WXII-TV is 1.93 percent, which complies with the 2.0 percent limit for the transition period.

In summary, the proposed phase change for WXII-TV will comply with the interference allowance established for the transition period (regarding both caused and received interference), eliminates the existing dependency with WGGs-TV, and will not create any new linked station sets or dependencies. The change to phase 5 will remove WXII-TV from a linked station set at phase 9 with two stations that are downstream of WXII-TV, thus eliminating the need for their coordination with WXII-TV.

List of Attachments

Table 1	WXII-TV Ch. 16 Technical Parameters
Table 2	TVStudy Analysis to Pre-Auction Operations
Table 3	TVStudy Analysis – Interference-Free Service WXII-TV Licensed
Table 4	TVStudy Analysis – Interference-Free Service WXII-TV Proposed
Table 5	TVStudy Analysis – Interference-Free Service WXII-TV Testing Period
Figure 1	Predicted Coverage and Interference – Existing Facility Licensed Ch. 31
Figure 2	Predicted Coverage and Interference – Proposed Early Transition Ch. 16
Figure 3	Service Gain-Loss Analysis

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	October 5, 2018	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

Table 1 WXII-TV Ch. 16 Technical Parameters
Hearst Properties Inc.



WXII-TV Channel 16 Construction Permit Technical Data
Proposed Transition Assignment Change to Phase 5

WXII-TV - WINSTON-SALEM, NC, US - [Main Listing](#)

Licensee (Owner): WXII HEARST TELEVISION INC. ([Hearst-Argyle](#))
 Service Designation: **DTV** Full Service Digital TV Station
 Channel: **16** 482 - 488 MHz **Construction Permit** (Expires 05/01/2020)
 File Number: 0000034697 Facility ID Number: 53921
 Application ID Number: 25076f916245947c01626270e27a3a55
 CDBS Application ID: 2009325

Location: [Sauratown Mountain \(NC\)](#)

36° 22' 31" N ([36.375278](#)) Latitude

80° 22' 25" W ([-80.373611](#)) Longitude (NAD83)

Polarization: Horizontal (H)	Horizontal	Vertical
Effective Radiated Power (ERP):	1000	kW ERP

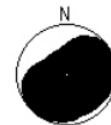
TV Zone: 2	Feet	Meters
Antenna Height Above Average Terrain:	1876'	571.9m
Antenna Height Above Ground Level:	525'	160m
Antenna Height Above Mean Sea Level:	2924'	891.5m

Directional Antenna ID No.: 1002929 Pattern Rotation: 0°
 Elec. Beam Tilt: 1°
 Antenna Make: DIE Antenna Model: TFU-30DSC-R C135

Relative Field values for directional antenna [Relative Field polar plot](#)

Relative field values do not include any pattern rotation that may be indicated above.

0° 0.622	60° 0.991	120° 0.932	180° 0.956	240° 0.973	300° 0.549
10° 0.716	70° 0.999	130° 0.912	190° 0.978	250° 0.940	310° 0.511
20° 0.809	80° 0.999	140° 0.900	200° 0.993	260° 0.886	320° 0.498
30° 0.886	90° 0.993	150° 0.900	210° 0.999	270° 0.809	330° 0.498
40° 0.940	100° 0.978	160° 0.912	220° 0.999	280° 0.716	340° 0.511
50° 0.973	110° 0.956	170° 0.932	230° 0.991	290° 0.622	350° 0.549
76° 1.000	214° 1.000				



ASRN: 1008241 [ULS Data](#) [Other Stations on Tower](#)

Data Summary from:

<https://www.rabbitears.info/tvq.php?request=items&appid=25076f916245947c01626270e27a3a55&arch=>

**Table 2 TVStudy Analysis to Pre-Auction Operations
WXII-TV Ch. 16 Early Transition at Phase 5**
(page 1 of 4)



tvstudy v2.2.5 (4uoc83)
Database: localhost, Study: WXII-TV CP-16 BLANK0000034697 pre-auct 2.0-0.1, Model: Longley-Rice
Start: 2018.10.04 08:14:47

Study created: 2018.10.04 08:14:47

Study build station data: LMS TV 2018-10-03

Proposal: WXII-TV D16 DT CP WINSTON-SALEM, NC
File number: BLANK0000034697
Facility ID: 53921
Station data: LMS TV 2018-10-03
Record ID: 25076f916245947c01626270e27a3a55
Country: U.S.
Zone: II

Build options:
Protect pre-transition records not on baseline channel

Search options:
Baseline record excluded if station has CP
All post-transition APP, CP, and baseline records excluded

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WRPX-TV	D15	DT	LIC	ROCKY MOUNT, NC	BLANK0000048990	198.0 km
No	WNXC-TV	D15	DT	LIC	ROCK HILL, SC	BLEDT20060111AAK	180.3
No	WAGT-CD	D16	DC	LIC	AUGUSTA, GA	BLANK0000001455	356.2
Yes	WKHA	D16	DT	LIC	HAZARD, KY	BLANK0000001625	266.5
No	WCPB	D16	DT	CP	SALISBURY, MD	BLANK0000029877	477.7
Yes	WPDE-TV	D16	DT	LIC	FLORENCE, SC	BLCDT20080815ABI	242.4
Yes	WGGS-TV	D16	DT	LIC	GREENVILLE, SC	BLCDT20130925AJI	243.5
Yes	WHRO-TV	D16	DT	LIC	HAMPTON-NORFOLK, VA	BLEDT20090701AFO	348.7
Yes	WNCN	D17	DT	LIC	GOLDSBORO, NC	BMLCDT20140925AEP	183.3
Yes	WUNE-TV	D17	DT	LIC	LINVILLE, NC	BLEDT20091118ADR	136.2
No	WLTX	D17	DT	LIC	COLUMBIA, SC	BLCDT20050701AAC	255.7
Yes	WFXR	D17	DT	LIC	ROANOKE, VA	BLCDT20090609ABS	93.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16
Latitude: 36 22 31.00 N (NAD83)
Longitude: 80 22 25.00 W
Height AMSL: 891.5 m
HAAT: 571.9 m
Peak ERP: 1000 kW
Antenna: DIE-TFU-30DSC-R C135 (ID 1002929) 0.0 deg
Elev Pattn: Generic
Elec Tilt: 1.00

38.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	387 kW	561.5 m	114.0 km
45.0	915	603.5	124.7
90.0	986	533.7	121.1
135.0	821	602.0	123.5
180.0	914	582.2	123.4
225.0	990	596.4	125.1
270.0	654	564.3	119.0
315.0	255	531.9	108.3

ERP exceeds maximum
ERP: 1000 kW ERP maximum: 363 kW

Distance to Canadian border: 614.6 km

Distance to Mexican border: 1948.0 km

**Table 2 TVStudy Analysis to Pre-Auction Operations
WXII-TV Ch. 16 Early Transition at Phase 5**
(page 2 of 4)



Conditions at FCC monitoring station: Laurel MD
Bearing: 44.1 degrees Distance: 439.9 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 288.5 degrees Distance: 2201.3 km

No land mobile station failures found

Study cell size: 2.00 km
Profile point spacing: 0.10 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to BLANK0000001625 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WKHA	D16	DT	LIC	HAZARD, KY	BLANK0000001625	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	266.5 km
	WKMR	D15	DT	LIC	MOREHEAD, KY	BMLEDT20120503ADU	111.0
	WELF-TV	D16	DT	LIC	DALTON, GA	BLCDDT20130610ACF	331.0
	WNKY	D16	DT	LIC	BOWLING GREEN, KY	BLANK0000007775	265.6
	WGGG-TV	D16	DT	LIC	GREENVILLE, SC	BLCDDT20130925AJI	259.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
19288.9	439,974	17857.3	391,416	17825.4	390,283	17813.5 390,276	0.07 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV	D16 DT CP	11.9	7			11.9 7	
WKMR	D15 DT LIC	7.9	85	7.9	85	7.9 85	
WELF-TV	D16 DT LIC	8.0	676	4.0	0	4.0 0	
WNKY	D16 DT LIC	16.0	995	12.0	319	12.0 319	
WGGG-TV	D16 DT LIC	4.0	53	4.0	53	4.0 53	

Interference to BLCDDT20080815ABI LIC scenario 1

****IX: 1.36% interference caused**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPDE-TV	D16	DT	LIC	FLORENCE, SC	BLCDDT20080815ABI	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	242.4 km
	WAGT-CD	D16	DC	LIC	AUGUSTA, GA	BLANK0000001455	268.5
	WSAV-TV	D16	DT	LIC	SAVANNAH, GA	BLANK0000055021	315.2
	WGGG-TV	D16	DT	LIC	GREENVILLE, SC	BLCDDT20130925AJI	288.8
	WHRO-TV	D16	DT	LIC	HAMPTON-NORFOLK, VA	BLEDT20090701AFO	372.7
	WNCN	D17	DT	LIC	GOLDSBORO, NC	BMLCDDT20140925AEP	162.6
	WLTX	D17	DT	LIC	COLUMBIA, SC	BLCDDT20050701AAC	135.1
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
40190.4	1,764,645	40062.2	1,760,333	39216.7	1,727,056	38517.0 1,703,543	1.78 1.36
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV	D16 DT CP	1161.9	41,258			699.7 23,513	
WAGT-CD	D16 DC LIC	8.0	154	0.0	0	0.0 0	
WSAV-TV	D16 DT LIC	131.9	4,114	11.9	12	8.0 0	
WGGG-TV	D16 DT LIC	453.6	7,720	249.7	1,633	71.5 351	
WHRO-TV	D16 DT LIC	12.0	1,311	0.0	0	0.0 0	
WNCN	D17 DT LIC	224.2	17,675	212.1	16,364	100.1 6,141	
WLTX	D17 DT LIC	359.7	13,957	135.8	7,320	119.9 7,156	

**Table 2 TVStudy Analysis to Pre-Auction Operations
WXII-TV Ch. 16 Early Transition at Phase 5**
(page 3 of 4)



Interference to BLCDDT20130925AJI LIC scenario 1

****IX: 0.52% interference caused**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WGGG-TV	D16	DT	LIC	GREENVILLE, SC	BLCDDT20130925AJI	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	243.5 km
	WAGT-CD	D16	DC	LIC	AUGUSTA, GA	BLANK0000001455	166.7
	WELF-TV	D16	DT	LIC	DALTON, GA	BLCDDT20130610ACF	274.5
	WGXA	D16	DT	LIC	MACON, GA	BLCDDT20070501AAI	265.6
	WSAV-TV	D16	DT	LIC	SAVANNAH, GA	BLANK0000055021	336.5
	WPDE-TV	D16	DT	LIC	FLORENCE, SC	BLCDDT20080815ABI	288.8
	WUNE-TV	D17	DT	LIC	LINVILLE, NC	BLEDT20091118ADR	135.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
30017.9		2,163,321		28567.1		1,977,144	0.71
						28206.1	0.52
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV D16 DT CP		245.0		12,628		200.8	10,314
WAGT-CD D16 DC LIC		16.1		841		4.0	680
WELF-TV D16 DT LIC		16.0		941		12.0	928
WGXA D16 DT LIC		83.8		1,837		67.8	1,633
WSAV-TV D16 DT LIC		12.0		26		4.0	13
WPDE-TV D16 DT LIC		28.0		760		8.0	155
WUNE-TV D17 DT LIC		28.2		1,889		8.1	507

Interference to BLEDT20090701AFO LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WHRO-TV	D16	DT	LIC	HAMPTON-NORFOLK, VA	BLEDT20090701AFO	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	348.7 km
	WCPB	D16	DT	CP	SALISBURY, MD	BLANK0000029877	192.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
33407.0		2,149,481		33379.1		2,139,778	0.09
						32690.9	0.01
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV D16 DT CP		36.0		245		28.0	108
WCPB D16 DT CP		660.2		7,303		652.2	7,166

Interference to BMLCDDT20140925AEP LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WNCN	D17	DT	LIC	GOLDSBORO, NC	BMLCDDT20140925AEP	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	183.3 km
	WPDE-TV	D16	DT	LIC	FLORENCE, SC	BLCDDT20080815ABI	162.6
	WUNE-TV	D17	DT	LIC	LINVILLE, NC	BLEDT20091118ADR	301.7
	WLTX	D17	DT	LIC	COLUMBIA, SC	BLCDDT20050701AAC	268.9
	WKTD-CD	D17	DC	LIC	PORTSMOUTH, VA	BLTTA20050316ACC	221.1
	WFXR	D17	DT	LIC	ROANOKE, VA	BLCDDT20090609ABS	223.1
	WFXB	D18	DT	LIC	MYRTLE BEACH, SC	BLCDDT20070205ACJ	175.6
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
40624.4		3,427,038		40488.9		3,241,845	0.02
						37103.9	0.01
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV D16 DT CP		68.1		2,840		8.0	171
WPDE-TV D16 DT LIC		257.3		7,636		138.6	5,050
WUNE-TV D17 DT LIC		171.9		7,852		20.0	908
WLTX D17 DT LIC		91.3		4,228		11.9	2,464
WKTD-CD D17 DC LIC		16.0		907		4.0	501
WFXR D17 DT LIC		3138.9		172,261		2871.7	162,188
WFXB D18 DT LIC		59.5		934		27.8	332

Table 2 TVStudy Analysis to Pre-Auction Operations WXII-TV Ch. 16 Early Transition at Phase 5

(page 4 of 4)



Interference to BLEDT20091118ADR LIC scenario 1

****IX: 1.10% interference caused**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WUNE-TV	D17	DT	LIC	LINVILLE, NC	BLEDT20091118ADR	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	136.2 km
	WGGS-TV	D16	DT	LIC	GREENVILLE, SC	BLCDT20130925AJI	135.0
	WNCN	D17	DT	LIC	GOLDSBORO, NC	BMLCDT20140925AEP	301.7
	WQCW	D17	DT	LIC	PORTSMOUTH, OH	BLCDT20100422ABY	273.4
	WLTX	D17	DT	LIC	COLUMBIA, SC	BLCDT20050701AAC	239.6
	WKOP-TV	D17	DT	LIC	KNOXVILLE, TN	BLEDT20040405ACC	190.2
	WFXR	D17	DT	LIC	ROANOKE, VA	BLCDT20090609ABS	196.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27096.8 1,931,274		24100.8 1,623,077		23336.9 1,577,886		22908.4 1,560,471	1.84 1.10
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV D16 DT CP		516.7 20,565				428.6 17,415	
WGGS-TV D16 DT LIC		133.0 9,233		72.5 5,538		72.5 5,538	
WNCN D17 DT LIC		188.8 10,442		124.3 4,254		48.2 1,386	
WQCW D17 DT LIC		32.0 1,121		4.0 0		4.0 0	
WLTX D17 DT LIC		334.1 26,065		209.1 16,300		209.1 16,300	
WKOP-TV D17 DT LIC		24.0 130		4.0 105		4.0 105	
WFXR D17 DT LIC		249.2 10,007		181.0 7,816		173.0 7,709	

Interference to BLCDT20090609ABS LIC scenario 1

****IX: 0.64% interference caused**

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WFXR	D17	DT	LIC	ROANOKE, VA	BLCDT20090609ABS	
Undesireds:	WXII-TV	D16	DT	CP	WINSTON-SALEM, NC	BLANK0000034697	93.4 km
	WNCN	D17	DT	LIC	GOLDSBORO, NC	BMLCDT20140925AEP	223.1
	WUNE-TV	D17	DT	LIC	LINVILLE, NC	BLEDT20091118ADR	196.3
	WQCW	D17	DT	LIC	PORTSMOUTH, OH	BLCDT20100422ABY	231.7
	WLTX	D17	DT	LIC	COLUMBIA, SC	BLCDT20050701AAC	348.9
	WDBJ	D18	DT	LIC	ROANOKE, VA	BLANK0000055470	0.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
39009.1 1,432,348		35825.8 1,347,019		34818.2 1,310,765		34570.9 1,302,420	0.71 0.64
Undesired		Total IX		Unique IX, before		Unique IX, after	
WXII-TV D16 DT CP		466.6 21,926				247.3 8,345	
WNCN D17 DT LIC		633.2 24,350		529.6 16,558		497.7 15,623	
WUNE-TV D17 DT LIC		247.2 13,888		159.5 7,895		59.7 1,244	
WQCW D17 DT LIC		162.9 3,874		147.0 2,365		147.0 2,365	
WLTX D17 DT LIC		8.0 2,325		0.0 0		0.0 0	
WDBJ D18 DT LIC		71.9 1,926		60.0 1,552		60.0 1,552	

**Table 3 TVStudy Analysis – Interference-Free Service
WXII-TV Licensed Facility**



WXII-TV Existing Facility - Licensed Ch. 31

tvstudy v2.2.5 (4uoc83)

Database: localhost
 Station Data: LMS TV 2018-10-03
 Study: Early Transition 2.0-0.1 20181003
 Model: Longley-Rice
 Scenario: WXII-TV LIC-31
 Start: 2018.10.04 10:45:59

Desired station	Service area		Terrain-limited		Interference-free	
Undesired station	Total interference		Unique interference			
WXII-TV D31 DT LIC WINSTON-SALEM, NC	43989.1	3,434,637	41079.6	3,108,916	39779.2	3,054,339
WFXG D31 DT LIC AUGUSTA, GA	28.2	1,544	4.0		47	
WDKY-TV D31 DT LIC DANVILLE, KY	0.0	0	0.0		0	
WUBX-CD D31 DC LIC DURHAM, ETC., NC	0.0	0	0.0		0	
WUNU D31 DT LIC LUMBERTON, NC	575.8	30,018	507.7		22,312	
WHIG-CD D31 DC LIC ROCKY MOUNT, NC	0.0	0	0.0		0	
WUNL-TV D32 DT LIC WINSTON-SALEM, NC	0.0	0	0.0		0	
WAVY-TV D31 DT LIC PORTSMOUTH, VA	44.0	1,129	27.9		768	
WSLS-TV D30 DT LIC ROANOKE, VA	724.6	29,596	688.6		23,740	
Total Incoming Interference (population)					54,577	
					(1.76%)	

**Table 4 TVStudy Analysis – Interference-Free Service
WXII-TV Proposed Early Transition**



**WXII-TV Proposed Early Transition Ch. 16
Relevant Interfering Pre-Repack and Post-Repack Facilities
Operation Between Phase 5 and Phase 9**

tvstudy v2.2.5 (4uoc83)

Database: localhost
Station Data: LMS TV 2018-10-03
Study: Early Transition 2.0-0.1 20181003
Model: Longley-Rice
Scenario: WXII-TV CP-16_Phase 5 to 9
Start: 2018.10.04 10:16:19

Desired station	Service area		Terrain-limited		Interference-free	
Undesired station	Total interference		Unique interference			
WXII-TV D16 DT CP WINSTON-SALEM, NC	45264.5	3,630,551	42602.6	3,318,375	41774.9	3,272,491
W21CK-D D15 DC CP CHARLOTTE, NC	4.0	2,835	0.0		0	
WPXU-TV D16 DT CP JACKSONVILLE, NC	104.8	2,988	28.2		518	
WRAZ D15 DT CP RALEIGH, NC	277.2	13,553	0.0		0	
WRAL-TV D17 DT CP RALEIGH, NC	365.5	17,476	80.3		3,510	
WJPM-TV D16 DT CP FLORENCE, SC	254.4	15,300	181.8		9,436	
WAPK-CD D16 DC CP BRISTOL VA/KINGSPORT,	172.0	13,107	155.9		11,132	
WHRO-TV D16 DT LIC HAMPTON-NORFOLK, VA	56.0	2,071	39.9		994	
Total Incoming Interference (population)					45,884	
					(1.38%)	

**Table 5 TVStudy Analysis – Interference-Free Service
WXII-TV Proposed Early Transition – Testing Period**



**WXII-TV Proposed Early Transition Ch. 16
Relevant Interfering Pre-Repack and Post-Repack Facilities
Operation During Phase 5 Testing Period – Worst Case**

tvstudy v2.2.5 (4uoc83)

Database: localhost
Station Data: LMS TV 2018-10-03
Study: Early Transition 2.0-0.1 20181003
Model: Longley-Rice
Scenario: WXII-TV CP-16_Phase 5 testing
Start: 2018.10.04 10:16:19

Desired station	Service area		Terrain-limited		Interference-free	
Undesired station	Total interference		Unique interference			
WXII-TV D16 DT CP WINSTON-SALEM, NC	45264.5	3,630,551	42602.6	3,318,375	40130.9	3,138,545
W21CK-D D15 DC CP CHARLOTTE, NC	4.0	2,835	0.0	0		
* WNCN D17 DT LIC GOLDSBORO, NC	160.7	8,256	0.0	0		(0.00%)
WPXU-TV D16 DT CP JACKSONVILLE, NC	104.8	2,988	12.0	159		
* WUNE-TV D17 DT LIC LINVILLE, NC	225.2	31,555	100.5	12,381		(0.39%)
WRAZ D15 DT CP RALEIGH, NC	277.2	13,553	0.0	0		
WRAL-TV D17 DT CP RALEIGH, NC	365.5	17,476	72.2	3,289		
WJPM-TV D16 DT CP FLORENCE, SC	254.4	15,300	16.2	330		
* WPDE-TV D16 DT LIC FLORENCE, SC	794.8	47,074	411.6	17,594		(0.56%)
* WGGG-TV D16 DT LIC GREENVILLE, SC	620.2	93,346	346.5	58,768		(1.84%)
WAPK-CD D16 DC CP BRISTOL VA/KINGSPORT,	172.0	13,107	112.0	6,490		
WHRO-TV D16 DT LIC HAMPTON-NORFOLK, VA	56.0	2,071	27.9	648		
* WFXR D17 DT LIC ROANOKE, VA	692.4	25,718	620.4	19,479		(0.62%)

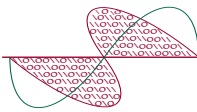
* Stations on Pre-Auction channel, to transition at phase 5 and may be present through portions of the testing period

Total Incoming Interference (population) 179,830
(5.42%)

**Supplemental Analysis Regarding WGGG-TV
Using Pre-Auction WXII-TV Service as Baseline**

Consider only cells with interference-free service from WXII-TV LIC D31: 39779.2 sq km
3,054,339 pop

All interference cells from WGGG-TV D16 DT LIC GREENVILLE, SC to WXII-TV D16 DT CP
that are presently interference-free service from WXII-TV LIC D31: 302.0 sq km
58,880 pop (1.93%)

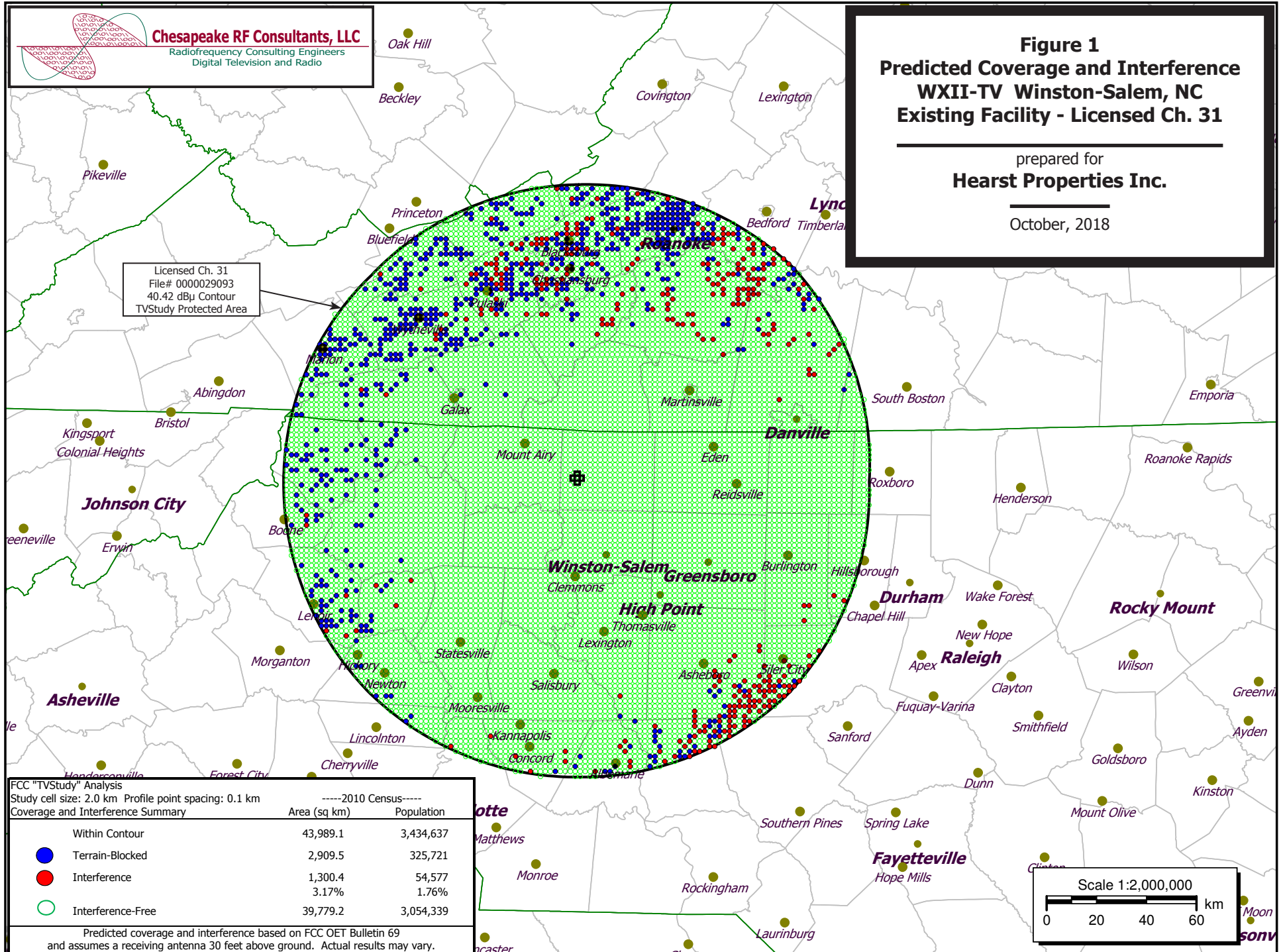


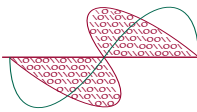
Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Predicted Coverage and Interference
WXII-TV Winston-Salem, NC
Existing Facility - Licensed Ch. 31

prepared for
Hearst Properties Inc.

October, 2018



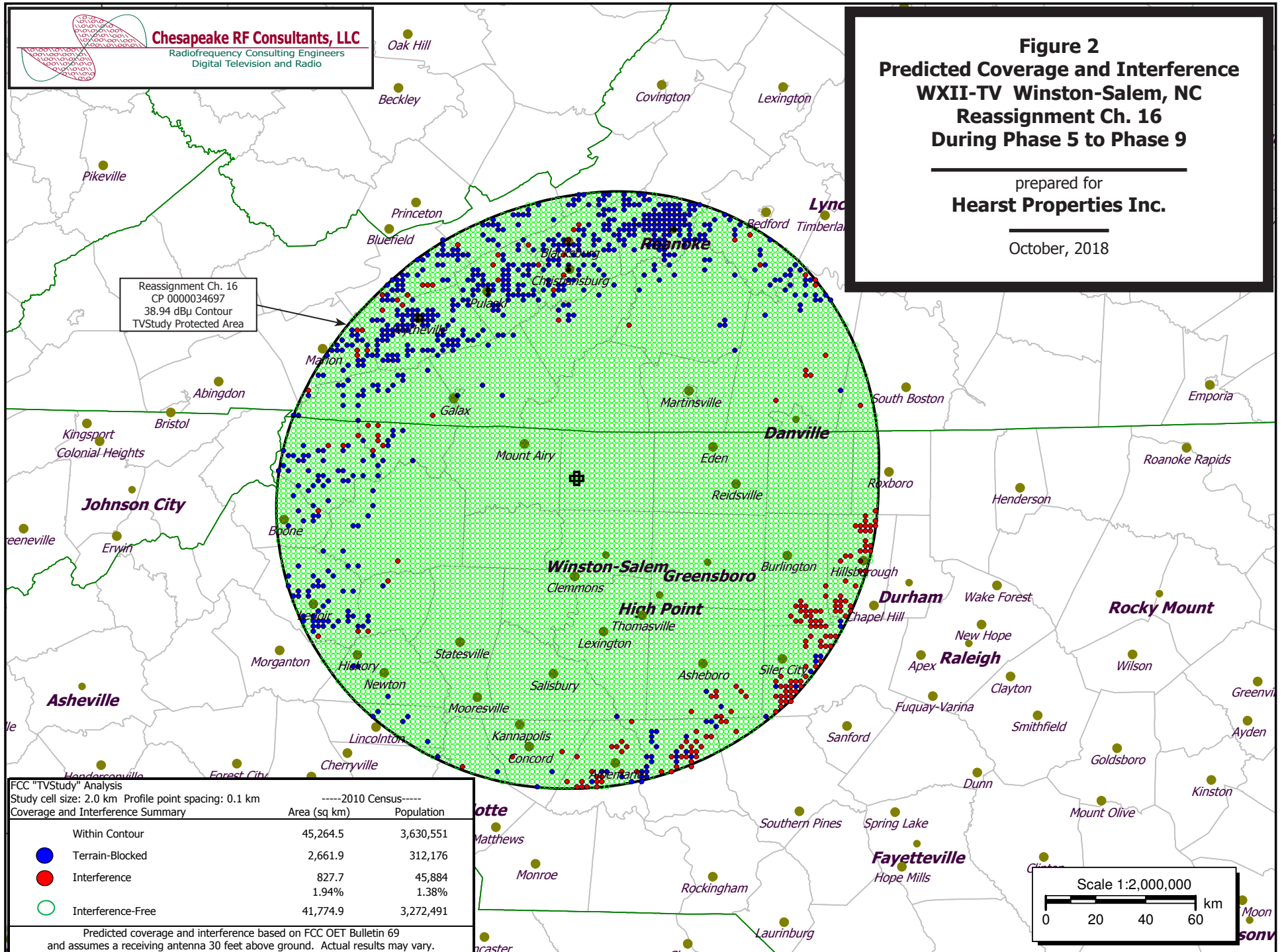


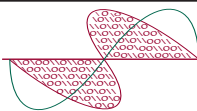
Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Predicted Coverage and Interference
WXII-TV Winston-Salem, NC
Reassignment Ch. 16
During Phase 5 to Phase 9

prepared for
Hearst Properties Inc.

October, 2018





Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 3
Service Gain-Loss Analysis
During Phase 5 to Phase 9
WXII-TV Winston-Salem, NC

prepared for
Hearst Properties Inc.

October, 2018

