



(REFERENCE COPY - Not for submission)

# Modification of a Construction Permit to Convert from DTV to DTS Application

File Number: **0000036076** | Submit Date: **12/07/2017** | Call Sign: **WUNW** | Facility ID: **83822** | FRN: **0001910066** | State: **North Carolina** | City: **CANTON**

Service: **DTS** | Purpose: **Modification to Convert 0000035959** | Status: **Superceded** | Status Date: **03/19/2020** |

Filing Status: **InActive**

## General Information

Section	Question	Response
Attachments	Are attachments (other than associated schedules) being filed with this application?	Yes

## Fees, Waivers, and Exemptions

Section	Question	Response
Waivers	Does this filing request a waiver of the Commission's rule(s)?	No
	Total number of rule sections involved in this waiver request:	
	Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	No

Applicant  
Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
University of North Carolina Doing Business As: University of North Carolina	PO Box 14900 Research Triangle Park, NC 27709 United States	+1 (919) 549-7000	fcc_notice@unctv.org	Government Entity

Authorization Holder Name

Check box if the Authorization Holder name is being updated because of the sale (or transfer of control) of the Authorization(s) to another party and for which proper Commission approval has not been received or proper notification provided.

Contact  
Representatives  
(4)

Contact Name	Address	Phone	Email	Contact Type
<b>Joseph M. Davis , P.E. .</b> <i>Consulting Engineer</i> Chesapeake RF Consultants, LLC	207 Old Dominion Road Yorktown, VA 23692 United States	+1 (703) 650- 9600	Joseph.Davis@RF- consultants.com	Technical Representative
<b>Stephen Hartzell</b> Brooks, Pierce et al.	Stephen Hartzell 150 Fayetteville Street Suite 1700 Raleigh, NC 27601 United States	+1 (919) 839- 0300	shartzell@brookspierce. com	Legal Representative
<b>Donald W Smith</b> University of North Carolina	Donald Smith 10 T.W. Alexander Drive 10 T.W. Al Research Triangle Park, NC 27709 United States	+1 (919) 549- 7025	dsmith@unctv.org	Technical Representative
<b>Marcus W Trathen</b> Brooks, Pierce et al.	Marcus Trathen 150 Fayetteville Street Suite 1700 Raleigh, NC 27601 United States	+1 (919) 839- 0300	mtrathen@brookspierce. com	Legal Representative

Alien Ownership

Question	Response
1) Is the applicant a foreign government or the representative of any foreign government as specified in Section 310(a) of the Communications Act?	
2) Is the applicant an alien or the representative of an alien? (Section 310(b)(1))	
3) Is the applicant a corporation, or non-corporate entity, that is organized under the laws of any foreign government? (Section 310(b)(2))	
4) Is the applicant an entity of which more than one-fifth of the capital stock, or other equity or voting interest, is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any entity organized under the laws of a foreign country? (Section 310(b)(3))	
5) Is the applicant directly or indirectly controlled by any other entity of which more than one-fourth of the capital stock, or other equity or voting interest, is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any entity organized under the laws of a foreign country? (Section 310(b)(4))	
6) Has the applicant received a declaratory ruling(s) under Section 310(b)(4) of the Communications Act?	
7) In connection with this application, is the applicant filing a foreign ownership Petition for Declaratory Ruling pursuant to Section 310(b)(4) of the Communications Act?	

Basic Qualifying Questions

Section	Question	Response
Revoked Application	Has the Applicant or any party to this application had any FCC station Authorization revoked or had any application for an initial, modification or renewal of FCC station Authorization denied by the Commission?	No
State or Federal Convictions	Has the Applicant or any party to this application, or any party directly or indirectly controlling the Applicant, ever been convicted of a felony by any state or federal court?	No

Channel and Facility Information

Section	Question	Response
Facility ID	83822	
State	North Carolina	
City	CANTON	
DTS Channel	27	
Facility Type	Facility Type	Noncommercial Educational
	Station Type	Main
Zone	Zone	2

DTS Reference Point

Section	Question	Response
Construction Permit File Number and Facility ID	File Number for Current Authorized Service Area:	0000035959
	Facility ID	83822
Coordinates (NAD83)	Latitude	35° 34' 07.0" N+
	Longitude	082° 54' 26.2" W-

Site 1: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1275765
Coordinates (NAD83)	Latitude	35° 34' 07.0" N+
	Longitude	082° 54' 26.2" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	59.0 meters
	Support Structure Height	59.0 meters
	Ground Elevation (AMSL)	1366.0 meters
Antenna Data	Height of Radiation Center Above Ground Level	55 meters
	Height of Radiation Center Above Average Terrain	504.9 meters
	Height of Radiation Center Above Mean Sea Level	1421.0 meters
	Effective Radiated Power	55 kW

Site 1: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Directional Custom
	Do you have an Antenna ID?	Yes
	Antenna ID	103681
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-10DSB-B-R
	Electrical Beam Tilt	3
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Rotation	0 degrees
	Uploaded file for elevation antenna (or radiation) pattern data	

Directional Antenna Relative Field Values (Pre-rotated Pattern)

Degree	Value	Degree	Value	Degree	Value	Degree	Value
0	0.613	90	0.627	180	0.873	270	0.917
10	0.627	100	0.613	190	0.917	280	0.873
20	0.644	110	0.608	200	0.952	290	0.824
30	0.66	120	0.616	210	0.979	300	0.772
40	0.672	130	0.639	220	0.995	310	0.721
50	0.676	140	0.675	230	1	320	0.675
60	0.672	150	0.721	240	0.995	330	0.639
70	0.66	160	0.772	250	0.979	340	0.616
80	0.644	170	0.824	260	0.952	350	0.608

Additional Azimuths

Degree	V <sub>A</sub>
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Site 2: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1271385
Coordinates (NAD83)	Latitude	35° 10' 36.4" N+
	Longitude	082° 40' 53.5" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	54.8 meters
	Support Structure Height	54.8 meters
	Ground Elevation (AMSL)	1146.9 meters
Antenna Data	Height of Radiation Center Above Ground Level	45.7 meters
	Height of Radiation Center Above Average Terrain	429.2 meters
	Height of Radiation Center Above Mean Sea Level	1192.6 meters
	Effective Radiated Power	0.90 kW

Site 2: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 3: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1302071
Coordinates (NAD83)	Latitude	35° 25' 24.6" N+
	Longitude	082° 15' 34.9" W-
	Structure Type	LTOWER-Lattice Tower
	Overall Structure Height	51.8 meters
	Support Structure Height	45.7 meters
	Ground Elevation (AMSL)	850.3 meters
Antenna Data	Height of Radiation Center Above Ground Level	47.2 meters
	Height of Radiation Center Above Average Terrain	304.2 meters
	Height of Radiation Center Above Mean Sea Level	897.5 meters
	Effective Radiated Power	0.50 kW

Site 3: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 4: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	No
	ASR Number	
Coordinates (NAD83)	Latitude	36° 02' 00.4" N+
	Longitude	082° 12' 08.5" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	35 meters
	Support Structure Height	35 meters
	Ground Elevation (AMSL)	1243 meters
Antenna Data	Height of Radiation Center Above Ground Level	33 meters
	Height of Radiation Center Above Average Terrain	320.7 meters
	Height of Radiation Center Above Mean Sea Level	1276 meters
	Effective Radiated Power	0.94 kW

Site 4: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 5: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1299624
Coordinates (NAD83)	Latitude	35° 07' 56.7" N+
	Longitude	082° 59' 00.6" W-
	Structure Type	LTOWER-Lattice Tower
	Overall Structure Height	54.8 meters
	Support Structure Height	54.8 meters
	Ground Elevation (AMSL)	1453.8 meters
Antenna Data	Height of Radiation Center Above Ground Level	51.8 meters
	Height of Radiation Center Above Average Terrain	570.2 meters
	Height of Radiation Center Above Mean Sea Level	1505.6 meters
	Effective Radiated Power	0.88 kW

Site 5: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	



Site 6: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1280547
Coordinates (NAD83)	Latitude	35° 24' 47.0" N+
	Longitude	083° 30' 02.0" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	54.8 meters
	Support Structure Height	48.7 meters
	Ground Elevation (AMSL)	1007.0 meters
Antenna Data	Height of Radiation Center Above Ground Level	51.8 meters
	Height of Radiation Center Above Average Terrain	298.7 meters
	Height of Radiation Center Above Mean Sea Level	1058.8 meters
	Effective Radiated Power	0.88 kW

Site 6: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 7: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	No
	ASR Number	
Coordinates (NAD83)	Latitude	35° 18' 12.4" N+
	Longitude	083° 10' 39.5" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	35.4 meters
	Support Structure Height	35.4 meters
	Ground Elevation (AMSL)	777 meters
Antenna Data	Height of Radiation Center Above Ground Level	33 meters
	Height of Radiation Center Above Average Terrain	-146.0 meters
	Height of Radiation Center Above Mean Sea Level	810 meters
	Effective Radiated Power	0.94 kW

Site 7: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Site 8: Antenna  
Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1257558
Coordinates (NAD83)	Latitude	35° 40' 17.3" N+
	Longitude	082° 00' 18.5" W-
	Structure Type	TOWER-A free standing or guyed struct
	Overall Structure Height	50.0 meters
	Support Structure Height	50.0 meters
	Ground Elevation (AMSL)	595.9 meters
Antenna Data	Height of Radiation Center Above Ground Level	48 meters
	Height of Radiation Center Above Average Terrain	177.9 meters
	Height of Radiation Center Above Mean Sea Level	643.9 meters
	Effective Radiated Power	0.50 kW

Site 8: Antenna  
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	1002716
Antenna Manufacturer and Model	Manufacturer:	ERI
	Model	AL8O-27-E
	Electrical Beam Tilt	1.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Circular
DTV and DTS: Elevation Pattern	Does evaluation of this application require the use of an elevation or matrix pattern?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

**Parties to the  
Application (0)**

Information not provided.

**Attributable Interest**

Section	Question	Response
Equity and Financial Interests	Applicant certifies that equity and financial interests not set forth by the applicant parties are non-attributable.	
Other Authorizations	Does the applicant or any party to the application have an attributable interest in any other broadcast station(s).	



Construction  
Permit  
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See 47 C.F.R. Section 1.1306)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes
Interference Protection Provisions	The proposed TV station satisfies the interference protection provisions of 47 C.F.R. Section 73.626.	Yes
DTS Facility Requirements	The combined coverage from all of the DTS transmitters in the proposed DTS facility covers all of the station's authorized service area, as required in 47 C.F.R. Section 73.626(f)(1).	Yes
	Each DTS transmitter's coverage is contained within either the TV station's Table of Distances area (47 C.F.R. Section 73.626 (c)) or its authorized service area, except where such coverage is of a minimal amount and necessary to meet the requirements of 47 C.F.R. Section 73.626(f)(1).	Yes, coverage entirely contained within station s authorized service area
	Each DTS transmitter's coverage is contiguous with at least one other DTS transmitter's coverage, as required in 47 C.F. R. Section 73.626(e)(3).	Yes
	The coverage from one or more DTS transmitter(s) in the DTS facility provide(s) principal community coverage, as required in 47 C.F.R. Section 73.626(e)(4).	Yes, one transmitter provides principal community coverage

<p>The combined field strength of all of the DTS transmitters in the proposed DTS facility do not cause interference to another station in excess of the criteria specified in 47 C.F.R. Section 73.616, as required in 47 C.F.R. Section 73.626 (e)(5).</p> <p>Note: The combined field strength level shall be determined by a "root-sum-square" calculation, where the combined field strength level at a given location is equal to the square root of the sum of the squared field strengths from each transmitter in the DTS network at that location.</p>	Yes
<p>Each DTS transmitter in the proposed DTS facility is located within either the TV station's Table of Distances area or its authorized service area.</p>	Yes

Legal  
Certifications

Section	Question	Response
Eligibility	The applicant certifies that it is a:	
	The applicant certifies that the applicant's officers, directors and members of its governing board are broadly representative of the educational, cultural, and civic segments of the principal community to be served.	
	The applicant certifies that the Commission has previously granted a broadcast application identified here by file number that found this applicant qualified as a noncommercial educational entity with a qualifying educational program, and that the applicant will use the proposed station to advance a program similar to that the Commission has found qualifying in applicant's previous application.	
	FCC File Number	
	The applicant certifies that its governing documents (e.g., articles of incorporation, by-laws, charter, enabling statute, and/or other pertinent organizational document) permit the applicant to advance an educational program and that there is no provision in any of those documents that would restrict the applicant from advancing an educational program or complying with any Commission rule, policy, or provision of the Communications Act of 1934, as amended.	
Character Issues	<p>Applicant certifies that neither applicant nor any party to the application has or had any interest in, or connection with:</p> <p>(a) any broadcast application in any proceeding where character issues were left in unresolved or were resolved adversely against the applicant or party to the application; or</p> <p>(b) any pending broadcast application in which character issues have been raised.</p>	
Adverse Findings	Has the Applicant or any party to this application had an adverse finding or an adverse final action taken by any court or administrative body in a civil or criminal proceeding brought under any law related to the following: any felony; mass media-related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?	
Program Service Certification	Applicant certifies that it is cognizant of and will comply with its obligations as a Commission licensee to present a program service responsive to the issues of public concern facing the station's community of license and service area.	
Local Public Notice	Applicant certifies that it has or will comply with the public notice requirements of 47 C.F.R. Section 73.3580.	Yes
Equal Employment Opportunity (EEO)	If the applicant proposes to employ five or more full-time employees, applicant certifies that it is filing simultaneously with this application a Model EEO Program Report.	
Holding Period	Applicant certifies that this application does not propose a modification to an authorization that was awarded on the basis of a preference for fair distribution of service pursuant to 47 U.S.C. Section 307(b).	Yes
	Applicant certifies that the proposed modification will not downgrade service to the area on which the Section 307(b) preference was based.	

Applicant certifies that although it proposes to downgrade service to the area on which the Section 307(b) preference was based, applicant has provided full service to that area for a period of four years of on-air operations.	
Applicant certifies that this application does not propose a modification to an authorized station that received a credit for superior technical parameters under the point system selection method in 47 C.F.R. Section 73.7003.	Yes
Applicant certifies that the population and area within the proposed service contour (60 dBu (FM) or Noise-Limited (TV)) are greater than or equivalent to those authorized.	

## Certification

Section	Question	Response
General Certification Statements	The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by authorization or otherwise, and requests an Authorization in accordance with this application (See Section 304 of the Communications Act of 1934, as amended.).	
	The Applicant certifies that neither the Applicant nor any other party to the application is subject to a denial of Federal benefits pursuant to §5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. §862, because of a conviction for possession or distribution of a controlled substance. This certification does not apply to applications filed in services exempted under §1.2002(c) of the rules, 47 CFR . See §1.2002(b) of the rules, 47 CFR §1.2002(b), for the definition of "party to the application" as used in this certification §1.2002 (c). The Applicant certifies that all statements made in this application and in the exhibits, attachments, or documents incorporated by reference are material, are part of this application, and are true, complete, correct, and made in good faith.	
Authorized Party to Sign	<b>FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID</b> Upon grant of this application, the Authorization Holder may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in automatic cancellation of the Authorization. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of Authorization requested in this application. WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. Code, Title 18, §1001) AND/OR REVOCATION OF ANY STATION AUTHORIZATION (U.S. Code, Title 47, §312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, §503).	
	I certify that this application includes all required and relevant attachments.	Yes
	I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.	<b>Thomas Brooks Skinner</b> <i>Associate General Manager and General Counsel</i>  12/07/2017

Attachments

File Name	Uploaded By	Attachment Type	Description
<u>WUNW DTS conversion minor mod application ENG 12-07-2017.pdf</u>	Applicant	All Purpose	WUNW DTS engineering exhibits. FCC processing of this proposal is requested using a 1.0 km cell size and 0.1 km terrain profile increment.
<u>WUNW - Local Public Notice Exhibit.pdf</u>	Applicant	Legal Certifications	Local Public Notice Exhibit