

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	WT Docket 02-55
	)	
Consolidating the 800 and 900 MHz Industrial/Land Transportation and Business Pool Channels	)	
	)	
Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems	)	ET Docket No. 00-258
	)	
Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum at 2 GHz for use by the Mobile Satellite Service	)	ET Docket No. 95-18
	)	

**COMMENTS OF TERRESTAR NETWORKS INC.**

TerreStar Networks Inc. (“TerreStar”) hereby comments on the Further Notice of Proposed Rulemaking (“FNPRM”) in the above-captioned proceeding.<sup>1</sup>

**I. INTRODUCTION AND SUMMARY**

The FNPRM is part of an item released last month that also included a Memorandum Opinion and Order (“MO&O”). In the MO&O, in response to a Joint Petition filed by Sprint Nextel Corporation (“Sprint”), the Association for Maximum Service Television, Inc., the National Association of Broadcasters, and the Society of

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<sup>1</sup> FCC 08-73 (March 5, 2008).

Broadcast Engineers (collectively, the “Joint Parties”), the Commission extended through March 5, 2009, the deadline by which Sprint is required to complete relocation of broadcast auxiliary service (“BAS”) stations from the 2 GHz band.<sup>2</sup> A portion of this BAS band will be used by 2 GHz mobile satellite service (“MSS”) licensees.

In the FNPRM, the Commission sought comment on how, in light of the extension of the Sprint deadline, it could best balance the needs of 2 GHz MSS licensees to introduce their service and the requirements of BAS licensees to operate free of harmful interference. The Commission proposed to eliminate, effective January 1, 2009, the rule requiring that 2 GHz MSS systems not begin operating until BAS relocation has been completed in the top 30 markets and fixed BAS links have been relocated in all markets (the “Top 30/Fixed Links Rule”).<sup>3</sup> The Commission also sought comment on how to mitigate interference in non-relocated markets between 2 GHz MSS licensees and BAS incumbents.<sup>4</sup>

TerreStar strongly supports elimination of the Top 30/Fixed Links Rule as of January 1, 2009. This change will enable 2 GHz MSS licensees to provide nationwide service in a timely fashion. As demonstrated in the studies TerreStar has filed in this proceeding, moreover, elimination of the rule presents no BAS interference issues because it is technically feasible for 2 GHz MSS systems and BAS stations to share spectrum. To optimize the sharing environment, the parties should be required to

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<sup>2</sup> The Joint Parties had sought a twenty nine month extension, through February 7, 2010.

<sup>3</sup> FNPRM, ¶ 2.

<sup>4</sup> FNPRM, ¶ 2.

coordinate in good faith concerning the implementation of mitigation techniques. Further, to provide appropriate incentives for BAS relocation, the status of 2 GHz MSS operations should be changed to co-primary in non-relocated markets in which BAS relocation has not been completed by the relocation deadline (as extended) of March 5, 2009.

**II. THE COMMISSION SHOULD ELIMINATE THE TOP 30/FIXED LINKS RULE.**

**A. Eliminating the Rule Will Serve the Public Interest.**

In the FNPRM, the Commission tentatively concluded that, effective January 1, 2009, the Top 30/Fixed Links Rule should be eliminated.<sup>5</sup> In connection with this tentative conclusion, the Commission sought comment on the potential for interference to occur if 2 GHz MSS systems begin operating before BAS stations have been relocated.<sup>6</sup>

TerreStar strongly supports the Commission's tentative conclusion. As the Commission has recognized, retaining the Top 30/Fixed Links Rule would prevent 2 GHz MSS operators from offering nationwide service.<sup>7</sup> The ability to provide ubiquitous service nationwide is an important factor that distinguishes MSS from terrestrial competitors and is a central feature of TerreStar's business plan. Many potential customers, including public safety first responders, will be drawn to

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<sup>5</sup> FNPRM, ¶ 49.

<sup>6</sup> FNPRM, ¶ 49.

<sup>7</sup> FNPRM, ¶ 52. The Commission found that under the Consensus Plan approximately half of the top 30 BAS markets will not be relocated until after January 2009 and some will not be relocated until September 2009. *Id.*

TerreStar's services precisely because of their ubiquitous nationwide coverage capabilities. Eliminating the Top 30/Fixed Links Rule as of January 1, 2009, will serve the public interest by ensuring that this critical consumer demand can be satisfied.

**B. MSS/BSS Sharing is Technically Feasible.**

The Top 30/Fixed Links Rule is not needed to protect BAS operations because TerreStar can operate its 2 GHz MSS system without causing interference to BAS stations. There are three elements to the interference analysis supporting this conclusion.

First, TerreStar has filed a technical study in this proceeding addressing the potential for MSS mobile earth terminals ("METs"), which transmit on BAS frequencies, to cause interference to BAS stations.<sup>8</sup> The study is based on field tests and bench tests conducted by TerreStar's independent technical consultant. The study demonstrates that sharing between MSS systems and BAS stations is technically feasible because MET-to-satellite transmissions have little impact on BAS operations.<sup>9</sup>

In conjunction with the technical study, TerreStar provided the results of a simulation predicting that there would at most be an MSS/BSS interference event every

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<sup>8</sup> See du Treil, Lundin & Rackley, "Predicted Impact To 2 GHz Broadcast Auxiliary Operations From Proposed Handset To Satellite Emissions, TerreStar Networks" (Jan. 30, 2008) ("dLR Study"), attached to a letter from Joseph A. Godles, counsel to TerreStar, to Marlene H. Dortch, FCC (Jan. 30, 2008) ("dLR Study Cover Letter").

<sup>9</sup> The study does not address the potential impact of transmissions with ancillary terrestrial component ("ATC") base stations. TerreStar has represented, however, that absent coordination it will not conduct ATC operations in non-relocated markets. See Section II.B, *infra*.

2.29 years for MSS Band A and every 1.06 years for MSS Band B.<sup>10</sup> TerreStar noted that this probability could be reduced even further by coordination, including frequency planning, during the period of shared operations, and TerreStar committed to engaging in such coordination both prior to deployment and on an ongoing 24/7 basis.<sup>11</sup>

Second, although TerreStar's previously-filed report focused on mobile and portable BAS links, TerreStar's independent technical consultant has prepared an additional study, a copy of which is attached to these comments, addressing the potential impact of 2 GHz MSS operations on fixed BAS links.<sup>12</sup> This study shows that sharing between 2 GHz systems and fixed BAS links also is technically feasible.<sup>13</sup> In fact, the study shows that because of the characteristics of fixed BAS links, the potential for interference from METs to those links is even less than the already-minimal potential for interference from METs to mobile and portable BAS links.<sup>14</sup>

Finally, TerreStar's plans for operating ancillary terrestrial component ("ATC") facilities present no BAS interference issues. TerreStar has already indicated that it will not initiate ATC operations in any market unless BAS relocation in the market has been completed or TerreStar's ATC operations have been coordinated with the market's BAS licensees.<sup>15</sup> TerreStar hereby reaffirms this commitment.

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<sup>10</sup> dLR Study Cover Letter at 2.

<sup>11</sup> *Id.*

<sup>12</sup> du Treil, Lundin & Rackley, "Case Study, Predicted Impact To 2 GHz Fixed-Link System Broadcast Auxiliary Operation From Proposed Handset To Satellite Emissions, Terrestar Networks" (Apr. 30, 2008).

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 4.

<sup>15</sup> See Comments of TerreStar Networks Inc. in this proceeding, filed on December 18, 2007, at n. 12.

**C. A Market-by-Market Approach is Unnecessary for Non-ATC MSS Operations.**

In the FNPRM, the Commission also sought comment on whether it should adopt a market-by-market approach to 2 GHz MSS entry that relies on spot beam technology to preclude MET-to-satellite transmissions in non-relocated BAS markets.<sup>16</sup> TerreStar opposes a market-by-market standard for MSS entry, because the “flash cut” approach outlined above better serves the Commission’s objectives.

Under a flash cut approach, 2 GHz MSS operators would have access to all markets as of January 1, 2009, enabling them to provide service nationwide in a manner that is technically compatible with BAS operations. Under a market-by-market approach, on the other hand, 2 GHz MSS operators would be denied access to BAS markets that have not been relocated even though they are capable of operating in those markets without causing harmful interference. Denying access to these markets would prevent the 2 GHz MSS operators from offering the ubiquitous nationwide service that, as discussed above, is critical to MSS customers and is a key element of the operators’ business plans.

A market-by-market approach is warranted, however, in the case of ATC operations. In light of possible BAS interference issues implicated by transmissions with ATC base stations, TerreStar will limit its ATC operations to BAS markets that either have been relocated or have been coordinated for ATC with all non-relocated BAS licensees in the market. Although TerreStar would prefer to have the flexibility to

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<sup>16</sup> FNPRM, ¶ 56.

introduce ATC services wherever market conditions dictate, TerreStar is willing to limit ATC operations during the BAS transition period in an effort to simplify and accelerate the relocation process.

In sum, the Commission should eliminate the Top 30/Fixed Links Rule as of January 1, 2009, because: (1) eliminating the rule would serve the public interest by enabling ubiquitous, nationwide 2 GHz MSS service that consumers want and need; (2) coexistence between 2 GHz MSS systems and BAS stations is technically feasible during the period prior to the completion of BAS relocation; and (3) ATC operations can be initiated on a market-by-market basis..

### **III. THE COMMISSION SHOULD REQUIRE THE PARTIES TO COORDINATE IN GOOD FAITH.**

Although TerreStar's technical studies demonstrate that sharing between MSS and BAS is technically feasible, TerreStar has studied the role that coordination could play in non-relocated markets. Based on this work, TerreStar is convinced that mitigation techniques in some cases could improve the already robust sharing environment.<sup>17</sup> These techniques cannot be implemented effectively, however, unless the parties work cooperatively. To facilitate coordination, TerreStar urges the Commission to require that MSS and BSS licensees negotiate in good faith concerning appropriate mitigation techniques to be used in non-relocated markets.

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<sup>17</sup> TerreStar has retained Broadcast Technology Consultants, Inc., experts in BAS operations, to advise it on coordination and mitigation techniques.

**IV. THE STATUS OF MSS OPERATIONS SHOULD BE CHANGED TO CO-PRIMARY AS OF MARCH 5, 2009.**

Under current rules, 2 GHz MSS stations are secondary vis-à-vis BAS stations that have yet to be relocated. 2 GHz MSS stations must not cause interference to such BAS stations and must accept interference from such BAS stations.<sup>18</sup> In the FNPRM, the Commission sought comment as to whether these requirements should be altered.<sup>19</sup>

TerreStar urges the Commission to change the status of 2 GHz MSS stations to co-primary as of the deadline for BAS relocation. Absent this change, TerreStar fears there will be inadequate incentives for relocating BAS channels in a timely manner. Indeed, without a change to co-primary it is unclear whether there are *any* consequences for BAS licensees that do not complete relocation by the date the Commission has specified.

If MSS operations are given co-primary status as of the relocation deadline, BAS licensees will be encouraged to comply with the Commission's relocation timetable. Giving MSS operations co-primary status will have no practical impact on the potential for interference to BAS operations, because it has been shown that the risk of interference from METs is minimal and TerreStar has committed to refraining from ATC operations in non-relocated markets. If MSS licensees have co-primary status as of the relocation deadline, however, then they will be in a position to object to harmful interference from BAS stations that have failed to relocate on time. BAS licensees then

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<sup>18</sup> See FNPRM, ¶ 53.

<sup>19</sup> See FNPRM, ¶ 53.

will know that they can avoid these objections by completing relocation on schedule. Accordingly, as of the BAS relocation deadline of March 5, 2009, the status of 2 GHz MSS stations should be changed to co-primary in non-relocated markets.<sup>20</sup>

## CONCLUSION

For the reasons stated herein, the Commission should:

- eliminate the Top 30/Fixed Links Rule as of January 1, 2009;
- require 2 GHz MSS and BAS licensees to coordinate in good faith with respect to MSS/BAS sharing in non-relocated markets; and
- change the status of 2 GHz MSS operations to co-primary in non-relocated markets as of March 6, 2009.

Respectfully submitted,

TERRESTAR NETWORKS INC.

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*Counsel for TerreStar Networks Inc.*

April 30, 2008

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<sup>20</sup> TerreStar is committed to coordinating in good faith with BAS licensees in markets in which 2 GHz MSS operations become co-primary.

CASE STUDY  
PREDICTED IMPACT TO 2 GHZ FIXED-LINK SYSTEM  
BROADCAST AUXILIARY OPERATION  
FROM PROPOSED HANDSET TO SATELLITE EMISSIONS  
TERRESTAR NETWORKS

APRIL 30, 2008

Summary

A 2 GHz Studio-to-Transmitter (STL) fixed microwave path licensed by KTVT(TV) at Fort Worth, Texas, was theoretically analyzed for any interference impact from a Terrestrial Network device operating in satellite mode. As discussed below, even if a Terrestrial Network device were to operate in a worst-case (to STL) ground level position relative to the KTVT(TV) STL receive site location, no interference to the KTVT(TV) STL receiver is predicted.

Background

This Case Study reviews a licensed 2 GHz fixed-link Broadcast Auxiliary (BAS) analog operation and determines the predicted interference impact from a Terrestrial Network (TSN) satellite component handset operation.<sup>1</sup> Within the 2 GHz Broadcast Auxiliary frequency band, broadcasters may utilize fixed link analog microwave paths for Intercity Relays (ICR's) and/or Studio-to-Transmitter Links (STL) applications.

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<sup>1</sup> For a more detailed discussion of the TSN impact to Broadcast Auxiliary Operations, see the report completed by the undersigned's office, Predicted Impact To 2 GHz Broadcast Auxiliary Operations From Proposed Handset To Satellite Emissions Terrestrial Networks, January 30, 2008.

The satellite component of TSN's network will make use of a number of narrowband signals, in a fashion similar to the GSM cellular system, using Time Division Multiple Access (TDMA) digital modulation. Handset power will be 1 watt peak, 0.25 watt average. The handset antenna will be enclosed within the handset, and its radiation pattern is characterized as omni-directional. For additional discussion of the TSN impact to Broadcast Auxiliary Operations, see the report completed by the undersigned's office, entitled Predicted Impact To 2 GHz Broadcast Auxiliary Operations From Proposed Handset To Satellite Emissions, January 30, 2008 (herein "TSN Report").

For this case study, it is assumed the TSN emission will be operating within BAS Channel 1, at a center frequency of 2007.0313 MHz, which was one of the TSN frequencies tested for BAS operation impact within the TSN Report.

#### Subject 2 GHz Analog Fixed Link

Television station KTVT(TV) at Fort Worth, Texas has a licensed 2 GHz fixed analog mode microwave link, callsign KNZ72, operating from its studio site located at Bridge Street in Fort Worth, Texas to a receiver located at the KTVT(TV) main transmitter site. The KNZ72 license and application, obtained from the Commission's Universal Licensing System (ULS) is contained within the Appendix. The KNZ72 case was selected as it likely considered a "representative" type of STL link with a moderate link path distance of 21 miles, a line-of-sight propagation path and has its STL receiving antenna mounted relatively high above ground level on the television station's main transmitting tower.



Predicted BAS Interference Calculations

The predicted interference impact to the KNZ72 microwave receiver located at the main KTVT(TV) transmitter site from a TSN device was calculated based upon a TSN device operating in satellite mode. From the TSN Report, the desired-to-undesired ratio for this scenario is +8.5 dB. Therefore, with a calculated received BAS (desired) signal strength of -28 dBm, the associated TSN signal strength would have to be -36.5 dBm or stronger for interference to occur to the BAS system.

Due to the above ground level height of the KNZ72 receiving antenna and also its vertical plane radiation characteristics of the antenna, no interference from a single TSN device into the KNZ72 receiver operating with the 15 MHz Receiver I.F. setting and two aural subcarriers is predicted. According to the KNZ72 FCC application, its receiving antenna is located 144.8 meters (475 feet) above ground level and employs a 12 foot diameter parabolic antenna. Even if a TSN device is operating at ground level in the immediate vicinity of the KTVT(TV) transmitter site, no interference is predicted as demonstrated by the below table.

Parameter	Value
TSN Device EIRP:	+30 dBm
Propagation Loss (Free-Space, 144.8 meters)	81.6 dB
KNZ72 Receive antenna peak gain	35.4 dBi
KNZ72 Receive antenna discrimination (vertical-angle only)	30.0 dB
Received TSN interference power	-46.2 dBm
Analysis Result	No Interference

Table 1. KNZ72 Interference Analysis Assuming TSN device Operating at Ground Level at or near the KNZ72 receiver location.

In general, fixed microwave links, such as the subject KNZ72 STL system, should have greater interference immunity from TSN devices, then compared electronic news gathering (ENG) operations operating in the same frequency band. This is because fixed microwave paths are typically designed for long-term reliability by incorporating substantial signal fade margins and receive antennas mounted at high elevations. Both of these path attributes will increase the interference immunity from a TSN device.

## APPENDIX

KNZ72 LICENSE AND APPLICATION  
OBTAINED FROM THE FCC UNIVERSAL  
LICENSING SYSTEM

**Federal Communications Commission  
Wireless Telecommunications Bureau**

**Radio Station Authorization (Reference Copy)**

**This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.**

**Licensee:** CBS STATIONS GROUP OF TEXAS L.P.

CBS STATIONS GROUP OF TEXAS L.P.  
SUITE 350 2175 K STREET N.W.  
WASHINGTON, DC 20037

<b>FCC Registration Number (FRN):</b> 0001767078	
<b>Call Sign:</b> KNZ72	
<b>File Number:</b>	
<b>Radio Service:</b> TS - TV Studio Transmitter Link	
<b>SMSA</b>	<b>Station Class</b> FXO

<b>Grant Date</b> 12/06/1985	<b>Effective Date</b> 01/18/2005	<b>Expiration Date</b> 08/01/2006	<b>Print Date</b> 04/28/2008
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**LOCATION**

**Fixed Location Address or Area of Operation**

5233 BRIDGE STREET

<b>City</b> FORT WORTH	<b>County</b> TARRANT	<b>State</b> TX
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Loc. No.	Location Name	Latitude	Longitude	Elevation	Antenna Structure Registration No.
1	KTVT Studio	32-45-38.4 N	097-14-39.0 W	179.8m	
2	KTVT Transmitter	32-34-43.5 N	096-57-13.0 W	243.5m	

**FREQUENCY PATHS**

Frequency (MHz)	Tol (%)	Emission Desig	EIRP (dBm)	Constr Date	Path No.	Seg	Emit Loc No.	Ant Hgt (m)	Gain (dBi)	Beam (deg)	POL	AZIM (deg)	Rec Loc No.	Rec Call Sign
001990.00000000-002008.00000000	0.00500	18M0F9W	70.5		1	1	1	47.9	33.8	4.0	H	126.4	2	

**Waivers/Conditions:**

The Facility ID of the Associated Broadcast Parent Station for this license is 23422.

<p><b>Conditions</b> Pursuant to Section 309(h) of the Communications Act of 1934, as amended, 47 U.S.C. Section 309(h), this license is</p>
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# Reference Copy Only. Do Not Mail to the FCC as an Application.

Submitted: 09/09/2004 at 10:33:27  
File Number: 0001865515

This Reference Copy is being display on the July 2005 version of FCC Form 601. This version of the form may be different than the version in effect when the form was submitted to the FCC. To obtain a prior version of this form visit <http://wireless.fcc.gov/feesforms/obsoleteforms/index.html>

**FCC 601**  
**Main Form**

## FCC Application for Wireless Telecommunications Bureau Radio Service Authorization

Approved by OMB  
3060 - 0798  
See instructions for  
public burden estimate

1) Radio Service Code: <b>TS</b>	1a) Existing Radio Service Code:
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### General Information

2) (Select only one) <b>(MD)</b> <b>NE</b> - New <b>RO</b> - Renewal Only <b>AU</b> - Administrative Update <b>NT</b> - Required Notifications <b>MD</b> - Modification <b>RM</b> - Renewal/Modification <b>WD</b> - Withdrawal of Application <b>EX</b> - Requests for Extension of Time <b>AM</b> - Amendment <b>CA</b> - Cancellation of License <b>DU</b> - Duplicate License <b>RL</b> - Registered Location/Link	
3a) If this application is for a <u>D</u> evelopmental License, <u>D</u> emonstration License, or a <u>S</u> pecial Temporary Authorization (STA), enter the code and attach the required exhibit as described in the instructions. Otherwise enter ' <u>N</u> ' (Not Applicable).	( <b>N</b> ) <u><b>D</b></u> <u><b>M</b></u> <u><b>S</b></u> <u><b>N/A</b></u>
3b) If this application is for Special Temporary Authority due to an emergency situation, enter 'Y'; otherwise enter 'N'. Refer to Rule 1.915 for an explanation of situations considered to be an emergency.	(   ) <u><b>Y</b></u> es <u><b>N</b></u> o
4) If this application is for an Amendment or Withdrawal, enter the file number of the pending application currently on file with the FCC.	File Number
5) If this application is for a Modification, Renewal Only, Renewal/Modification, Cancellation of License, Duplicate License, or Administrative Update, enter the call sign of the existing FCC license. If this is a request for Registered Location/Link, enter the FCC call sign assigned to the geographic license.	Call Sign <b>KNZ72</b>
6) If this application is for a New, Amendment, Renewal Only, or Renewal/Modification, enter the requested authorization expiration date (this item is optional).	MM      DD ____ / ____
7) Is this application "major" as defined in §1.929 of the Commission's rules when read in conjunction with the applicable radio service rules found in Parts 22 and 90 of the Commission's rules? (NOTE: This question only applies to certain site-specific applications. See the instructions for applicability and full text of §1.929).	(   ) <u><b>Y</b></u> es <u><b>N</b></u> o
8) Are attachments being filed with this application?	( <b>N</b> ) <u><b>Y</b></u> es <u><b>N</b></u> o

### Fees, Waivers, and Exemptions

9) Is the applicant exempt from FCC application fees?	( <b>N</b> ) <u><b>Y</b></u> es <u><b>N</b></u> o
10) Is the applicant exempt from FCC regulatory fees?	( <b>N</b> ) <u><b>Y</b></u> es <u><b>N</b></u> o
11a) Does this application include a request for a Waiver of the Commission's rule(s)? If 'Yes', attach an exhibit providing rule number(s) and explaining circumstances.	( <b>N</b> ) <u><b>Y</b></u> es <u><b>N</b></u> o
11b) If 11a is 'Y', enter the number of rule section(s) being waived.	Number of Rule Section(s): _____
12) Are the frequencies or parameters requested in this filing covered by grandfathered privileges, previously approved by waiver, or functionally integrated with an existing station?	( <b>N</b> ) <u><b>Y</b></u> es <u><b>N</b></u> o

**Applicant Information**

13) FCC Registration Number (FRN): <b>0001767078</b>			
14) Applicant/Licensee legal entity type: (Select One) <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Unincorporated Association <input type="checkbox"/> Trust <input type="checkbox"/> Government Entity <input type="checkbox"/> Consortium <input type="checkbox"/> General Partnership <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Limited Liability Partnership <input type="checkbox"/> Limited Partnership <input type="checkbox"/> Other (Description of Legal Entity) _____			
15) If the licensee name is being updated, is the update a result from the sale (or transfer of control) of the license(s) to another party and for which proper Commission approval has not been received or proper notification not provided?			( ) <u>Yes</u> <b>No</b>
16) First Name (if individual):	MI:	Last Name:	Suffix:
17) Legal Entity Name (if other than individual): <b>CBS STATIONS GROUP OF TEXAS L.P.</b>			
18) Attention To:			
19) P.O. Box:	<b>And/Or</b>	20) Street Address: <b>2000 K STREET, N.W. SUITE 725</b>	
21) City: <b>WASHINGTON</b>	22) State: <b>DC</b>	23) Zip Code: <b>20006</b>	
24) Telephone Number: <b>(202)457-4505</b>		25) FAX:	
26) E-Mail Address: <b>elnass@cbs.com</b>			

**27) Demographics (Optional):**

<b>Race:</b> <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African-American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> White	<b>Ethnicity:</b> <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Not Hispanic or Latino	<b>Gender:</b> <input type="checkbox"/> Male <input type="checkbox"/> Female
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**Real Party in Interest**

28) Name of Real Party in Interest of Applicant (If different from applicant):	29) FCC Registration Number (FRN) of Real Party in Interest:
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**Contact Information (If different from the applicant)**

30) First Name:	MI:	Last Name:	Suffix:
31) Company Name:			
32) Attention To:			
33) P.O. Box:	<b>And /Or</b>	34) Street Address:	
35) City:	36) State:	37) Zip Code:	
38) Telephone Number:		39) FAX:	
40) E-Mail Address:			

**Regulatory Status**

41) This filing is for authorization to provide or use the following type(s) of radio service offering (enter all that apply):

(  ) **C**ommon Carrier (  ) **N**on-Common Carrier (  ) **P**rivate, internal communications (  ) **B**roadcast Services (  ) **B**and **M**anager

**Type of Radio Service**

42) This filing is for authorization to provide the following type(s) of radio service (enter all that apply):

(  ) **F**ixed (  ) **M**obile (  ) **R**adiolocation (  ) **S**atellite (sound) (  ) **B**roadcast Services

43) Interconnected Service? (  ) **N**  **Y**es  **N**o

**Alien Ownership Questions**

44) Is the applicant a foreign government or the representative of any foreign government? (  ) **N**  **Y**es  **N**o

45) Is the applicant an alien or the representative of an alien? (  ) **N**  **Y**es  **N**o

46) Is the applicant a corporation organized under the laws of any foreign government? (  ) **N**  **Y**es  **N**o

47) Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? (  ) **N**  **Y**es  **N**o

48a) Is the applicant directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof, or by any corporation organized under the laws of a foreign country? (  ) **N**  **Y**es  **N**o

48b) If the answer to the above question is 'Y', has the applicant received a ruling(s) under Section 310(b)(4) of the Communications Act with respect to the same radio service involved in this application? (  ) **Y**es  **N**o

If the answer to 48b is 'N', attach to this application a date-stamped copy of a request for a foreign ownership ruling pursuant to Section 310(b)(4) of the Communications Act.

**Basic Qualification Questions**

49) Has the applicant or any party to this application had any FCC station authorization, license or construction permit revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? (  ) **N**  **Y**es  **N**o

50) 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? (  ) **N**  **Y**es  **N**o

51) Has any court finally adjudged the applicant or any party directly or indirectly controlling the applicant guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or any other means or unfair methods of competition? (  ) **N**  **Y**es  **N**o

**Aeronautical Advisory Station (Unicom) Certification**

52) (  ) I certify that the station will be located on property of the airport to be served, and, in cases where the airport does not have a control tower, RCO, or FAA flight service station, that I have notified the owner of the airport and all aviation service organizations located at the airport within ten days prior to application.

**Broadband Radio Service and Educational Broadband Service Cable Cross-Ownership**

53a) Will the requested facilities be used to provide multichannel video programming service? (  ) **Y**es  **N**o

53b) If the answer to question 53a is yes, does applicant operate, control or have an attributable interest (as defined in Section 27.1202 of the Commission's Rules) in a cable television system whose franchise area is located within the geographic service area of the requested facilities? (  ) **Y**es  **N**o

**Note: If the answer to question 53b is 'Y', attach an exhibit explaining how the applicant complies with Section 27.1202 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.**

**Broadband Radio Service and Educational Broadband Service (Part 27)**

54) (For EBS only) Does the applicant comply with the programming requirements contained in Section 27.1203 of the Commission's Rules? (  ) **Y**es  **N**o

**Note: If the answer to item 54 is 'N', attach an exhibit explaining how the applicant complies with Section 27.1203 of the Commission's Rules or justifying a waiver of that rule. If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.**

55) (For BRS and EBS) Does the applicant comply with Sections 27.50, 27.55, and 27.1221 of the Commission's Rules? (  ) **Y**es  **N**o

**Note: If the answer to item 55 is 'N', attach an exhibit justifying a waiver of that rule(s). If a waiver of the Commission Rule(s) is being requested, Item 11a must be answered 'Y'.**

**General Certification Statements**

1)	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 license or otherwise, and requests an authorization in accordance with this application.
2)	The applicant certifies that grant of this application would not cause the applicant to be in violation of any pertinent cross-ownership or attribution rules.* *If the applicant has sought a waiver of any such rule in connection with this application, it may make this certification subject to the outcome of the waiver request.
3)	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.
4)	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 § 1.2002(c). 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.
5)	The applicant certifies that it either (1) has current required ownership data on file with the Commission, (2) is filing updated ownership data simultaneously with this application, or (3) is not required to file ownership data under the Commission's rules.
6)	The applicant certifies that the facilities, operations, and transmitters for which this authorization is hereby requested are either: (1) categorically excluded from routine environmental evaluation for RF exposure as set forth in 47 C.F.R. 1.1307(b); or, (2) have been found not to cause human exposure to levels of radiofrequency radiation in excess of the limits specified in 47 C.F.R. 1.1310 and 2.1093; or, (3) are the subject of one or more Environmental Assessments filed with the Commission.
7)	The applicant certifies that it has reviewed the appropriate Commission rules defining eligibility to hold the requested license(s), and is eligible to hold the requested license(s).
8)	The applicant certifies that it is not in default on any payment for Commission licenses and that it is not delinquent on any non-tax debt owed to any federal agency.

**Signature**

56) Typed or Printed Name of Party Authorized to Sign

First Name: <b>Ray</b>	MI:	Last Name: <b>White</b>	Suffix:
57) Title: <b>Assistant Secretary</b>			
Signature: <b>Ray White</b>			58) Date: <b>09/09/2004</b>
<b>FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.</b>			
Upon grant of this license application, the licensee may be subject to certain construction or coverage requirements. Failure to meet the construction or coverage requirements will result in termination of the license. Consult appropriate FCC regulations to determine the construction or coverage requirements that apply to the type of license 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 LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, §312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, §503).			

**Technical Data Schedule for the  
Fixed Microwave and Microwave Broadcast Auxiliary Services  
(Parts 101 and 74)**

**Administrative Information**

1) Is this application being filed as part of a pack? <span style="float:right">( <input type="radio"/> )Yes/<input checked="" type="radio"/>No</span>		
2a) If the answer to Item 1 is 'Yes', enter the pack identification number (required if the pack identification number has already been assigned by the FCC):		
2b) Pack Name:		
3) Type of Operation (refer to instructions) Check One Only: <input checked="" type="checkbox"/> Permanent Fixed Point to Point <input type="checkbox"/> Multiple Address System (MAS) <input type="checkbox"/> Temporary Fixed/Mobile <input type="checkbox"/> Digital Electronic Message Service (DEMS)	4) Station Class:  <b>FXO</b>	5) DEMS only: SMSA:
6) If this request is for a Modification, Renewal/Modification, or Amendment of a currently pending application, does it, along with all minor Modification or Amendment requests filed since you applied for a new authorization or since the last major action was granted by the Commission, produce a cumulative effect that would equal or exceed the criteria for a major filing? <span style="float:right">( <input type="radio"/> )Yes/<input checked="" type="radio"/>No</span>		
7) Has frequency coordination been completed for this application? <span style="float:right">( <input type="radio"/> )Yes/<input checked="" type="radio"/>No</span>		

**Frequency Coordinator Information**

Complete Items 8 through 11 if not self-coordinated			
8) Frequency Coordination Number	9) Name of Frequency Coordinator	10) Telephone Number	11) Coordination Date

**Broadcast Auxiliary Only**

If there is an associated Parent Station, provide:	12a) Facility Id of Parent Station:  <b>23422</b>	12b) Radio Service of Parent Station:  <b>TV</b>	12c) City and State of Parent Station Principal Community:  <b>FORT WORTH TX</b>
If there is no associated parent station, applicant certifies that it is a Broadcast Network Entity and completes Item 13.			13) State of Primary Operation:  <b>TX</b>

**Control Point (Technical Point of Contact)**

14) Action <b>A/M</b>	15) Location Street Address, City or Town, County/Borough/Parish, State	16) Telephone Number
<b>A</b>	<b>Suite 725, 2000 K Street NW Washington, DC</b>	<b>(202)457-4505</b>

Location Data

1) Action Requested: ( <input checked="" type="checkbox"/> M ) <u>Add</u> <input type="checkbox"/> <u>Mod</u> <input type="checkbox"/> <u>Del</u>		2) Location Number: <b>1</b>	
3) Location Description: <b>T Transmit Location</b>		4) Area of Operation Code:	
		5) Location Name: <b>KTVT Studio</b>	
6) FCC Antenna Structure Registration # or N/A (FAA Notification not Required):			
7) Latitude (DD-MM-SS.S): <b>32-45-38.4</b>		8) Longitude (DDD-MM-SS.S): <b>097-14-39.0</b>	
9) Street Address, Name of Landing Area, or Other Location Description: <b>5233 BRIDGE STREET</b>			
10) City: <b>FORT WORTH</b>		11) State: <b>TX</b>	
		12) County/Borough/Parish: <b>TARRANT</b>	
13) Elevation of Site AMSL (meters) ( 'a' in antenna structure example): <b>179.8</b>		14) Overall Ht AGL Without Appurtenances (meters) ( 'b' in antenna structure example): <b>45.7</b>	
		15) Overall Ht AGL With Appurtenances (meters) ( 'c' in antenna structure example): <b>60.0</b>	
16) Support Structure Type: <b>BANT</b>			
17) Radius (km):			
18) Maximum Latitude (DD-MM-SS.S): <b>Use for rectangle only (Northwest corner)</b>  --		19) Maximum Longitude (DDD-MM-SS.S): <b>Use for rectangle only (Northwest corner)</b>  --	
20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u>			
21) Description: (only for Area of Operation Code 'O')			
22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? See Section 1.1307 of 47 CFR. ( ) <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u> If 'Yes', submit an environmental assessment as required by 47 CFR, Sections 1.1308 and 1.1311.			
23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified: ___/___/___			
23b) Has the applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u>			
24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) <u>Yes</u> <input checked="" type="checkbox"/> <u>No</u>			

Location Data

1) Action Requested: ( <input type="radio"/> A ) <b>Add</b> <input type="radio"/> <b>Mod</b> <input type="radio"/> <b>Del</b>		2) Location Number: <b>2</b>	
3) Location Description: <b>R Receive Location</b>		4) Area of Operation Code:	
		5) Location Name: <b>KTVT Transmitter</b>	
6) FCC Antenna Structure Registration # or N/A (FAA Notification not Required):			
7) Latitude (DD-MM-SS.S): <b>32-34-43.5</b>		8) Longitude (DDD-MM-SS.S): <b>096-57-13.0</b>	
9) Street Address, Name of Landing Area, or Other Location Description:			
10) City:		11) State:	
12) County/Borough/Parish:			
13) Elevation of Site AMSL (meters) ( 'a' in antenna structure example): <b>243.5</b>		14) Overall Ht AGL Without Appurtenances (meters) ( 'b' in antenna structure example):	
15) Overall Ht AGL With Appurtenances (meters) ( 'c' in antenna structure example):			
16) Support Structure Type:			
17) Radius (km):			
18) Maximum Latitude (DD-MM-SS.S): <b>Use for rectangle only (Northwest corner)</b>  --		19) Maximum Longitude (DDD-MM-SS.S): <b>Use for rectangle only (Northwest corner)</b>  --	
20) Do you propose to operate in an area that requires frequency coordination with Canada? ( ) <u>Yes</u> <b>No</b>			
21) Description: (only for Area of Operation Code 'O')			
22) Would Commission grant of Authorization for this location be an action which may have a significant environmental effect? See Section 1.1307 of 47 CFR. ( ) <u>Yes</u> <b>No</b> If 'Yes', submit an environmental assessment as required by 47 CFR, Sections 1.1308 and 1.1311.			
23a) If the site is located in one of the Quiet Zones listed in Item 23b of the Instructions, provide the date (mm/dd/yyyy) that the proper Quiet Zone entity was notified: ___/___/___			
23b) Has the applicant obtained prior written consent from the proper Quiet Zone entity for the same technical parameters that are specified in this application? ( ) <u>Yes</u> <b>No</b>			
24) Do you propose to operate in an area that requires frequency coordination with Mexico? ( ) <u>Yes</u> <b>No</b>			



Passive Repeaters (PR)

**Transmit Location**

1) Transmit Location Name:	2) Path Number:
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3) Action Requested: ( ) <u>A</u> dd New Passive Repeater <u>M</u> odify Existing Passive Repeater <u>D</u> elete Existing Passive Repeater
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**Passive Repeater Information**

4) Passive Repeater Id: ( )		5) Passive Repeater Sequence Number: ( )	
6) Passive Repeater Location Name:			
7) Passive Repeater Antenna Manufacturer:		8) Passive Repeater Antenna Model Number:	
9) Height to Center of Passive Repeater Antenna AGL (meters):	10) Back-to-Back RX Dish Gain (dBi):	11) Back-to-Back TX Dish Gain (dBi):	
12) Reflector Dimensions (meters): Height:                      Width:	13) Transmit Polarization:	14) Azimuth to RX Location or Next Passive Repeater:	

Supplement 4

Frequency Data

Transmitter Location Information

1) Transmit Location Name: <b>KTVT Studio</b>	2) Path Number: <b>1</b>
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Frequency Information

3) Action A/M/D	4) Lower or Center Frequency (MHZ)	5) Upper Frequency (MHZ)	6) Tolerance (%)	7) EIRP (dBm)	8) Emission Designator	9) Baseband Digital Rate (kbps)	10) Digital Modulation Type
<b>M</b>	Existing (if mod) <b>001990.00000000</b>	<b>002008.000000 00</b>	<b>0.00500</b>	<b>70.5</b>	<b>18M0F9W</b>		
	New						
	11) Transmitter Manufacturer		12) Transmitter Model	13) Automatic Transmitter Power Control			
	<b>Microwave Associates</b>		<b>MA2G</b>	<b>N</b>			