

TECHNICAL SPECIFICATIONS

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX

7.1.	Channel: 22
7.2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III
7.3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 34 Minutes 58 Seconds 6 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 111 Minutes 30 Seconds 28 <input checked="" type="radio"/> West <input type="radio"/> East
7.4.	Antenna Structure Registration Number: 1007647 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA
7.5.	Antenna Location Site Elevation Above Mean Sea Level: 2579 meters
7.6.	Overall Tower Height Above Ground Level: 88 meters
7.7.	Height of Radiation Center Above Ground Level: 52 meters
7.8.	Height of Radiation Center Above Average Terrain: 465 meters
7.9.	Maximum Effective Radiated Power (average): 283 kW
7.10.	Antenna Specifications: <input type="radio"/> Nondirectional <input checked="" type="radio"/> Directional a. Manufacturer DIE Model TFU-24DSB-B(C) b. Electrical Beam Tilt: 1.25 degrees <input type="checkbox"/> Not Applicable c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable d. Polarization: <input checked="" type="radio"/> Horizontal <input type="radio"/> Circular <input type="radio"/> Elliptical Directional Antenna Relative Field Values: Rotation (Degrees): 0 <input checked="" type="checkbox"/> No Rotation

Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value
0	0.569	10	0.571	20	0.586	30	0.607	40	0.627	50	0.640
60	0.645	70	0.641	80	0.631	90	0.613	100	0.592	110	0.579
120	0.570	130	0.579	140	0.610	150	0.650	160	0.699	170	0.759
180	0.817	190	0.869	200	0.914	210	0.951	220	0.975	230	0.993
240	1.000	250	0.996	260	0.981	270	0.955	280	0.920	290	0.876
300	0.826	310	0.771	320	0.714	330	0.661	340	0.615	350	0.583
Additional Azimuths											

8.	Please explain in detail the "extraordinary circumstances" which warrant temporary operations at variance from the Commission's Rules. In addition, please specify 1) the specific rules and/or policies from which the applicant seeks temporary relief; 2) how the public interest will be furthered by grant; and 3) the expected duration of the STA and the licensee's plan for restoration of licensed operation. If requesting variance with other than authorized technical facilities, please specify the exact facilities sought	[Exhibit 21]
9.	Anti-Drug Abuse Act Certification. Applicant certifies that neither applicant nor any party to the application is subject to denial of federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862.	<input checked="" type="radio"/> Yes <input type="radio"/> No

I certify that I have prepared Engineering Data on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name RICHARD H. MERTZ	Relationship to Applicant (e.g., Consulting Engineer) CONSULTANT	
Signature	Date (mm/dd/yyyy) 08/17/2008	
Mailing Address CAVELL, MERTZ & ASSOCIATES, INC. 7839 ASHTON AVENUE		
City MANASSAS	State or Country (if foreign address) VA	Zip Code 20109 -
Telephone Number (No dashes or parentheses, include area code) 7033929090	E-Mail Address (if available) RMERTZ@CAVELLMERTZ.COM	

I hereby certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith. I acknowledge that all certifications and attached Exhibits are considered material representations.

Typed or Printed Name of Person Signing TODD A. MAYMAN	Typed or Printed Title of Person Signing SECRETARY
Signature	Date (mm/dd/yyyy)

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

Exhibits**Exhibit 21****Description:** NATURE OF STA REQUEST

APPLICANT HAS BEEN ALLOTTED CHANNEL 2 AS ITS POST-TRANSITION DIGITAL CHANNEL. IT HAS FILED A PETITION FOR RULE MAKING TO CHANGE TO CHANNEL 22. IF THE PETITION IS NOT SUCESSFUL, APPLICANT WILL REQUIRE A PHASED TRANSITION STA TO CONTINUE OPERATING ON CHANNEL 22 -- ITS PRE-TRANSITION CHANNEL -- WHILE IT COMPLETES THE CHANNEL 2 FACILITY USING EQUIPMENT REPURPOSED FROM ANOTHER COMMONLY-OWNED STATION. THIS STA REQUEST IS CONTINGENT ON THE NON-OCCURRENCE OF THE CHANNEL CHANGE. IT IS BEING FILED TO COMPLY WITH THE AUGUST 18 DEADLINE FOR FILING PHASED TRANSITION STA REQUESTS. IT WILL BE WITHDRAWN UPON FINALITY OF THE CHANNEL CHANGE.

THE PUBLIC INTEREST JUSTIFICATION FOR THE STA AND A SUPPORTING ENGINEERING STATEMENT ARE ATTACHED.

Attachment 21

Description
KNAZ-DT STA Request Exhibit 21

Engineering Statement
REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION
prepared for
Multimedia Holdings Corporation
KNAZ-TV Flagstaff, Arizona
Facility ID 24749
Ch. 22 283 kW (MAX-DA) 465 m

Multimedia Holdings Corporation (“*Multimedia*”) is the licensee of analog station KNAZ-TV, Channel 2, Flagstaff, Arizona (see BLCT-19811006KM) and the companion pre-transition digital station, KNAZ-DT, Channel 22 (see BLCDT-20070119AAN). *Multimedia* is currently requesting authorization to construct the final post-transition KNAZ facility on Channel 22 (see BPRM-20080620AOL) in place of the allotted Channel 2. As explained in the most recent DTV Transition Update (see BDTUCT-20080718AGM), should the Commission not grant the request to change its final channel, *Multimedia* may need to avail itself of the “phased transition” provisions contained in the Third Periodic Review¹ by remaining on its pre-transition digital facility past the February 17, 2009 shut down of full-service analog television. Accordingly, the instant engineering statement has been prepared to support the request for a Special Temporary Authorization to continue post-transition operation on Channel 22 contingent on the pending channel change request being denied.

Recent severe problems with the existing KNAZ-TV Channel 2 antenna make its repair impractical and the site location makes any remedial efforts extremely difficult, if not impossible. The transmitter is located in a remote mountainous area that is inaccessible during winter months. Thus, any efforts towards construction of a permanent digital facility are limited to only warmer months of the year, not during January or February. As mentioned earlier, to avoid interruptions in service, *Multimedia* requested a change in KNAZ’s post-transition digital channel to its pre-transition allotment channel using the existing licensed Channel 22 facility. In response to *Multimedia*’s request to employ the currently license KNAZ-DT Channel 22 facility for post-transition operation, the Commission has requested additional information, which may delay final disposition of the request. Thus, in an abundance of caution, the instant engineering statement has been prepared to support a request to operate the current KNAZ-DT

¹ See paragraphs 92 and 93, *Report and Order, Third Periodic Review of the Commission’s Rules and Policies Affecting the Conversion To Digital Television*, MB Docket No. 07-91, FCC 07-228, Released December 31, 2007.

Engineering Statement
REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION
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Channel 22 digital facility after the February 17, 2008 shut down of full-service analog television.

The facility proposed for the post-transition operation is identical to that of the current KNAZ-DT licensed facility. The antenna for the proposed STA facility is the existing, installed Dielectric TFU-32DSB-B(C) antenna which is directional in the horizontal plane with 1.25° electrical beam tilt. A polar plot of the antenna pattern is provided in the attached **Exhibit 21-Figure 1**. **Exhibit 21-Figures 2 and 2A** provide a depiction of the antenna's elevation pattern.

Exhibit 21-Figure 3 provides a coverage comparison of the currently licensed KNAZ-TV analog facility and the licensed KNAZ-DT pre-transition digital operation. Within the predicted Grade B analog coverage area there are 288,123 persons (2000 Census). The currently licensed KNAZ-DT facility, as proposed herein for the post-transition STA operation, provides coverage to 267,340 persons within the service contour. This is 92.8 percent of the number of persons within the analog Grade B contour. **Exhibit 21-Figure 4** provides a map depicting the service contour of the proposed facility. The map also provides the proposed facility's principal community coverage contour. As demonstrated therein, the principal community of Flagstaff, Arizona is predicted to receive the enhanced signal level as required in §73.625(a) of the Commission's Rules. As demonstrated in **Exhibit 21-Table I**, the proposed STA facility complies with the Commission's 0.5 percent new interference limit.

Since the instant proposal requests the use of the existing, licensed KNAZ-DT facility for post-transition operation, no construction is required. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of §1.1306 of the Commission's Rules. No increase in overall structure height is proposed, thus no change in structure lighting or marking is anticipated. Thus, it is believed that this application may be categorically excluded from environmental processing pursuant to §1.1306 of the Commission's Rules.

Since the instant proposal employs an existing, licensed digital facility, and given the reduction in power by the crippled KNAZ-TV facility, a re-evaluation of the RF exposure environment is not believed necessary. As previously demonstrated, excessive levels of RF

Engineering Statement
REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION
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energy attributable to the proposal will not be caused at publicly accessible areas at ground level near the antenna supporting structure. Consequently, members of the general public will not be exposed to RF levels in excess of the Commission's guidelines. Nevertheless, tower access will continue to be restricted and controlled through the use of a locked fence. Additionally, appropriate RF exposure warning signs will continue to be posted.

With respect to worker safety, it is believed that based on the preceding analysis, excessive exposure would not occur in areas at ground level. A site exposure policy will continue to be employed protecting maintenance workers from excessive exposure when work must be performed on the tower in areas where high RF levels may be present. Such protective measures may include, but will not be limited to, restriction of access to areas where levels in excess of the guidelines may be expected, power reduction, or the complete shutdown of facilities when work or inspections must be performed in areas where the exposure guidelines will be exceeded. On-site RF exposure measurements may also be undertaken to establish the bounds of safe working areas. The applicant will coordinate exposure procedures with all pertinent stations.

Based on the preceding, it is believed that the instant proposal may be categorically excluded from environmental processing under Section 1.1306 of the Rules, hence preparation of an Environmental Assessment is not required.

Engineering Statement
REQUEST FOR SPECIAL TEMPORARY AUTHORIZATION
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Certification

The undersigned hereby certifies that the foregoing statement and exhibits were prepared by him or under his direction, and that it is true and correct to the best of his knowledge and belief. Mr. Mertz is a principal in the firm of *Cavell, Mertz & Associates, Inc.*, holds a Bachelor of Science degree from Oglethorpe University, and has submitted numerous engineering exhibits to the Federal Communications Commission. His qualifications are a matter of record with that agency.



Richard H. Mertz
August 17, 2008

Cavell, Mertz & Associates, Inc.
7839 Ashton Avenue
Manassas, Virginia 20109
703-392-9090

Attachments

Exhibit 21-Figure 1	Antenna Horizontal Plane Radiation Pattern
Exhibit 21-Figure 2	Antenna Vertical (Elevation) Plane Pattern
Exhibit 21-Figure 2A	Antenna Vertical (Elevation) Plane Pattern Detail
Exhibit 21-Figure 3	Coverage Contour Comparison
Exhibit 21-Figure 4	Predicted Coverage Contours
Exhibit 21-Table I	Interference Study Results

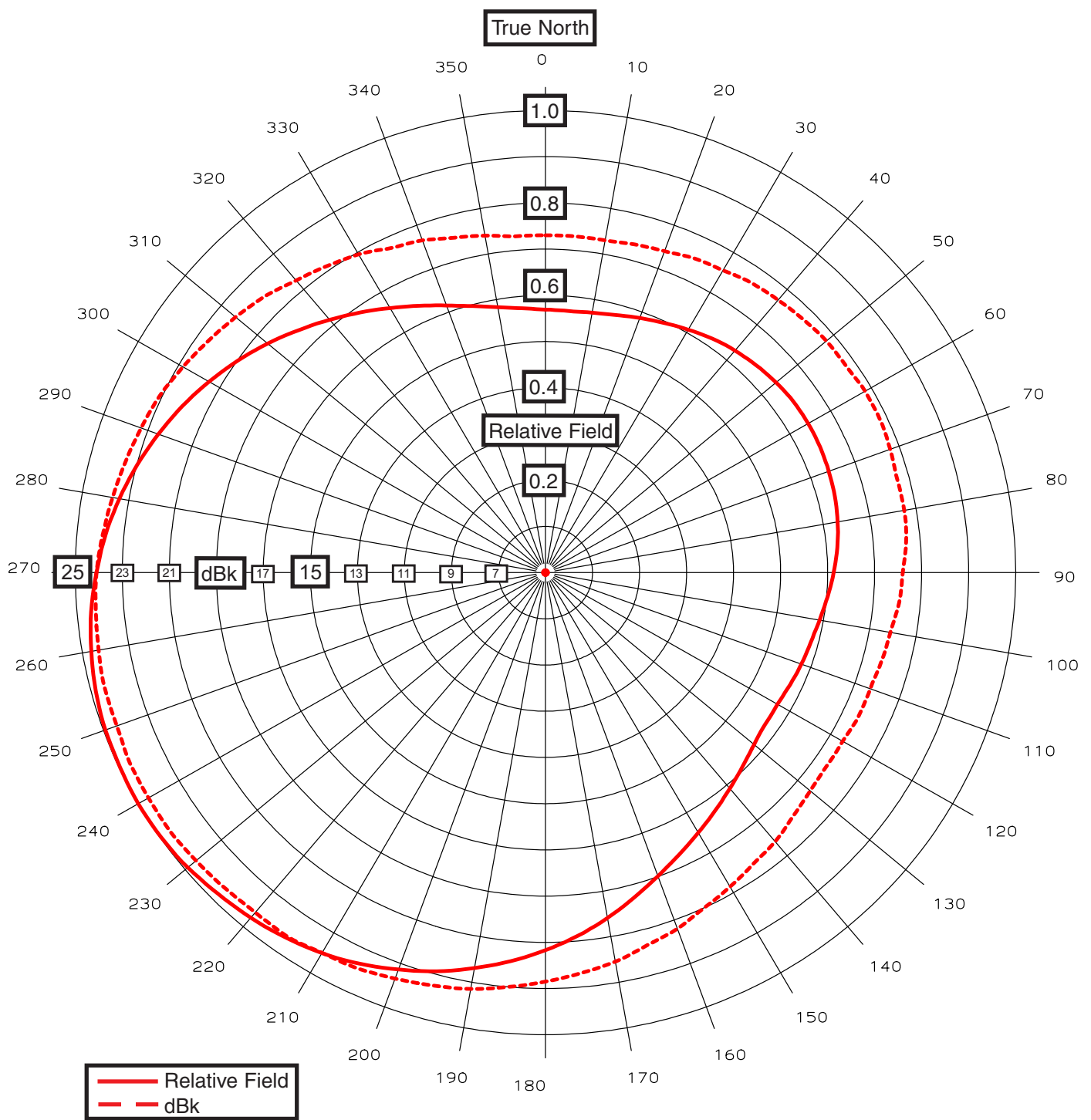


EXHIBIT 21 - FIGURE 1
ANTENNA HORIZONTAL PLANE
RADIATION PATTERN

prepared August 2008 for

Multimedia Holdings Corporation

KNAZ-DT Flagstaff, Arizona

Facility ID 24749

Ch. 22 283 kW (MAX-DA) 465 m

Cavell, Mertz & Associates, Inc.
Manassas, Virginia



Proposal Number	1A038-1	Revision	1
Date	30 May 2002		
Call Letters	KNAZ-DT	Channel	22
Location	Flagstaff, AZ		
Customer	Gannett		
Antenna Type	TFU-24DSB-B (C)		

ELEVATION PATTERN

RMS Gain at Main Lobe	24.0 (13.80 dB)	Beam Tilt	1.25 Degrees
RMS Gain at Horizontal	6.7 (8.26 dB)	Frequency	521.00 MHz
Calculated / Measured	Calculated	Drawing #	24B240125

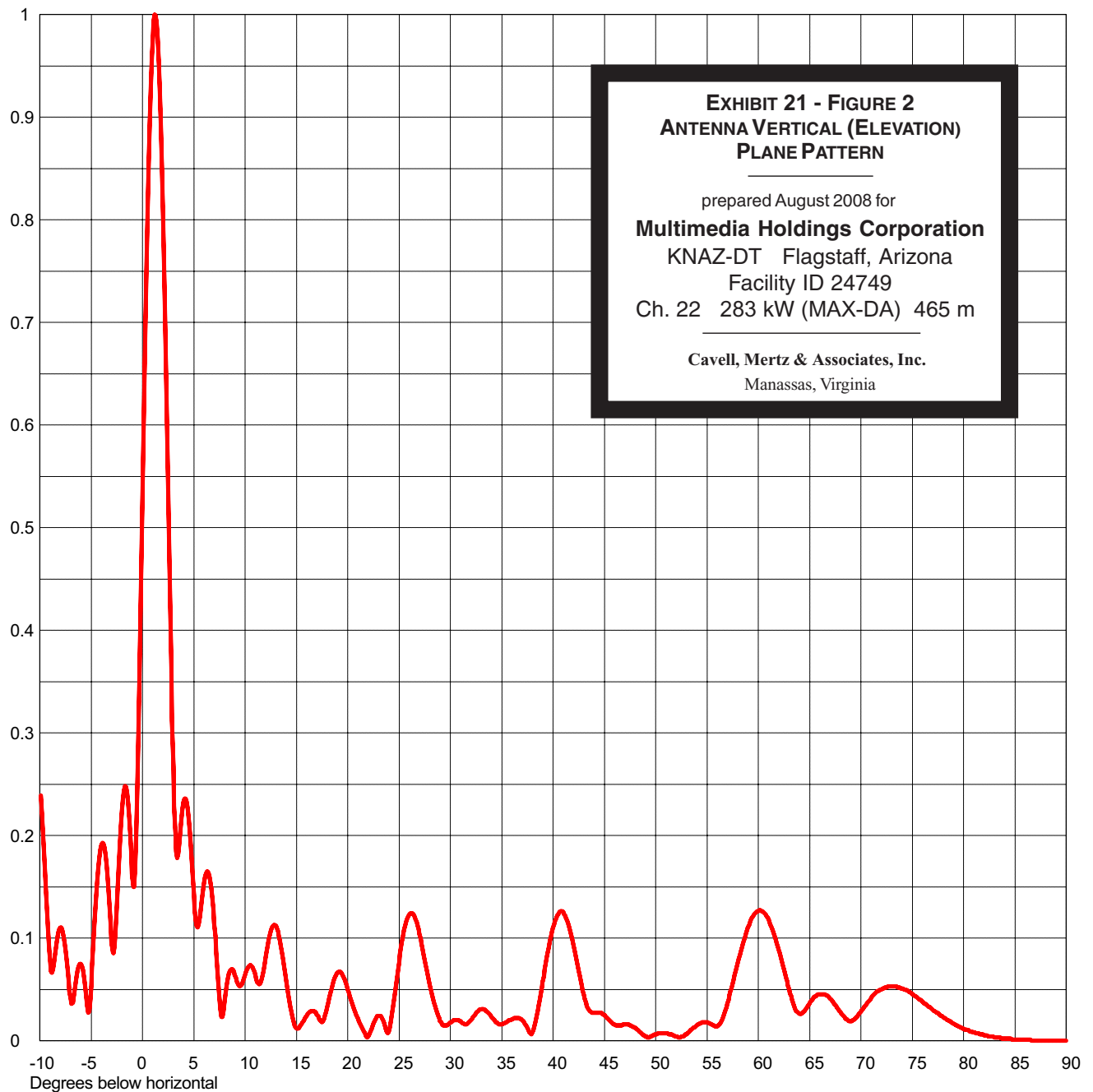


EXHIBIT 21 - FIGURE 2
ANTENNA VERTICAL (ELEVATION)
PLANE PATTERN

prepared August 2008 for
Multimedia Holdings Corporation
KNAZ-DT Flagstaff, Arizona
Facility ID 24749
Ch. 22 283 kW (MAX-DA) 465 m

Cavell, Mertz & Associates, Inc.
Manassas, Virginia

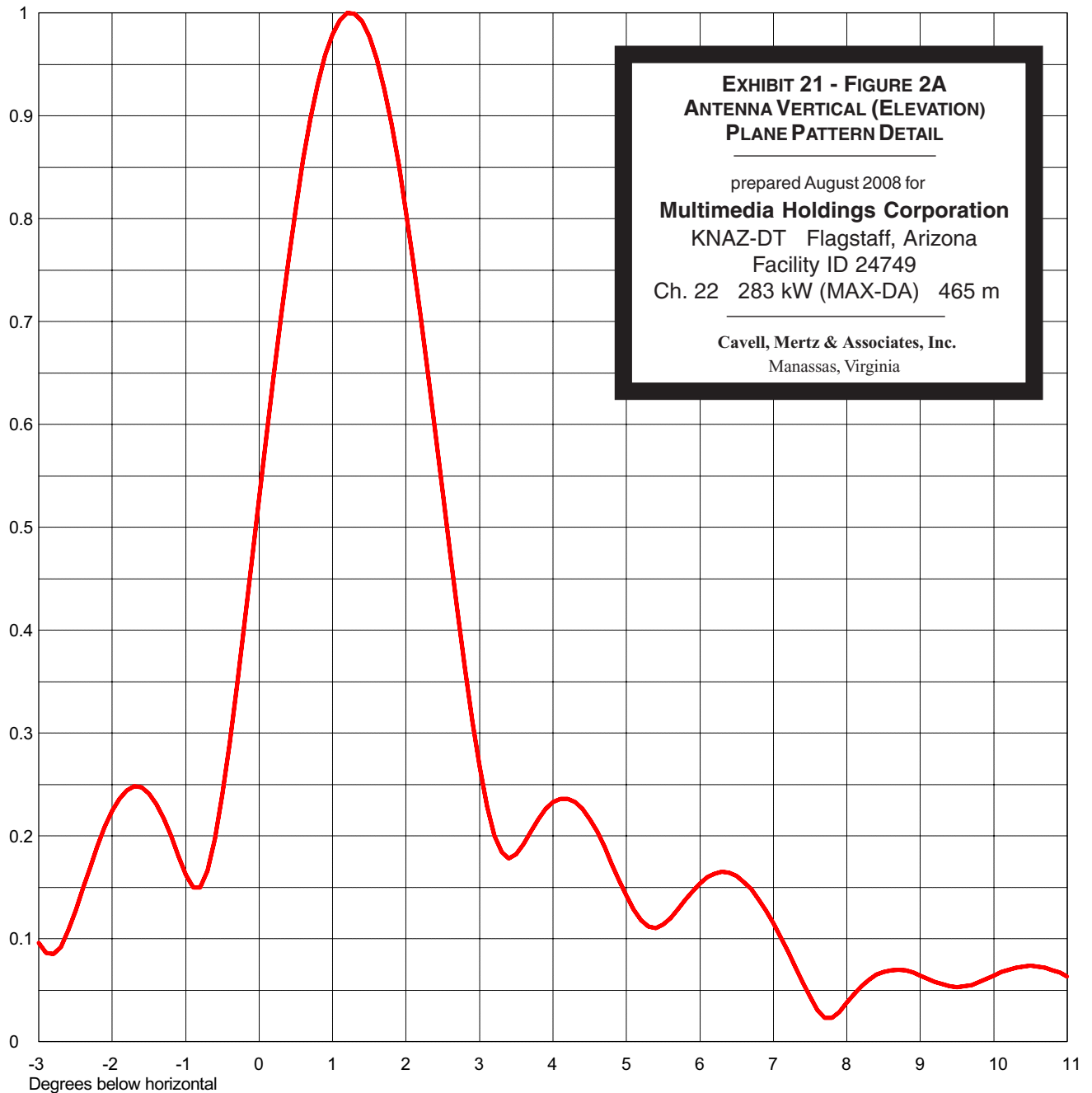
Remarks:



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Calculated / Measured	Calculated	Drawing #	24B240125



Remarks:

Population (2000 Census) within Contours:
KNAZ-TV 288,123
KNAZ-DT Licensed 267,340

KNAZ-TV Licensed Facility
Ch. 2 100 kW 488 m
47 dBu F(50,50) Grade B Contour

KNAZ-DT Licensed
Ch. 22 283 kW (MAX-DA) 465 m
41 dBu F(50,90) Service Contour

Flagstaff

Flagstaff

Tuba City

Coconino

Navajo

Winslow

Sedona

Chino Valley

Cottonwood

Prescott Valley

Yavapai
Prescott

Camp Verde

Payson

Wickenburg

Gila

Sun City West

Sun City

Glendale

Maricopa

Fountain Hills

EXHIBIT 21 - FIGURE 3 COVERAGE CONTOUR COMPARISON

prepared August 2008 for
Multimedia Holdings Corporation
KNAZ-DT Flagstaff, Arizona
Facility ID 24749
Ch. 22 283 kW (MAX-DA) 465 m

Cavell, Mertz & Associates, Inc.
Manassas, Virginia

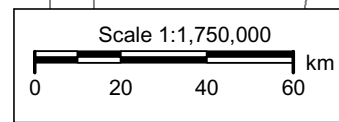
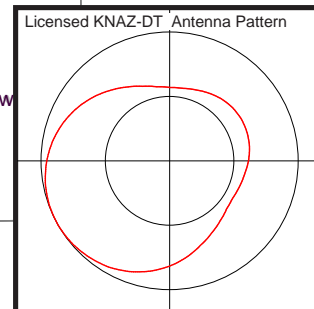


EXHIBIT 21 - FIGURE 4 PROPOSED COVERAGE CONTOURS

prepared August 2008 for
Multimedia Holdings Corporation
 KNAZ-DT Flagstaff, Arizona
 Facility ID 24749
 Ch. 22 283 kW (MAX-DA) 465 m

Cavell, Mertz & Associates, Inc.
 Manassas, Virginia

Tuba City

Proposed KNAZ-DT
 STA Service Contours
 41 dBu F(50,90)
 48 dBu F(50,90)

Coconino

0° T

45° T

Navajo

315° T

Flagstaff

90° T

Winslow

270° T

Sedona

Chino Valley

Cottonwood

Prescott Valley

Yavapai

Prescott

Camp Verde

135° T

Payson

Show Low

225° T

180° T

Wickenburg

Gila

Proposed Coverage within 41 dBu contour:
 Area (sq km) 27,599
 Population (2000 Census) 267,340

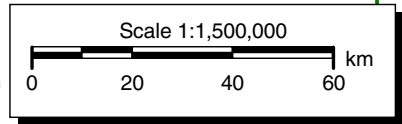


Exhibit 21 - Table I
INTERFERENCE STUDY RESULTS
 prepared for
Multimedia Holdings Corporation
 KNAZ-TV Flagstaff, AZ
 Facility Id: 24749
 Ch. 22 283 kW (MAX-DA) 465 m

<u>Channel</u>	<u>Affected Station</u>	<u>City, State</u>	<u>File Number</u>	<u>7th R&O Table Baseline (2000 Census)</u>	<u>Calculated Baseline (2000 Census)</u>	<u>Interference Population without Proposal (2000 Census)</u>	<u>Interference Population with Proposal (2000 Census)</u>	<u>New Interference</u>	
								<u>Population</u>	<u>Percentage</u>
22	KVYE(TV)	El Centro, CA	BPCDT-19991029ACL	325,000			---	No Interference	---
22	KVYE(TV)	El Centro, CA	Reference	325,000			---	No Interference	---
22	KVMY(TV)	Las Vegas, NV	BMPCDT-20060630AAJ	1,351,000			---	No Interference	---
22	KVMY(TV)	Las Vegas, NV	Reference	1,351,000			---	No Interference	---