

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Amendment of Parts 1, 21, 73, 74 and 101 of the) WT Docket No. 03-66
Commission's Rules to Facilitate the Provision of) RM-10586
Fixed and Mobile Broadband Access, Educational)
and Other Advanced Services in the 2150-2162)
and 2500-2690 MHz Bands)
)
Part 1 of the Commission's Rules - Further) WT Docket No. 03-67
Competitive Bidding Procedures)
)
Amendment of Parts 21 and 74) MM Docket No. 97-217
to Enable Multipoint Distribution Service)
and the Instructional Television Fixed)
Service Amendment of Parts 21 and 74 to Engage)
in Fixed Two-Way Transmissions)
)
Amendment of Parts 21 and 74) WT Docket No. 02-68
of the Commission's Rules With Regard to) RM-9718
Licensing in the Multipoint)
Distribution Service and in the)
Instructional Television Fixed Service for the)
Gulf of Mexico)
)
Promoting Efficient Use of Spectrum Through) WT Docket No. 00-230
Elimination of Barriers to the Development of)
Secondary Markets)
)
Review of the Spectrum Sharing Plan Among) IB Docket No. 02-364
Non-Geostationary Satellite Orbit Mobile Satellite)
Service Systems in the 1.6/2.4 GHz Bands)
)
Amendment of Part 2 of the Commission's Rules) ET Docket No. 00-258
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)

ORDER ON RECONSIDERATION AND FIFTH MEMORANDUM OPINION AND ORDER
AND
THIRD MEMORANDUM OPINION AND ORDER AND SECOND REPORT AND ORDER

Adopted: April 12, 2006

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By the Commission: Chairman Martin and Commissioner Tate issuing a joint statement; Commissioner Copps concurring and issuing a separate statement, Commissioner Adelstein concurring in part and issuing a separate statement.

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I. INTRODUCTION

1. In the attached *Order on Reconsideration and Fifth Memorandum Opinion and Order (Big LEO Order on Reconsideration and AWS 5th MO&O)*, we affirm the Commission's decision in the *Big LEO Spectrum Sharing Order*¹ to establish a plan for sharing between the fixed and mobile (except aeronautical mobile) services and Code Division Multiple Access (CDMA) Mobile-Satellite Service (MSS) operators in the 2495-2500 MHz band. This decision, along with those in this *Third Memorandum Opinion and Order and Second Report and Order (BRS/EBS 3rd MO&O and 2nd R&O)*, continue our efforts to transform our rules and policies governing the licensing of the Educational Broadband Service (EBS) and the Broadband Radio Service (BRS) (collectively, the Services) in the 2495-2690 MHz band.² Among other modifications to our rules, we require that new BRS/EBS band plan transitions take place in Basic Trading Areas (BTAs) instead of Major Economic Areas (MEAs), and we allow licensees the option to self-transition after 30 months after the effective date of the amended rules in markets where a proponent has not come forward. In addition, we adopt substantial service requirements and safe harbors for BRS and EBS licensees and we establish new rules for grandfathered EBS stations operating on the E and F channel groups.

2. Our actions in this proceeding are designed to provide both incumbent licensees and potential new entrants in the 2495-2690 MHz band with greatly enhanced flexibility to encourage the

¹ Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands; Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Service to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, IB Docket No. 02-364, ET Docket No. 00-258, *Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking*, FCC 04-134, 19 FCC Rcd 13386 (2004) (*Big LEO Spectrum Sharing Order*).

² The two services in the 2500-2690 MHz band, the Instructional Television Fixed Service (ITFS) and the Multichannel Multipoint Distribution Service (MMDS), and the Multipoint Distribution Service (MDS) in the 2150-2162 MHz band were renamed by the Commission in 2004. The ITFS service became the Educational Broadband Service (EBS) and the MMDS and MDS services became the Broadband Radio Service (BRS). See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, *Report and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 03-66, 19 FCC Rcd 14165, 14169 ¶ 6 (2004) (*BRS/EBS R&O and FNPRM* as appropriate).

efficient and effective use of spectrum domestically and internationally, and the growth and rapid deployment of innovative and efficient communications technologies and services.³ Specifically, we provide the opportunity for operators using different technologies and/or services to have access to the same spectrum. Moreover, we facilitate the development of wireless broadband systems in this band that could offer consumers another choice for broadband access -- competing in price and features with existing landline offerings, reaching areas not currently served by landline networks, and offering consumers portability or mobility. In addition, we facilitate use of this band by educational institutions, thereby improving the ability of educators to serve America's students through wireless technology. Accordingly, through these actions, we make further progress towards our goal of providing all Americans with universal, affordable access to broadband technology.⁴

II. EXECUTIVE SUMMARY

3. In the *Big LEO Order on Reconsideration and AWS 5th MO&O*,⁵ we take the following actions with respect to petitions for reconsideration filed in response to the *Big LEO Spectrum Sharing Order*:

- Affirm the Commission's decision to allocate the 2495-2500 MHz band for fixed and mobile (except aeronautical mobile) services on a primary basis, shared with the MSS on an unprotected basis.
- Conclude that BRS/EBS and MSS operators have compatible characteristics that enable them to share certain portions of the 2495-2500 MHz band through engineering solutions, without causing harmful interference.
- Adopt specific power flux density (PFD) limits for CDMA MSS downlink operations in the band to further ensure that harmful interference does not occur to BRS operations.
- Decline to modify Part 18 of the Commission's rules to restrict the emissions of industrial, science, and medical (ISM) devices in that band.
- Decline to relocate grandfathered broadcast auxiliary service (BAS) and Part 90 and 101 fixed service licensees.

4. In the *BRS/EBS Third Memorandum Opinion and Order*,⁶ we take the following actions with respect to petitions for reconsideration filed in response to the *BRS/EBS R&O*:

- Grant petitions filed by various parties to implement a transition by Basic Trading Areas

³ See Federal Communications Commission, Strategic Plan 2006-2011 at 3 (2005) (*Strategic Plan*).

⁴ *Id.*

⁵ The *Big LEO Order on Reconsideration* is part of the Big LEO proceeding in IB Docket No. 02-364. The *AWS 5th MO&O* is part of the Advanced Wireless Services proceeding in ET Docket No. 00-258. A list of petitioners is available in Appendix C. Unless otherwise noted references to petitions, oppositions, replies, and *ex parte* letters in n. 39-153 *infra* are contained in IB Docket No. 02-364.

⁶ Unless otherwise noted references to petitions, oppositions, replies, comments, reply comments, and *ex parte* letters in n. 154-1018 *infra* are contained in WT B Docket No. 03-66.

(BTAs), rather than by Major Economic Areas (MEAs).

- Grant a petition and adopt a “first-in-time” rule for determining which entity will be a proponent.
- Make minor changes to our rules relating to Pre-Transition Data Requests in order to clarify the responsibilities of the parties and improve the administration of the transition process.
- In response to a petition, adopt two additional “safe harbors” that will be presumed to be reasonable offers for the transition from proponents.
- Grant petitions to allow licensees to self-transition after 30 months after the effective date of the amended rules in markets where a proponent does not come forward.
- Deny petitions asking the Commission to reverse its decision to require certain Multichannel Video Programming Distributors (MVPD) to obtain a waiver before opting out of the transition process.
- Grant WATCH TV’s Waiver Request to permanently opt-out of the transition to the new band plan.
- Grant, in part, petitions asking that all commercial licensees, in a proponent-driven transition, reimburse the proponent a pro rata share of the cost of transitioning a BTA to the new band plan.
- On our own motion, require all licensees, except for EBS licensees, to pay their own costs if they self-transition.
- Adopt procedures for self-transitioning EBS licensees to recover costs from BRS licensees and lessees, commercial EBS licensees, and entities that lease EBS spectrum for a commercial purpose.
- Deny most petitions for reconsideration of the technical rules adopted in the *BRS/EBS R&O*, but make minor changes in response to a petition.
- Affirm our decision to allow Part 15 unlicensed operations to operate in the 2655-2690 MHz band and deny petitions asking that the Commission prohibit unlicensed operations in that band.
- Deny petitions and affirm our decision to allow two-way service prior to transition.
- Reject a petition that we clarify the educational use requirements applicable to EBS spectrum.
- Deny petitions and affirm our decision that cable television operators and ILECs may hold or lease spectrum in this band to the extent consistent with the Communications Act.
- With one exception, affirm the dismissal of applications for new EBS stations identified as mutually exclusive in the *BRS/EBS R&O*.

- Permit EBS licensees to enter into a lease with a maximum term of thirty years, subject to conditions designed to ensure that EBS licensees have a fair opportunity to re-evaluate their educational needs.
 - Clarify that BRS BTA authorization holders maintain their right to apply for unassigned EBS spectrum.
5. In the *BRS/EBS Second Report and Order*, we take the following actions:
- Adopt substantial service standards for BRS and EBS licensees, and establish safe harbors similar to those used in other services.
 - On our own motion, require all licensees to establish substantial service as of May 1, 2011.
 - Defer accepting applications for any remaining EBS white space spectrum until the completion of incumbent-organized transitions to the new band plan.
 - On our own motion, defer accepting applications for BRS spectrum recovered from MDS BTA overlay licensees until the completion of incumbent-organized transitions to the new band plan in order to consider the effects of the self-transition process advocated by commenters.
 - Consistent with the majority of the comments filed in this proceeding: (1) establish a geographic service area for grandfathered E and F channel EBS licensees, and allow such licensees to modify or assign their licenses; (2) eliminate overlaps of 50 percent or less between a grandfathered EBS licensee and a BRS site-based incumbent by “splitting the football;”⁷ and (3) for overlaps of more than 50%, establish a ninety-day mandatory negotiation period, followed by “splitting the football” if no agreement is reached at the end of the period.
 - Consistent with the majority of the commenters, eliminate the rule that limits EBS licensees to four channels in a given geographic area.
 - Accept comments supporting the elimination of the wireless cable exception to the EBS eligibility rules.
 - On our own motion, alter, where possible, the regulatory fee structure for the BRS services to establish a tiered regulatory fee structure based on market size/MHz.

III. BACKGROUND

A. *Big LEO Order on Reconsideration and AWS 5th MO&O*

6. *Big LEO Spectrum Sharing Order*. In the *Big LEO Spectrum Sharing Order*, the

⁷ “Splitting the football” occurs when the geographic service areas (GSAs) of two or more licensees overlap. The MDS and ITFS industry developed an informal method for handling this problem by drawing a boundary line through a “football”-shaped area where the GSAs intersect, with each licensee agreeing to limit the interference it generates across the boundary.

Commission established a primary fixed and mobile (except aeronautical mobile) allocation in the upper five megahertz of Big LEO MSS S-band spectrum at 2495-2500 MHz.⁸ The Commission stated that the resulting services would operate in those frequencies with CDMA MSS downlink operations.⁹ The Commission further stated that the CDMA MSS providers would provide their services in that spectrum on an unprotected basis.¹⁰ The Commission determined that this allocation was appropriate because the Commission was reviewing proposals to restructure the adjacent 2500-2690 MHz band, also allocated as a primary fixed and mobile (except aeronautical mobile) band.¹¹ The result would be the new BRS/EBS band plan at 2495-2690 MHz.¹² The Commission also stated that those bands combined could serve as suitable relocation spectrum for BRS licensees currently operating in the 2150-2160/62 MHz band.¹³

7. The Commission concluded that CDMA MSS operators could use the same spectrum as fixed and mobile operators, specifically BRS, without harmful interference because BRS operations would be more likely to occur in urban, suburban and less developed areas, whereas MSS operators would more likely serve customers in rural and underdeveloped areas.¹⁴ To address interference concerns for CDMA MSS, the Commission stated that the BRS would be a low power service at 2496-2500 MHz.¹⁵ The Commission also noted that MSS operators would have access to a newly-established 1 megahertz guard band at 2495-2496 MHz, but MSS would not receive protection in the 2495-2500 MHz band.¹⁶ To address interference concerns for BRS, the Commission stated that the ITU-established PFD

⁸ See generally *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13387-13388 ¶¶ 69-71. Big LEO satellite systems provide voice and data communication to users with handheld mobile terminals via non-geostationary satellites in Low Earth Orbit (LEO), *i.e.*, at orbital altitudes below the Van Allen Radiation Belt. The term “Big LEO” was coined to distinguish such systems, operating in frequency bands above 1 GHz, from the so-called “Little LEO” systems that provide data communications via non-geostationary satellites in frequency bands below 1 GHz. The Big LEO S-band spectrum spans the 2483.5-2500 MHz band. The *Big LEO Spectrum Sharing Order* also addresses issues in the Big LEO MSS L-band spectrum at 1610-1626.5 MHz. Reconsideration of the L-band issues is not a part of this Order and will be addressed separately at a later date. For additional background about MSS in the Big LEO bands, see Amendment of the Commission’s Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, CC Docket No. 92-166, *Report and Order*, FCC 94-261, 9 FCC Rcd 5936 (1994) (*Big LEO Order*), *on reconsideration*, *Memorandum Opinion and Order*, FCC 96-54, 11 FCC Rcd 12861 (1996).

⁹ *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13387-13388 ¶¶ 69-71. With regard to the Big LEO systems, CDMA MSS uplinks operate in the 1610-1621.35 MHz band and CDMA MSS downlinks operate in the 2483.5-2500 MHz band. TDMA MSS uplinks and downlinks operate in the 1618.25-1626.5 MHz band.

¹⁰ *Id.*

¹¹ *Id.* at 13387 ¶ 69.

¹² See generally *BRS/EBS R&O*, 19 FCC Rcd 14165.

¹³ *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13388 ¶ 71.

¹⁴ *Id.* at 13388 ¶ 72.

¹⁵ *Id.* at 13389 ¶ 72. The Commission also stated that strict out-of-band emissions limits would be imposed on the BRS operators at and above 2496 MHz. *Id.* at 13389 ¶ 74.

¹⁶ *Id.* See also 47 C.F.R. § 2.106 US391.

values for MSS downlinks operations in this band should sufficiently protect the BRS from harmful interference.¹⁷ The Commission also shifted MSS ancillary terrestrial component (ATC) operations down five megahertz, from 2492.5-2498 MHz to 2487.5-2493 MHz, to ensure adequate separation between MSS ATC and BRS operations at and above 2496 MHz.¹⁸

8. With respect to incumbent terrestrial radio operators in the 2483.5-2500 MHz band, the Commission declined to relocate ISM devices, reasoning that BRS could operate with ISM operations present.¹⁹ The Commission stated, however, that it would consider a relocation plan for BAS and private radio services grandfathered in that band, if necessary, after addressing the then-remaining issues concerning the relocation associated with the introduction of Advanced Wireless Services (AWS) in ET Docket No. 00-258.²⁰

B. BRS/EBS 3rd MO&O and 2nd R&O

9. A full discussion of the background and history involving this band is contained in the *BRS/EBS R&O & FNPRM*.²¹ Briefly, in 1963, the Commission established ITFS in the 2500-2690 MHz band,²² envisioning that it would be used for transmission of instructional material to accredited public and private schools, colleges, and universities for the formal education of students.²³ In 1974, the Commission established MDS as a new common carrier service and allotted the 2150-2160 MHz band for such use.²⁴ The Commission anticipated that the MDS spectrum would be used for wireless cable, a

¹⁷ *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13389 ¶ 73.

¹⁸ *Id.* at 13385-86 ¶ 66. ATC allows MSS operators to utilize their satellite spectrum terrestrially in urban areas and in buildings, where the satellite signal is weak. *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13367, ¶ 24; *see generally* Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, IB Docket No. 01-185, *Report and Order and Notice of Proposed Rulemaking*, FCC 03-15, 18 FCC Rcd 1962 (2003) (*ATC Report and Order* and *Big LEO Spectrum Sharing Notice* as appropriate), *modified sua sponte*, *Order on Reconsideration*, FCC 03-162, 18 FCC Rcd 13590 (2003), *on reconsideration*, *Memorandum Opinion and Order and Second Order on Reconsideration*, FCC 05-30, 20 FCC Rcd 4616 (2005) (*ATC MO&O*), *further recon pending*. ATC operations are limited to specific portions of the Big LEO bands. In the L-band, ATC is allowed at 1610-1615.5 MHz and 1621.35-1626.5 MHz. *See* 47 C.F.R. § 25.149(a)(2)(iii).

¹⁹ *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13386 ¶ 67.

²⁰ *Id.*

²¹ *BRS/EBS R&O and FNPRM*, 19 FCC Rcd at 14171-14176 ¶¶ 9-20.

²² *See* Educational Television, Docket No. 14744, *Report and Order*, 39 FCC 846 (1963) (*MDS R&O*), *recon. denied*, 39 FCC 873 (1964) (*ETV Decision*).

²³ *See* Amendment of the Commission's Rules With Regard to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service; and Applications for an Experimental Station and Establishment of Multi-Channel Systems, *Report and Order*, 48 Fed. Reg. 33873, 33875 ¶ 9 (1983) (*1983 R&O*) *citing ETV Decision*, 39 FCC 846, 853 ¶ 25.

²⁴ Amendment of Parts 1, 2, 21, and 43 of the Commission's Rules and Regulations to Provide for Licensing and Regulation of Common Carrier Radio Stations in the Multipoint Distribution Service, *Report and Order*, Docket No. 19493, 45 FCC 2d 616 (1974), *recon. denied*, 57 FCC 2d 301 (1975) (*1974 R&O*). *See also* *1983 R&O*, 48 Fed. Reg. at 33873 ¶ 5. Amendment of Parts 2 and 74 of the Commission's Rules to Establish a New Class of (continued....)

common carrier service for distribution of television programming from a central location to fixed points selected by the common carrier's subscribers.²⁵ The Commission allotted two 6 megahertz channels (2150-2162 MHz) in fifty of the largest metropolitan areas (referred to as MDS Channel Nos. 1 and 2).²⁶ In the rest of the country, only 10 megahertz of spectrum was allotted to MDS in this band —namely, Channel No. 1 (2150-2156 MHz) and Channel No. 2A (2156-2160 MHz).²⁷

10. In 1983, in response to the demand for additional spectrum for delivery of video entertainment programming to subscribers, the Commission re-allotted eight ITFS channels (the E and F channel blocks) and associated response channels for use by MDS.²⁸ At the same time, in an effort to encourage more intensive use of the spectrum and to help ITFS licensees generate needed revenue, the Commission began to relax use restrictions on ITFS licensees so that they could lease excess capacity on their facilities to commercial entities.²⁹ In 1991, in an effort to provide more spectrum for multichannel video operations, the Commission re-allotted three additional channels in the 2500-2690 MHz band (the H channel block) from the Private Operational-Fixed Microwave Service³⁰ (OFS) to MDS.³¹

11. The Commission subsequently took a number of steps to increase the technical flexibility afforded to both ITFS and MDS licensees in the 2500-2690 MHz band. In 1993, the Commission granted ITFS licensees flexibility to use channel loading to shift their required educational programming onto a

(Continued from previous page) _____

Educational Television Service for the Transmission of Instructional and Cultural Material to Multiple Receiving Locations on Channel in the 2500-2690 MHz Frequency Band, Docket No. 14744, *Second Report and Order*, 30 FCC 2d 197 ¶ 8 (1971) (*1971 R&O*).

²⁵ *Id.*

²⁶ Amendment of Part 21.703(g), and (h) of the Commission's Rules, *Memorandum Opinion and Order*, 47 FCC 2d 957 (1970).

²⁷ *Id.*

²⁸ Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules and Regulations in regard to frequency allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service, Gen Docket No. 80-112 and CC Docket No. 80-116, *Report and Order*, 94 FCC 2d 1203 (1983) (*First Leasing Decision*). The terms MDS and MMDS are often used interchangeably.

²⁹ *First Leasing Decision*, 94 FCC 2d at 1203.

³⁰ Prior to its allocation to ITFS, the 2500-2690 MHz band was allocated to shared use by Private Operational Fixed Microwave Service (OFS) stations and international control stations. The traditional Fixed Service use of this band was primarily private microwave communications uses such as multichannel voice and data circuits. *See 1983 R&O*, 48 Fed. Reg. at 33873 ¶ 8.

³¹ *1991 R&O*, 6 FCC Rcd at 6792. In the first *R&O* in this proceeding, the Commission made MDS operators eligible to use microwave frequencies in the Cable Television Relay Service (CARS). Amendment of Parts 21, 43, 74, 78 and 94 of the Commission's Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multi-Channel Multipoint Distribution Service, Instructional-Television Fixed Service, and Cable Television Relay Service, *Report and Order*, 5 FCC Rcd 6411, 6423 (1990) (*1990 R&O*). CARS is primarily a service for carrying video. Amendment of Eligibility Requirement in Part 78 Regarding 12 GHz Cable Television Relay Service, *Report and Order*, 17 FCC Rcd 9930, 9945-6 (2002) (*CARS R&O*). ITFS operators are currently not eligible for CARS licenses, except in very limited circumstances. 47 C.F.R. § 78.13(e).

subset of their authorized number of channels.³² In 1996, the Commission permitted MDS and ITFS licensees to employ digital technologies,³³ and in 1998, it expanded the existing allocation for one-way video service to allow MDS and ITFS licensees to construct digital two-way systems capable of providing high-speed, high-capacity broadband service, including two-way Internet service via cellularized communication systems.³⁴ Finally, in 2001, the Commission added a mobile allocation to the 2500-2690 MHz band (excluding aeronautical mobile) to make it potentially available for advanced mobile wireless services, including IMT-2000 and future generations of wireless systems.³⁵

12. On October 7, 2002, the Coalition, consisting of the Wireless Communications Association, International (WCA), the Catholic Television Network (CTN), and the National ITFS Association (NIA), submitted a paper entitled “A Proposal for Revising the MDS and ITFS Regulatory Regime” (“Coalition Proposal” or “White Paper”), which recommended fundamentally changing the rules governing the 2500-2690 MHz band.³⁶ On April 2, 2003, the Commission released the *Notice of Proposed Rule Making (NPRM)* in this proceeding, seeking comment on the Coalition Proposal as well as other potential alternatives for restructuring the 2500-2690 MHz band.³⁷ In addition to the Coalition’s

³² For example, an ITFS licensee could move all of its ITFS programming on to one of its four channels and lease the remaining three channels on a twenty-four-hour basis to a wireless cable operator. Amendment of Part 74 of the Commission’s Rules Governing Use of the Frequencies in the Instructional Television Fixed Service, MM Docket 93-106, *Report and Order*, 9 FCC Rcd 3360 ¶ 2 (1994) (*1994 R&O*). See also 47 C.F.R. § 74.931(e)(9).

³³ See Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations, *Declaratory Ruling and Order*, 11 FCC Rcd 18839 (1996) (*Digital Modulation Declaratory Ruling and Order*).

³⁴ Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97-217, *Report and Order on Further Reconsideration and Further Notice of Proposed Rulemaking*, 15 FCC Rcd 14566 (2000) (*Two-Way FNPRM*).

³⁵ See 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, *First Report and Order and Memorandum Opinion and Order*, 16 FCC Rcd 17222 (2001) (*3G R&O*).

³⁶ See generally A Proposal for Revising the MDS and ITFS Regulatory Regime, submitted by the Wireless Communications Association International, Inc. (WCA), the National ITFS Association (NIA) and the Catholic Television Network (CTN), RM-10586 (filed Oct. 7, 2002) (Coalition Proposal or White Paper). WCA is the trade association of the wireless broadband industry. NIA is a non-profit, professional organization of ITFS licensees, applicants and others interested in the ITFS. CTN is an association of Roman Catholic archdioceses and dioceses that operate many of the largest parochial school systems in the United States. These entities represent that the proposals contained in the paper reflect a consensus among the organizations concerning rule changes for the 2500-2690 MHz band.

³⁷ See Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands; Part 1 of the Commission’s Rules - Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission’s Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico; WT Docket Nos. 03-66, 03-67, 02-68, MM Docket No. 97-217, *Notice of Proposed Rulemaking and Memorandum Opinion and Order*, 18 FCC Rcd 6722 (2003) (*NPRM*).

proposal, the Commission also sought comment on ownership and eligibility issues, transition timetables, and additional engineering issues as well.

13. On July 29, 2004, the Commission released the *BRS/EBS R&O & FNPRM*. In the *BRS/EBS R&O*, the Commission adopted a band plan that restructured the 2500-2690 MHz band into upper and lower-band segments for low-power operations (UBS and LBS, respectively), and a mid-band segment (MBS) for high-power operations, in order to reduce the likelihood of interference caused by incompatible uses. The Commission also designated the 2495-2500 MHz band for use in connection with the 2500-2690 MHz band.³⁸ Through the adoption of the new band plan, the Commission provided incentives for the development of low-power cellularized broadband use and, accordingly, renamed MDS and ITFS as the “Broadband Radio Service” and “Educational Broadband Service,” respectively, to more accurately describe the kinds of the services anticipated in this band.

14. In order to facilitate the transition to the new band plan, the *BRS/EBS R&O* adopted a market-oriented, transition mechanism that enables incumbent licensees to develop regional plans for moving to new spectrum assignments in the restructured band plan. Under this mechanism, licensees have a three-year period during which they can initiate the transition process in their regional area and negotiate a transition plan with other regional licensees. Transition plans must conform to certain safeguards to ensure a smooth transition and equitable treatment of incumbents.

15. The *BRS/EBS R&O* also adopted service rules that give licensees increased flexibility, reduce administrative burdens on both licensees and the Commission, and promote regulatory parity. Specifically, the Commission implemented geographic area licensing for all licensees in the band, consolidated licensing and service rules for EBS and BRS in Part 27, allowed spectrum leasing for BRS and EBS under our secondary markets spectrum leasing policies and procedures, and provided licensees with the flexibility to employ the technologies of their choice in the band. In addition, the Commission applied the Part 1 Wireless Telecommunications Bureau rules to the BRS/EBS spectrum, dismissed pending mutually exclusive applications for new ITFS stations, and took other actions to streamline the rules and eliminate unnecessary regulatory burdens.

16. With respect to eligibility to hold licenses in 2495-2690 MHz band, the Commission retained restrictions on the use of EBS licenses in continued furtherance of the educational objectives that led to the establishment of ITFS. Also, the Commission removed all non-statutory eligibility restrictions applicable to cable and digital subscriber line (DSL) operators for the BRS and thus permitted these operators to provide non-video services like broadband internet access.

17. In addition, the *BRS/EBS R&O* resolved certain technical issues as follows: set the signal strength limits for the low-power bands at the boundaries of the geographic service areas to 47 dB μ V/m; restricted the transmitter output power of response stations to 2.0 watts; modified emission limits for stations that would operate on the LBS and UBS channels; and refrained from allowing high-power unlicensed operations in the 2500-2690 MHz band, but allowed unlicensed operation under our existing Part 15 rules in the 2655-2690 MHz band.

18. In the *BRS/EBS Further Notice of Proposed Rulemaking (FNPRM)*, the Commission sought comment on alternative methods to transition licensees to the extent that licensee-negotiated transitions do not occur within the three-year transition period. Among other methods, we sought

³⁸ See *supra* ¶ 7 (citing *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13387-13388 ¶¶ 69-71).

comment on a process whereby the Commission would offer incumbent licensees modified non-renewable licenses that would become secondary to new licenses to be assigned pursuant to the new band plan. Under this process, the Commission also would offer incumbent licensees tradable bidding offset credits that could be used to obtain new licenses, and that would provide spectrum access valued comparably to that provided by the incumbent's existing license. In addition to alternate transition methods, we also sought further comment on the following issues: the Gulf of Mexico service area; performance requirements for licensees in the band; grandfathered ITFS stations on the E and F channel groups; limitations on the holdings of ITFS stations; the "wireless cable" exception to the ITFS eligibility rules; regulatory fees; methods of streamlining our review of transactions involving these services; and continuing our review of rules relating to these services.

19. Petitions for reconsideration and comments were due on January 10, 2005. We received 33 petitions for reconsideration of the *BRS/EBS R&O* and 30 comments in response to the *FNPRM*. Reply comments were due on February 8, 2005 and we received 27 reply comments.

IV. DISCUSSION

A. *Big LEO Order on Reconsideration and AWS 5th MO&O*

20. In this Section, we address issues related to the BRS, MSS, BAS, ISM and Part 90 and Part 101 operators sharing spectrum in the 2495-2500 MHz band.

1. Relocation Policy and BRS Operators

21. *Background.* In the *AWS* proceeding (ET Docket No. 00-258), the Commission decided to relocate BRS operators from the 2150-2160/62 MHz band so that *AWS* entrants could move into that spectrum. While the Commission determined that it would apply the *Emerging Technologies* relocation policy of requiring comparable facilities to BRS operators in this band, it also sought comment generally on the issues surrounding the relocation of the BRS operators.³⁹ The Commission noted, however, that its "relocation policies do not dictate that systems be relocated to spectrum-based facilities or even to the same amount of spectrum as they currently use, only that comparable facilities be provided."⁴⁰ In the *Big LEO Spectrum Sharing Order*, the Commission determined that the 2495-2500 MHz band, combined with the restructuring of BRS/EBS spectrum in the 2500-2690 MHz band, would serve as suitable

³⁹ See 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, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, FCC 03-16, 18 FCC Rcd 2223, 2256, ¶ 71 (2003) (*AWS Third Report and Order*). We note that the Commission has sought comment on the specific relocation procedures applicable to BRS operations in the 2150-2160/62 MHz band in a pending rulemaking proceeding in the *AWS* docket. See 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, *Eighth Report and Order and Fifth Notice of Proposed Rule Making*, FCC 05-172, 20 FCC Rcd 15866 (2005) (*AWS 8th R&O and 5th NPRM*).

⁴⁰ *AWS Third Report and Order*, 18 FCC Rcd at 2256, ¶ 72.

replacement spectrum for BRS providers that currently operate at 2150-2160/62 MHz.⁴¹

22. *Petitions.* WCA, Nextel, Sprint, BellSouth, and the BRS Advocacy Group claim that the Commission's choice of the 2495-2500 MHz band as replacement spectrum for BRS licensees that currently operate in the 2150-2160/62 MHz band contravenes its established relocation policy that incumbent licensees who are relocated to replacement spectrum are "no worse off" after relocation.⁴² WCA claims that BRS operators would be "worse off" after relocation because BRS licensees do not currently share their spectrum with MSS, BAS, ISM and Part 90 and Part 101 operators and are thus "free of the sorts of interference risks" they would face when sharing their replacement spectrum with these users.⁴³ Nextel and Sprint contend that requiring BRS operators, who obtained licenses at auction "with rights and expectations as to their future use and value,"⁴⁴ to share their replacement spectrum with other services that may cause interference to BRS operations, violates the "well-established principle" that licensees "are entitled to receive comparable replacement spectrum when the Commission relocates them."⁴⁵ BellSouth and the BRS Advocacy Group argue that adopting Globalstar's proposals to remedy interference concerns by, among other things, limiting BRS operations to the top 35 metropolitan statistical areas (MSAs) "would also contravene Commission policies designed to ensure that incumbent licensees forced to relocate to replacement spectrum are no worse off than they were before."⁴⁶

23. *Discussion.* In the *Emerging Technologies* proceeding,⁴⁷ the Commission recognized that

⁴¹ *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13387-13388, ¶¶ 69-71. The *BRS/EBS R&O* further discusses the benefits of restructuring the 2500-2690 MHz band into a new 2495-2690 MHz BRS/EBS band. See generally *BRS/EBS R&O*, 19 FCC Rcd 14165.

⁴² See, e.g., Nextel Petition at 3, n.7; Sprint Petition at 3; WCA Petition at 4-5; BellSouth Opposition at 5-7; BRS Advocacy Group Opposition at 6-8; Nextel Opposition at 5; Sprint Opposition at 6, n.15; WCA Opposition at 2, 5-7; Nextel Reply at 7; Sprint Reply at 5, n.12; WCA Reply at n.15.

⁴³ See WCA Petition at 4-5.

⁴⁴ See Sprint Petition at 3; see also Nextel Petition at 3, n.7.

⁴⁵ See Nextel Petition at 3, n.7. Nextel also claims that "revoking rights previously granted to licensees is fundamentally unfair to the dislocated BRS auction winners and subsequent purchasers for value of those rights because it ignores the licensees' reliance interest in the Commission's representations about the spectrum sold." *Id.* We note that the case cited by Nextel for support of this contention addresses a challenge, which the court ultimately rejected, of changes made by the Commission to the financial terms applicable to companies that had purchased licenses at auction and is therefore irrelevant to the case at hand. Nextel further claims that "denying the dislocated licensees comparable replacement spectrum violates the licensee's constitutional protections against uncompensated government takings as either a permanent physical occupation of their property, or a regulatory taking, or both." *Id.* We disagree. The Commission has provided relocating BRS licensees with replacement spectrum that is suitable for the provision of comparable facilities.

⁴⁶ See BellSouth Opposition at 5-6; BRS Advocacy Group Opposition at 7-8. Globalstar's proposed limitations on BRS operations are discussed in detail *infra* ¶ 28.

⁴⁷ See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, Notice of Proposed Rulemaking*, FCC 92-20, 7 FCC Rcd 1542 (1992) (*Emerging Technologies Notice*); *First Report and Order and Third Notice of Proposed Rulemaking*, FCC 92-437, 7 FCC Rcd 6886 (1992); *Second Report and Order*, FCC 93-350, 8 FCC Rcd 6495 (1993); *Third Report and Order and Memorandum Opinion and Order*, FCC 93-351, 8 FCC Rcd 6589 (1993) (*Emerging Technologies Third R&O*); *Memorandum (continued...)*

the establishment of emerging technologies bands may necessitate the relocation of significant numbers of existing users and outlined several factors to consider when determining whether replacement spectrum was suitable.⁴⁸ These factors include: (1) the cost of equipment – the spectrum chosen should be able to accommodate available state-of-the-art equipment; (2) the amount of spectrum – the spectrum should be sufficient to allow substantial development and economies of scale; (3) the feasibility of relocation – existing licensees must be able to relocate with minimal cost and disruption of service to consumers; (4) a preference for non-government spectrum; and (5) compatibility with international spectrum developments.⁴⁹ Although the Commission has identified replacement spectrum that is suited for the services to be relocated on several occasions, licensees may be relocated to any band appropriate for its use, taking into account the allocation and designated uses of the band. The Commission also established a relocation policy in which incumbent service providers with primary status would receive comparable facilities if they are involuntarily relocated to new spectrum.⁵⁰ Under this policy, incumbents must be provided with replacement facilities that allow them to maintain the same service in terms of: (1) throughput – the amount of information transferred within the system in a given amount of time; (2) reliability – the degree to which information is transferred accurately and dependably within the system; and (3) operating costs – the cost to operate and maintain the system.⁵¹ Thus, the Commission crafted the comparable facilities requirement to ensure that incumbents are “no worse off” than they would be if relocation were not required – not to guarantee incumbents superior systems at the expense of new entrants or unencumbered replacement spectrum. Indeed, the Commission’s policy recognizes that in some cases comparable facilities may be satisfied with a non-spectrum solution for relocating a licensee.⁵²

24. We disagree with the various petitioners’ claims that our choice of replacement spectrum would make BRS incumbents “worse off” than before relocation. Based on the factors described above, the Commission has chosen non-government replacement spectrum that is compatible with international spectrum developments, and would accommodate available state-of-the-art equipment. This spectrum is

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Opinion and Order, FCC 94-60, 9 FCC Rcd 1943 (1994); *Second Memorandum Opinion and Order*, FCC 94-303, 9 FCC Rcd 7797 (1994); *aff’d Association of Public Safety Communications Officials-International, Inc. v. FCC*, 76 F.3d 395 (D.C. Cir. 1996) (collectively, “*Emerging Technologies* proceeding”). See also *Teledesic, LLC v. FCC*, 275 F.3d 75 (D.C. Cir. 2001) (affirming modified relocation scheme for new satellite entrants to the 17.7 – 19.7 GHz band). See also Amendment to the Commission’s Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, WT Docket No. 95-157, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 96-196, 11 FCC Rcd 8825 (1996) (*Microwave Cost Sharing First R&O and FNPRM*); *Second Report and Order*, FCC 97-48, 12 FCC Rcd 2705 (1997) (collectively, “*Microwave Cost Sharing* proceeding”).

⁴⁸ *Emerging Technologies Notice*, 7 FCC Rcd at 1543 ¶ 9.

⁴⁹ *Id.* at 1543 ¶ 10. The Commission’s staff conducted a study to examine the possibility of creating emerging technologies bands with these considerations in mind. See *Creating New Technology Bands for Emerging Telecommunications Technology*, OET/TS 92-1 (January 1992).

⁵⁰ *Emerging Technologies Third R&O*, 8 FCC Rcd at 6591, 6603 ¶¶ 5, 36.

⁵¹ See *Microwave Cost Sharing First R&O and FNPRM*, 11 FCC Rcd at 8840-8844 ¶¶ 27-34. See also 47 C.F.R. §§ 101.73, 101.75, 101.91.

⁵² See, e.g., *Microwave Cost Sharing First R&O and FNPRM*, 11 FCC Rcd at 8843 ¶ 33; *Emerging Technologies First R&O and Third NPRM*, 7 FCC Rcd at 6889 ¶ 19 (recognizing, in the context of relocation of 2 GHz fixed microwave incumbents by PCS licensees, that fiber optics and satellites could, in some cases, allow for the provision of comparable facilities).

also sufficient to allow substantial development and economies of scale. As the Commission noted in the *BRS/EBS R&O*, the optimal location for relocated BRS licensees currently operating in the 2150-2160/62 MHz band is in the 2.5 GHz BRS band (2495-2500 MHz band combined with the restructured 2500-2690 MHz band) because these licensees would be integrated into contiguous spectrum for other BRS operations.⁵³ Further, the new licensing rules adopted by the Commission for the BRS spectrum in the 2.5 GHz band provide BRS licensees with additional flexibility (*e.g.*, the transition to geographic area licensing and the ability to pair BRS Channels 1 and 2 in an FDD system).⁵⁴ With respect to the remaining factor, the Commission has decided that relocation of existing users from the 2495-2500 MHz band is not necessary because, as discussed in the sections below, it finds that spectrum sharing between BRS and MSS operations, as well as the existing users in the band, is feasible.

25. We also disagree with WCA's contention that relocating incumbents are "worse off" because they are required to share their replacement spectrum with other users. As noted above, the Commission's relocation policies require that relocating incumbents receive replacement spectrum that is suitable for comparable facilities to maintain service to customers, not that they receive equivalent or unencumbered replacement spectrum. With respect to Nextel and Sprint's arguments that the Commission is altering the rights and expectations of BRS operators that obtained their licenses at auction, we note that the Commission is not precluded from regulating or reclaiming spectrum licenses that were auctioned.⁵⁵ Finally, our denial of Globalstar's proposal to limit BRS operations to the top 35 MSAs, as discussed below, addresses the concerns raised by BellSouth and the BRS Advocacy group.

26. Accordingly, we continue to believe that the 2495-2500 MHz band, combined with the restructured 2500-2690 MHz band, is suitable replacement spectrum for the provision of comparable facilities to accommodate BRS operations that currently operate in the 2150-2160/62 MHz band and, therefore, deny the petitions requesting reconsideration of this issue.

2. MSS and BRS Operations in the 2496-2500 MHz Band

27. *BRS Petitioners.* Petitioners WCA, Nextel and Sprint, (collectively referred to as BRS Petitioners) request the Commission to remove the co-primary allocation for Big LEO MSS in the 2496-2500 MHz band, claiming that the two services cannot operate on a co-channel, co-coverage basis without harmful interference occurring.⁵⁶ Although the BRS Petitioners acknowledge the Commission's

⁵³ *BRS/EBS R&O*, 19 FCC Rcd at 14179 ¶ 27.

⁵⁴ See generally *BRS/EBS R&O*, 19 FCC Rcd 14165. Frequency Division Duplex (FDD) provides simultaneous communications between two devices through the use of two different bands. The forward band refers to the spectrum used by base stations and the reverse band refers to the spectrum used by the subscriber. In FDD systems, frequency separation between the forward band and the reverse band remains constant among each subscriber-base station communication. *BRS/EBS R&O*, 19 FCC Rcd at 14190 n.71.

⁵⁵ 47 U.S.C. § 309(j)(6)(C). Section 309(j)(6)(C) of the Communications Act provides that "[n]othing in this subsection or in the use of competitive bidding shall diminish the authority of the Commission under other provisions of this Act to regulate or reclaim spectrum licenses."

⁵⁶ Nextel Petition at 13; Sprint Petition at 1; WCA Petition at 5-11; Nextel Opposition at 10, 11; Sprint Opposition at 6. See also BellSouth Opposition at 5; BRS Rural Advocacy Group Opposition at 2; *Ex Parte* Letter from Paul Sinderbrand, Counsel for WCA, to Marlene H. Dortch, Federal Communications Commission (dated October 19, 2005); *Ex Parte* Letter from Paul Sinderbrand, Counsel for WCA, to Marlene H. Dortch, Federal Communications Commission (dated October 6, 2005); *Ex Parte* Letter from Paul Sinderbrand, Counsel for WCA, to Marlene H. (continued....)

decision not to require BRS to protect MSS operations in this band, they allege that the Commission fails to protect BRS from MSS operations. In particular, the BRS Petitioners allege that the Commission incorrectly concluded that BRS could rely on the MSS PFD limits for interference protection because the PFD limits are not hard limits, but merely criteria triggering coordination, and thus are not required limits for MSS systems;⁵⁷ the PFD limits are designed to protect only analog fixed, not mobile or digital, operations; and the Commission previously rejected sharing between MSS and BRS in the adjacent 2.5 GHz band.⁵⁸ WCA claims that Globalstar, the sole MSS operator in that spectrum, cannot object to WCA's proposal because it would only lose four megahertz of spectrum (as compared to potentially 11 megahertz as proposed in the *Big LEO Spectrum Sharing Notice*).⁵⁹

28. *Globalstar Petition.* In its Petition, Globalstar claims that the Commission must impose additional restrictions on BRS in order for Globalstar to use the 2496-2500 MHz band in rural areas while BRS licensees use that band in urban areas.⁶⁰ In particular, Globalstar argues that the Commission should restrict: (1) BRS operations to the top 35 metropolitan statistical areas (MSAs);⁶¹ (2) BRS base station power to an effective isotropic radiated power (EIRP) of 600 watts; and (3) out-of-band emissions to a total of -209 dBW/Hz or less, 99 percent of the time, outside the boundaries of the 35 MSAs.⁶² In addition, Globalstar claims that the Commission incorrectly concluded that BRS operations are more likely to occur in urban areas, noting that BRS-1 operators are licensed on a nationwide basis.⁶³ Globalstar further argues that the EIRP limits adopted in the *Big LEO Spectrum Sharing Order, 2000* watts for base stations and 2 watts for mobile terminals, would “wipe out MSS downlink operations,

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Dortch, Federal Communications Commission (dated September 26, 2005) (arguing that the Commission should eliminate the co-primary allocation for MSS).

⁵⁷ BRS Petitioners refer to the PFD limits set forth in Annex 2.1.2.3.1 of Resolution 46 (WRC-97) of the ITU Radio Regulations. See Sprint Petition at 4; WCA Petition at 7-8. The provisions of Resolution 46 (WRC-97) are now specified in the ITU Radio Regulations at Appendix 5, Annex 1 (ITU-RR App. 5, Annex 1).

⁵⁸ See Nextel Petition at 5-8; WCA Petition at 10. WCA also asserts that an ITU-R Study Group 8 report (ITU-R M.2041) concluded that co-frequency sharing between MSS and IMT-2000 terrestrial services is not feasible in the same geographic area. See WCA Petition at 11. BRS Petitioners argue that the Commission has found spectrum sharing between satellite and terrestrial services not to be feasible in other cases, for example when it allowed MSS operators to provide ATC service. See Nextel Petition at 5-8; WCA Petition at 10-11.

⁵⁹ WCA Petition at 12-13; WCA Opposition at 5-6. See also BellSouth Opposition at 7-8; Sprint Petition at 5 (claiming that “[s]uch action . . . would not prejudice any MSS party”). WCA claims that its proposal is consistent with the 1.4 to 1 ratio of spectrum needed to ensure efficient spectrum use by Globalstar and questions Globalstar's need for even 11.5 megahertz of spectrum in the S-band. WCA Petition at 13, n.24; accord Sprint Opposition at 7.

⁶⁰ Globalstar Petition at 12.

⁶¹ According to Globalstar, a BRS user terminal needs to be restricted by geographic location because, to otherwise avoid interference to MSS, a BRS user terminal operating within 1 kilometer of a Globalstar customer would need to be limited to 0.18 mw of power, and no technology is capable of operating at this low power level. Globalstar Petition, Technical Appendix.

⁶² Globalstar Petition at 12.

⁶³ Globalstar Petition at 11. See also BRS Rural Advocacy Group Opposition at 6 (noting Globalstar's comments and arguing that the Commission failed to realize the extent to which BRS-1 licensees operate in rural areas).

either satellite or ATC, for a radius of 30 kilometers.”⁶⁴

29. *Discussion.* We affirm our decision in the *Big LEO Spectrum Sharing Order* that both MSS and BRS operators can operate in the 2496-2500 MHz band on a co-primary basis, and that MSS shall not receive protection from fixed and mobile (except aeronautical mobile) services in the 2495-2500 MHz band.⁶⁵ As a result, we reject the BRS petitioners’ request that we remove the co-primary allocation for Big LEO MSS in the 2496-2500 MHz band and Globalstar’s request that we restrict BRS operations in this band to certain markets. We conclude that the *Big LEO Spectrum Sharing Order* struck a more appropriate balance between the two services. Under the decision in the *Big LEO Spectrum Sharing Order*, MSS and BRS both will be able to operate in the band. The MSS-BRS sharing obligations, however, are complementary, not identical. For example, we established a 1-megahertz guard band at 2495-2496 MHz to separate BRS operations from MSS, and imposed strict out-of-band emission limits on BRS to protect MSS operations below 2495 MHz.⁶⁶ As we noted in the *Big LEO Spectrum Sharing Order*, Globalstar operations below 2495 MHz will be protected from interference as a consequence of these decisions. Further, although MSS retains co-primary status as a direct entry in the Table of Allocations in the 2495-2500 MHz band, MSS must accept interference from BRS pursuant to footnote US391. As a consequence, most MSS operations will likely occur below 2495 MHz where they are entitled to protection. In addition, MSS operators will have more success utilizing the 2495-2500 MHz band without receiving harmful interference in areas with little or no BRS deployment. On the other hand, BRS deployment nationwide will not be hindered by a need to protect MSS operations above 2495 MHz, and BRS operations will be protected from MSS interference by PFD limits, as we discuss below.⁶⁷ Thus, we do not see the need to modify the MSS allocation in the band as the BRS Petitioners request.⁶⁸ We also reject Globalstar’s proposal to significantly limit the number of BRS service areas nationwide, because it is inconsistent with the Commission’s decision to relocate BRS operations from the 2.1 GHz band to the 2496-2502 MHz band.

30. We note that it may be as long as five years before BRS operations are relocated to this band,⁶⁹ and so MSS may operate as it always has during that time. Once BRS operations commence, MSS will have notice of the discrete geographic areas of BRS operation, because Section 27.1235

⁶⁴ Globalstar Petition at 12.

⁶⁵ See 47 C.F.R. § 2.106 US391.

⁶⁶ See *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13388-13389 ¶¶ 72, 74.

⁶⁷ As a related matter, we disagree with those petitioners claiming that the Commission incorrectly concluded that BRS would more likely operate in urban areas. See Globalstar Petition at 11. See also BRS Rural Advocacy Group Opposition at 6 (noting Globalstar’s comments and arguing that the Commission failed to realize the extent to which BRS Channel No. 1 licensees operate in rural areas). The Commission did not preclude the possibility of BRS operations in rural areas, as some commenters seem to suggest, nor did it imply that BRS licensees may not operate nationwide. The Commission took into account BRS operations that would be operating near Globalstar (*i.e.*, in rural or less developed areas) when it explained that the MSS PFD limits should sufficiently protect BRS operations. See *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13388 ¶ 73.

⁶⁸ WCA expresses concern about the lack of procedures for resolving harmful interference if it occurs. WCA Petition at 6. To address this concern, we encourage each party to have an available point of contact so that any interference complaints could be handled expeditiously.

⁶⁹ See *AWS 8th R&O and 5th NPRM*, 20 FCC Rcd at 15879-15880 ¶ 24.

requires BRS operators to file a notice identifying the licensees that have transitioned to the band and the specific frequencies that they are using.⁷⁰ We anticipate that, once those BRS operation areas are identified, MSS will utilize primarily the spectrum below 2495 MHz, where it is entitled to interference protection, in delivering service to those areas, and use the 2495-2500 MHz band to deliver service to areas where BRS is not yet operating. Once BRS becomes ubiquitous in the 2496-2502 MHz band, we expect MSS to limit their PFD, as described below, in accessing the 2496-2500 MHz band.

31. When BRS and MSS are both operating in the same geographic area, sharing spectrum, through engineering solutions, should be feasible. In particular, we adopt PFD limits for MSS systems operating in the 2496-2500 MHz band, consistent with the PFD coordination threshold values set forth in ITU Radio Regulations, Appendix 5, Annex 1 (ITU-RR App. 5, Annex 1). ITU-RR App. 5, Annex 1 includes coordination threshold values of PFD for non-geostationary satellite orbit (NGSO) space stations and degradation of performance values for terrestrial systems and addresses both analog and digital fixed use in the 2496-2500 MHz band.⁷¹ Globalstar has the capability to control its PFD in the 2496-2500 MHz band by limiting the number of users on a particular channel in a given geographical region.⁷² At the same time, BRS operators could design their networks to accept interference-to-noise ratios higher than they might find in a non-shared environment, which should compensate for the effect of low-level, external noise sources, thereby yielding systems with the same throughput, availability and operating costs as currently exists in the 2150-2156 MHz band. Although we recognize, as the BRS Petitioners note, that the PFD coordination threshold values in ITU-RR App. 5, Annex 1 do not address all potential interference cases between MSS and BRS, such as mobile terrestrial use, the lower gains of antennas associated with mobile handheld units make them less vulnerable to the emissions of the satellite systems than antennas of fixed systems, and thus, the ITU-RR App. 5, Annex 1 PFD coordination threshold values should protect mobile terrestrial uses as well. If MSS operators intend to operate at power levels that exceed the newly-adopted PFD limits, or if actual operations routinely exceed the newly-adopted PFD limits, we require them to receive approval from each operational BRS system in the region in which the PFD limits are exceeded. Furthermore, we emphasize that, if the MSS footprint overlaps multiple BRS areas, later arriving BRS operators are not obligated to accept higher PFD limits previously approved by

⁷⁰ See 47 C.F.R. § 27.1235.

⁷¹ Specifically, ITU-RR App. 5, Annex 1, NOTE 7, states:

The pfd values specified for the band 2483.5-2500 MHz provide full protection for analogue radio-relay systems using the sharing criteria established by Recommendation ITU-R SF.357, for operation with multiple non-GSO MSS systems employing code division multiple access techniques. The pfd values specified will not provide full protection for existing digital fixed systems in all cases. However, these pfd values are considered to provide adequate protection for digital fixed systems designed to operate in this band, where high-power industrial, scientific and medical equipment and possible low-power applications are expected to produce a relatively high interference environment.

⁷² According to Globalstar, the power-density transmitted from each of the satellite's downlink antennas is dependent on the number of CDMA MSS users operating in the geographical region served by that antenna beam. See generally Application of L/Q Licensee, Inc. for Modification to Order and Authorization for Globalstar, File Nos. 88-SAT-WAIV-96 and 90-SAT-ML-96 (March 7, 1996). Therefore, as Globalstar stated in the ATC proceeding, the PFD in selected regions of the country may be dynamically controlled by the Globalstar operations center. See *Ex Parte* Letter in IB Docket No. 01-185 from William Wallace, Counsel for Globalstar L.P., to Marlene H. Dortch, Federal Communications Commission (dated July 1, 2002), Attachment at 18, 22-23.

an adjacent BRS operator.⁷³

32. We are not persuaded by WCA's study which purports to demonstrate that the PFD coordination threshold values for CDMA MSS in the downlink band would not sufficiently protect the BRS operators in all cases.⁷⁴ WCA's technical analysis does not reflect the actual operating conditions of Globalstar's satellite system.⁷⁵ WCA's analysis assumes that MSS satellite downlinks are transmitting at the maximum PFD level at all times, at all possible elevation angles. However, Globalstar's satellites, typical of most NGSO satellite systems, can not meet the theoretically maximum PFD coordination threshold values at all possible angles of elevation. WCA's analysis also assumes that the downlink transmissions are unmoving and fixed in space. Given the mobile nature of NGSO satellites, however, the position of the satellite will change continuously as will the satellite antenna gains towards the terrestrial receivers and the terrestrial antenna gain towards the satellites. A more persuasive analysis would have accounted for the relative motion of the satellites with respect to the terrestrial systems and would have been based on the percent of time that the interference to noise ratio or signal to noise plus interference ratio varies at the terrestrial receiver. Further, once such information is known, the BRS licensees could determine the percentage of time, if any, that the satellite PFD would exceed a level that could be tolerated by BRS receivers without causing operational degradations. In addition, as discussed above, manufacturers can design BRS equipment such that BRS can reliably operate under the known PFD levels. WCA's analysis is also inconsistent with the analysis used by the international community.⁷⁶ In analyzing the impact of MSS PFD levels on terrestrial facilities, the ITU adopted an in-depth statistical evaluation that utilized a "degradation of performance" statistical analysis, which takes the factors discussed above into account when analyzing the interaction of an NGSO satellite constellation with FS receivers. This statistical analysis resulted in ITU-RR App. 5, Annex 1.⁷⁷

⁷³ See 47 C.F.R. §§ 25.208(v); 25.213(b) in Appendix A.

⁷⁴ See WCA Petition, Attachment A.

⁷⁵ We also note that some of the "antennas" analyzed by WCA are not physically realizable, and that other WCA analyses have, in fact, used different definitions of interference than used in the current Reconsideration Petition. Compare *Ex Parte* Letter from Andrew Kreig, President of WCA, to Marlene H. Dortch, Federal Communications Commission (dated July 28, 2003), Attachment at 3 (using an increase in receiver noise of 1 dB, which is equivalent to an interference-to-noise ratio of -5.9 dB) with WCA Petition, Attachment A, Declaration of Harry W. Perlow (using an interference-to-noise ratio of -10 dB). WCA fails to consider the constantly changing polarization of Globalstar's system, which accordingly corresponds to a lower time-average signal at the output terminals of any BRS antenna than exists in WCA's model. In effect, WCA's model of co-planar polarization between MSS and BRS systems reflects a technically impossible scenario in which BRS antennas would have to constantly rotate while tilting in synchronization with the movement of an MSS satellite.

⁷⁶ See *supra* ¶ 31 (citing ITU RR App. 5, Annex 1).

⁷⁷ We note that an ITU Working Party 8F Report, which analyzes geostationary satellite orbit satellites interacting with IMT2000 terrestrial components, has been submitted as part of an *ex parte* letter filed on behalf of Sprint Nextel. See *Ex Parte* Letter from Trey Hanbury, Counsel for Sprint Nextel, to Marlene H. Dortch, Federal Communications Commission (dated September 15, 2005). In modeling the satellite/base station interaction in that report, the satellite is assumed to be continuously visible at a 10 degree elevation to the base station. Because Globalstar satellites are NGSO, their satellites will be seen at continuously varying elevation angles. Due to the dynamic nature of NGSO satellites, we find the analysis in this report does not apply to the current situation and, therefore, the results of the study are not directly applicable to the Globalstar/BRS sharing situation. Further, we note that the PFD limits that we have adopted are based upon the WRC-approved International Radio Regulations (continued....)

33. We disagree with the BRS Petitioners contention that, because the Commission has declined to designate the same spectrum for both MSS and terrestrial services in prior decisions, the Commission's overall spectrum policy is that MSS and terrestrial services cannot utilize the same spectrum.⁷⁸ The Commission determines whether two services may operate in the same spectrum on a case-by-case basis.⁷⁹ We acknowledge that the Commission previously denied a request to add a co-primary allocation for MSS in the 2500-2520 MHz (space-to-Earth) and 2670-2690 MHz (Earth-to-space) bands where BRS currently operates because, at that time, we determined that such sharing would present technical challenges and "that MSS has sufficient spectrum without those band segments."⁸⁰ With respect to the 2496-2500 MHz band, for which the Commission has adopted a sharing plan to address the technical challenges associated with such use, we note that MSS must accept interference from the fixed and mobile services that the BRS is anticipated to deploy in the band and will likely take this into account when determining how to most efficiently deploy its services. Thus, the Commission's decision for this band is sufficiently different from the allocation sought previously for the 2.5 GHz band. As for the BRS Petitioners' claims that the MSS ATC decision provides further evidence that MSS and terrestrial services cannot share spectrum, we disagree that the Commission's decision in that proceeding should govern our decision here. In the MSS ATC proceeding, MSS licensees wanted to dynamically reassign spectrum for use on either satellite or ATC systems as needed and, in this context, the Commission concluded that sharing between separately-licensed MSS and terrestrial networks was not practical.⁸¹ In this proceeding, we have crafted rules that allow MSS and terrestrial licensees to operate networks that are separate and distinct from each other.

34. Finally, we reject Globalstar's proposals to reduce BRS power limits and out-of-band emissions so that MSS can use the 2496-2500 MHz band without suffering harmful interference. Globalstar's proposed limitations would significantly restrict BRS operations. For example, Globalstar's proposal to limit BRS base station power to 600 watts would reduce their power to 5 dB below the designated Commission 2,000 watt power limit. In addition, although that proposal also would reduce the area in which Globalstar's MSS customers could receive interference, the proposal could also significantly reduce the BRS' coverage area. We also note that Globalstar's proposal to establish an emission limit of -209 dBW/Hz at the boundary of the MSA is 13.5 dB lower than the Commission-imposed co-channel limit of 47 dBμV/m.⁸² In essence, the effect of Globalstar's proposals would be to

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which have a higher level of authority than a report written by an ITU Working Party.

⁷⁸ See, e.g., Nextel Petition at 5-8 (citing, *inter alia*, *ATC Report and Order*, 18 FCC Rcd 1962); Sprint Petition at 5; WCA Petition at 9-11 (citing 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, *First Report and Order and Memorandum Opinion and Order*, FCC 01-256, 16 FCC Rcd 17222 (2001) (*AWS Report and Order*)).

⁷⁹ See, e.g., Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in the 5925-6425 MHz/3700-4200 MHz Band and 14.0-14.5 GHz/11.7-12.2 GHz Bands, IB Docket No. 02-10, FCC 04-286, *Report and Order*, 20 FCC Rcd 674 (2005) (adopting rules that allow satellite providers to operate in the same spectrum as incumbent terrestrial operators).

⁸⁰ *AWS Report and Order*, 16 FCC Rcd at 17241 ¶¶ 35, 36.

⁸¹ See generally *ATC Report and Order*, 18 FCC Rcd 1962.

⁸² See 47 C.F.R. § 27.55(4).

negate footnote US391, which states that MSS does not receive protection from fixed and mobile services in the 2495-2500 MHz band.⁸³

3. Grandfathered BAS Operations

35. *Background.* As of July 25, 1985, the Commission ceased accepting applications for new or modified BAS and Part 101 microwave stations in the 2483.5-2500 MHz band.⁸⁴ Existing stations are grandfathered and operate on a co-primary basis with the MSS and BRS. These operations include fixed point-to-point TV Relay stations⁸⁵ (Intercity Relays (ICR) and TV Translator Relays (TTR)), mobile TV pickup (TVPU) stations licensed under Part 74 of our rules, and Local Television Transmission Service (LTTS) stations, licensed under Part 101 of our rules. As indicated by our licensing records, this band is lightly used by these services – only 11 TV Relay stations (10 ICR and one TTR), 77 TVPU stations,⁸⁶ and one LTTS station⁸⁷ currently operate in the band.

36. *Petitions.* The BRS Petitioners contend that the BRS operators cannot share spectrum with the grandfathered licensees and that the Commission must relocate BAS and LTTS licensees in the 2496-2500 MHz band.⁸⁸ To bolster this claim, WCA provides a report completed by Kessler and Gehman Associates, Inc. (KGA) that concludes that a BRS receiver operating in the new Channel 1 spectrum will experience interference even if it is located several miles away from a BAS mobile unit.⁸⁹

⁸³ See 47 C.F.R. § 2.106 US391.

⁸⁴ For the purpose of this discussion, BAS operations will be defined to include Part 101 LTTS.

⁸⁵ TV Relay stations use fixed point-to-point facilities primarily to transmit or relay TV program material and related communications for use by TV broadcast stations.

⁸⁶ TVPU stations are used to perform electronic newsgathering (ENG) at the scene of a breaking event and to cover scheduled events, such as sport matches. TVPU stations may transmit from an ENG truck directly to a fixed receiver at the station or through a relay link at a remote fixed receiver location. They may also originate or relay transmission through aeronautical TVPU platforms, such as blimps, to a fixed receive point or to a mobile satellite uplink truck, or other facilities, to reach the ultimate receive point, typically a studio. TVPUs also transmit from “window ledge” or mobile camera locations to on-site production facilities or to a TVPU truck for relay to a fixed point. The majority of the 77 grandfathered TVPU stations are licensed with a circular geographic area designated by a radius (in kilometers) around a set of coordinates (latitude/longitude). The rest (27) are licensed for city-wide coverage and one for county-wide coverage.

⁸⁷ LTTS typically is used to provide temporary service to broadcasters and the community antenna relay service (CARS), and is coordinated on a case-by-case basis, such that the LTTS licensee is responsible for determining the presence of other systems in order to protect its own receivers from interference. The one grandfathered LTTS station is licensed on a nationwide basis over several bands from 1.9 to 31.3 GHz.

⁸⁸ Sprint Petition at 7-8; WCA Petition at 16-23. See also Nextel Petition at 11-12, n.32 (citing filings by WCA in support of its contention that the “Commission departs from the record evidence concerning interference between BRS and grandfathered licenses . . .”).

⁸⁹ WCA Petition at 16-17. According to WCA, interference can occur at distances ranging from 11-39 miles based on moderate antenna height assumptions and even greater distances if antennas reach farther above ground. *Id.* at 17. WCA also claims that the inability of BAS and BRS to share spectrum has been set forth in previous Commission proceedings. *Id.* at 17. For example, WCA states that, in response to a proposal to relocate BRS (continued....)

Similarly, SBE argues that the Commission mistakenly concluded that by utilizing proper frequency coordination techniques, MSS ATC base stations operating in the 2487.5-2493 MHz band could co-exist with operations on grandfathered TV BAS Channel A10 operating in the 2483.5-2500 MHz band. SBE further argues that BRS operations at 2496-2502 MHz, which would involve “intensive, cellular-like use with base stations and thousands of customer premises equipment (CPE) devices, would create a similar problem for TV BAS operations.”⁹⁰

37. SBE proposes to resolve its interference concerns by converting the 2.5 GHz TV BAS band into three 12-megahertz-wide digital channels and moving these operations to the 2450-2486 MHz band.⁹¹ SBE states that this proposal could be implemented concurrently with Nextel’s transition of BAS operations at 1990-2025 MHz to the 2 GHz TV BAS band.⁹² SBE further notes that there would be an additional cost to convert fixed link 2.5 GHz TV BAS from analog to digital, but that MSS ATC and BRS-1 operators – and not Nextel – should be required to pay this cost.⁹³ SBE claims its proposal will terminate the existing co-channel relationships of MSS and BRS with TV BAS, reduce out-of-band emissions from TV BAS operations as digital operations need to meet a more stringent emission mask, and make digitally modulated TV BAS operations less susceptible to interference from co-channel ISM devices and co-channel Part 15 spread spectrum devices at 2400-2483.5 MHz.⁹⁴ WCA supports SBE’s proposal to revise the BAS channel plan, but concludes that the beneficiaries of BAS relocation – Globalstar and the 1.7/2.1 GHz AWS auction winners – should bear the costs of relocating BAS.⁹⁵

38. *Discussion.* We conclude that spectrum sharing between BAS and BRS in this band will be possible, and thus we deny the parties’ request to relocate incumbent BAS operations. First, as noted above, there are relatively few BAS facilities operating in the band and this number will not increase.⁹⁶ In many geographic areas where BRS will be operating there may not be any BAS operations. Moreover, in areas where BRS and BAS operations may coexist, licensees can implement measures to reduce the

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channels 1 and 2 to the 2490-2500 MHz band, WCA, in its reply comments, discussed the adjacent channel interference that could result from analog BAS operations at 2467-2483.5 MHz. *Id.* at 17.

⁹⁰ SBE Petition at 1-4. SBE claims that frequency coordination cannot make operations of ATC and BAS on a co-channel basis possible. SBE Petition at 2.

⁹¹ SBE Petition at 4, 5. These channels would be designated as Channel A8d at 2450-2462 MHz; Channel A9d at 2462-2472 MHz, and Channel A10d at 2472-2486 MHz. SBE states that, as a result of its proposal, a 1.5-megahertz guard band would separate TV BAS Channel A10d and the MSS ATC band. *Id.* at 4. *See also* WCA Opposition at 12 (endorsing SBE’s proposal).

⁹² *See* SBE Petition at 5-6. SBE claims that such action could reduce Nextel’s costs because equipment costs could decrease if analog operations are no longer needed to support 2.5 GHz TV BAS operations. *Id.*

⁹³ *Id.* at 6-7.

⁹⁴ *Id.* at 4-7.

⁹⁵ WCA Petition at 19. *See also* Nextel Petition at 12-13; Sprint Petition at 8 (stating that the beneficiaries of the BAS relocation should pay the costs, which would include the AWS auction winners). WCA recognizes the efforts of Nextel to assist in the cost savings of the relocation, but still sticks to its argument that the beneficiaries, Globalstar and the AWS auction winners, should bear those costs. *See* WCA Reply at 3.

⁹⁶ *See supra* ¶ 35.

potential for interference. For example, because the majority of BAS stations are authorized to use channels outside the 2496-2500 MHz band, these licensees may be able to use other BAS channels in the 2 GHz band and thus facilitate the coordination of BRS and BAS operations in the 2496-2500 MHz band. For fixed stations, coordination procedures between stations are well established and although formal coordination may not be required, those procedures can be used by licensees to avoid situations that may cause harmful interference.⁹⁷ For mobile operations, we note that BAS licensees generally have access to multiple receive sites. In some cases, BAS licensees, knowing the location of BRS operations, can select a receive site that avoids causing interference to those operations. BAS licensees are accustomed to operating in this manner in order to permit multiple licensees to provide service in a limited amount of spectrum.⁹⁸ Similarly, BRS licensees can design their operations (or coordinate) using information on BAS operations from our ULS database. For some limited information, such as BAS receive only sites used for mobile BAS operations, which currently are not listed in the database, we encourage BAS licensees to provide this information to BRS licensees (both are co-primary in the band) and coordinate their operations.⁹⁹

39. Regarding the study submitted by WCA claiming that there will be interference between BRS and BAS systems, we note that the study only assumes worst-case situations which are unlikely to exist in an actual deployment. The study assumes, for example, a direct line-of-site transmission path between BAS and BRS transmitting and receiving antennas, perfect antenna coupling, and no losses due to antenna angular and polarization discrimination. Because all of these factors are unlikely to exist at any given time, the separation distances claimed by the study may, in fact, be substantially shorter than those claimed.

40. We recognize however, that in a few cases successful sharing between BRS and BAS in this band may be difficult to achieve. Nonetheless, we do not agree with SBE's suggestion that all BAS operations in the 2.5 GHz band need to be relocated to resolve a few difficult sharing cases that may occur. Individual parties, however, may agree to relocate some BAS operations out of this band in order to relocate BRS operations into this band. We note, for example, that the Commission has proposed procedures for AWS licensees in the 2.1 GHz band to relocate BRS licensees into this band and provide BRS licensees with comparable facilities.¹⁰⁰ The parties could agree that the AWS licensee relocate, as

⁹⁷ See 47 C.F.R. §§ 74.638, 101.103, 101.105.

⁹⁸ Such a situation occurs at the site of a major news event.

⁹⁹ The availability of such data would facilitate sharing between BAS and BRS operations. We note, for example, that SBE suggests that the availability of receiver data in the ULS would facilitate BRS/BAS sharing in the lower adjacent band. See SBE July 11, 2005, Response to Reply of Globalstar to the Informal Objection of the Society of Broadcast Engineers, Inc., filed regarding Globalstar applications for Mobile Satellite Service (MSS) Ancillary Terrestrial Component base stations, File Nos. SAT-MOD-20050301-00054 and SAT-MOD-20050301-00261. We also note that, after the Commission modified the coordination rules for the BAS bands above 2 GHz, it provided a mechanism for BAS licensees to add their receive-only sites for fixed BAS operations to the database to facilitate the coordination process and avoid interference. See Revisions to Broadcast Auxiliary Service Rules in Part 74 and Conforming Technical Rules for Broadcast Auxiliary Service, Cable Television Relay Service and Fixed Services in Parts 74, 78 and 101 of the Commission's Rules, ET Docket No. 01-75, *Report and Order*, 17 FCC Rcd 22979, 23001-23005 ¶¶ 53-65 (2002).

¹⁰⁰ Comparable facilities would maintain the BRS operations' throughput, reliability, and operating costs. See generally *AWS 8th R&O and 5th NPRM*, 20 FCC Rcd 15866.

necessary, only those BAS operations in the 2496-2500 MHz band that impede their ability to provide comparable facilities to the BRS licensee in this band.¹⁰¹

41. Also, we note that in the *ATC Report and Order*, the Commission recognized the potential for mutual interference between ATC operations and the grandfathered incumbent operations in the band, but we ultimately determined that these services would be able to share spectrum and that any potential interference concerns could be mitigated through coordination.¹⁰² Similarly, in the *ATC MO&O*, we upheld our decision concerning ATC licensees' coordinated use of the 2483.5-2500 MHz band with BAS licensees, but did not require that ATC licensees relocate BAS operations.¹⁰³ In addition, in the *Big LEO Spectrum Sharing Order*, we concluded that coordinated sharing of the 2483.5-2500 MHz band by ATC and BAS operators was still possible, and declined to relocate BAS operations when ATC operations in this band were moved down 5 MHz to 2487.5-2493 MHz.¹⁰⁴ In this case, coordinated sharing of the 2496-2500 MHz band by BAS and BRS operators is no different.

42. Finally, we note that SBE claims the relocation of BAS operations would improve spectrum sharing between BAS and MSS as well as with Part 15 unlicensed devices and Part 18 ISM equipment. However, the issue of sharing between those services is not a matter addressed in this docket. To the extent that SBE's plan to re-channel the entire 2450-2500 MHz band (BAS channels 8, 9, and 10) would address these sharing issues, it is beyond the scope of the proceeding. Those matters have already been settled in prior Commission decisions and therefore will not be addressed herein.¹⁰⁵

4. Grandfathered Part 90 and Part 101 Operations

43. *Petitions.* The BRS Petitioners contend that the Commission must relocate grandfathered Part 90 and Part 101 licensees in the 2496-2500 MHz band because BRS operators cannot share spectrum with these licensees.¹⁰⁶ WCA points to Commission findings that ATC could suffer from and cause interference to these licensees and draws parallels between ATC and planned BRS operations

¹⁰¹ Converting BAS channel 10 to digital transmission should eliminate the four megahertz sharing between BAS and BRS.

¹⁰² See *ATC Report and Order*, 18 FCC Rcd at 2060-2063 ¶¶ 201-206. ATC operators, prior to construction and operation of ATC base stations, must consult local coordination committees for information on the frequencies used and the geographic locations of the BAS systems that may receive interference, and must take the steps necessary to avoid causing harmful interference to these previously licensed facilities. See *id.* at 2061-2062 ¶ 203.

¹⁰³ See *ATC MO&O*, 20 FCC Rcd at 4650-4651 ¶¶ 93-94.

¹⁰⁴ See *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13389-13390 ¶ 75. Subsequently, the International Bureau granted Globalstar the authority to operate ATC in the 2487.5-2493 MHz band under this ATC-BAS coordinated sharing approach, despite WCA's and SBE's specific objections. See *Globalstar LLC, Order and Authorization*, 21 FCC Rcd 398, 408-409 ¶¶ 27-31 (Int'l Bur. 2006). Neither Globalstar, WCA nor SBE has requested review or reconsideration of that decision.

¹⁰⁵ See *ATC MO&O*, 20 FCC Rcd at 4650-51, ¶¶ 93-94 (declining SBE's request to mandate a relocation scheme for BAS Channels A8, A9, and A10). See also *ATC Report and Order*, 18 FCC Rcd at 2060-63 ¶¶ 201-206.

¹⁰⁶ Sprint Petition at 7-8; WCA Petition at 16-23. See also Nextel Petition at 11-12, n.32 (citing filings by WCA in support of its contention that the "Commission departs from the record evidence concerning interference between BRS and grandfathered licenses . . .").

in the band.¹⁰⁷ In particular, WCA argues that because ATC facilities and some BRS operations have similar technical and operating characteristics, BRS operations will also suffer from and cause interference to the grandfathered Part 90 and Part 101 operations, but that, unlike ATC operators, BRS licensees are not required to protect the Part 90 and Part 101 licensees or accept interference caused by these licensees.¹⁰⁸ WCA concludes that the beneficiaries of relocating the Part 90 and Part 101 licensees, the AWS auction winners and, possibly, Big LEO ATC operators, should bear the relocation costs.¹⁰⁹ SBE also recommends that the Commission transition Part 90 public safety operations in the 2450-2500 MHz band to the 2450-2486 MHz band, using 12-megahertz wide digital channels.¹¹⁰ SBE argues that public safety providers utilizing analog modulation in the 2487.5-2500 MHz band may experience increasing interference in the future unless the Commission adopts SBE's recommendation.¹¹¹

44. *Discussion.* The 2496-2500 MHz band, which is part of the larger 2483.5-2500 MHz band, was originally licensed for conventional public safety operations as well as to fixed terrestrial stations, including temporary fixed (transportable) stations, operating as links in microwave relay systems serving petroleum companies. Since 1985, however, the Commission has prohibited any further terrestrial licensing in this band but has permitted existing stations whose initial applications were filed on or before July 25, 1985 to be "grandfathered" in the 2483.5-2500 MHz band subject only to license renewal.¹¹² A database search shows that the 2496-2500 MHz band currently includes 11 point-to-point microwave, private-industrial business licenses ("Part 101 grandfathered licenses") and 4 point-to-point public safety licenses ("Part 90 grandfathered licenses") that are grandfathered on a primary basis.

45. In the *BRS/EBS Order*, the Commission noted that new BRS licensees in the 2495-2500 MHz band could successfully share this spectrum through coordination efforts, given the limited number of grandfathered licensees involved, but deferred consideration of the possible relocation of these operations to a future proceeding.¹¹³ In the *Big LEO Spectrum Sharing Order*, the Commission also did not establish a specific relocation plan for these remaining grandfathered incumbents at 2495-2500 MHz but noted that it would provide a relocation plan, if needed, in addressing AWS relocation issues in ET Docket No. 00-258.¹¹⁴ For the reasons discussed below, we do not believe that it is necessary to require the relocation of the grandfathered Part 90 and Part 101 licensees in the 2496-2500 MHz band.

46. First, we disagree with the BRS Petitioners' assertions that BRS operations cannot co-exist with the grandfathered Part 90 and Part 101 operations in the 2496-2500 MHz band. The BRS

¹⁰⁷ WCA Petition at 20. *See also* Sprint Petition at 8.

¹⁰⁸ WCA Petition at 20-21. *See also* Sprint Petition at 8.

¹⁰⁹ WCA Petition at 21. *See also* Nextel Petition at 12-13; Sprint Petition at 8 (stating that the beneficiaries of the Part 90 and Part 101 relocation should pay the costs, which would include the AWS auction winners).

¹¹⁰ SBE Petition at 8. *See supra* ¶ 37 (SBE making similar proposal for the 2.5 GHz TV BAS band).

¹¹¹ SBE Petition at 8.

¹¹² The grandfathered status of the incumbents in this band is set forth in Parts 2, 90, and 101 of the Commission's Rules. *See* 47 C.F.R. §§ 2.106 NG147, 90.20(d)(73), 90.35(c)(74), 101.147(f)(2).

¹¹³ *See BRS/EBS R&O*, 19 FCC Rcd at 14179-80 ¶ 28.

¹¹⁴ *See Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13386 ¶ 67.

Petitioners have failed to provide sufficient detail about the planned or proposed BRS operations in the band to support the conclusion that these grandfathered operations would significantly impact BRS operations in the band. Instead, the BRS Petitioners offer generalized comparisons of BRS operations to ATC operations as evidence of the potential for mutual interference between BRS operations and the grandfathered terrestrial operations in the band.¹¹⁵ In the *ATC Report and Order*, the Commission recognized the potential for mutual interference between ATC operations and the grandfathered incumbent operations in the band but ultimately determined that these services would be able to share spectrum and that any potential interference concerns would be mitigated through coordination.¹¹⁶ We similarly continue to believe that spectrum sharing between BRS and these grandfathered services is a viable option. We also disagree with the BRS Petitioners' contention that unlike ATC, BRS operators do not have to protect or accept interference from grandfathered licensees. BRS licensees and the grandfathered incumbents have co-primary status under our rules and, thus, BRS licensees are required to protect existing users from interference in the band.¹¹⁷

47. Further, we believe that coordination between BRS operators and the limited number of grandfathered operations in the band would sufficiently mitigate potential interference concerns, if any. As noted above, there are currently fifteen Part 90 and Part 101 incumbent grandfathered licenses in total in this band. Because this total number of grandfathered operations is small and localized, we believe that spectrum sharing is feasible. The nature of these services will also facilitate coordination. The eleven Part 101 grandfathered licenses, which are used primarily to provide temporary fixed communications, are currently coordinated on a case-by-case basis pursuant to the formal coordination procedures contained in Section 101.103 of the Commission's rules.¹¹⁸ These licensees would continue to be responsible for coordinating with other systems in order to protect their own receivers. Although the four Part 90 grandfathered licenses are not required to coordinate, because these public safety operations are generally localized and are critical to public safety, the information necessary for coordination with BRS – e.g., site and antenna information, as well as usage patterns – should be easily obtainable through the appropriate land mobile frequency coordinator or directly from the licensees. Because BRS, Part 90, and Part 101 licensees are co-primary, we expect all of these parties to cooperate in sharing spectrum and, as necessary, coordinate their operations. We believe that the small number and discrete localized nature of these incumbent licenses will permit efficient spectrum sharing in the band and we, therefore, deny the BRS Petitioners' request to require the relocation of Part 90 and Part 101 incumbent grandfathered licenses.¹¹⁹

¹¹⁵ See, e.g., WCA Petition at 19-23.

¹¹⁶ See *ATC Report and Order*, 18 FCC Rcd at 2060-2063 ¶¶ 201-206.

¹¹⁷ See 47 C.F.R. § 2.106 NG147, which provides in part that “. . . in the segment 2495-2500 MHz, these grandfathered stations may also continue to operate on a primary basis with stations in the fixed and mobile except aeronautical mobile services that are licensed under Part 27 (Miscellaneous Wireless Communication Services) of the Commission's rules.” See also 47 C.F.R. §§ 90.20(d)(73), 90.35(c)(74), 101.147(f)(2). The BRS is now licensed under Part 27 of our rules. See *BRS/EBS R&O*, 19 FCC Rcd 14165.

¹¹⁸ 47 C.F.R. § 101.103.

¹¹⁹ Because we have decided herein that the relocation of the grandfathered incumbents in the 2496-2500 MHz band is not necessary, we need not address the petitioners' arguments with respect to digitization of Part 90 licensees or who should bear the costs of relocation.

5. Industrial, Science, and Medical Operations

48. *Petitions.* The BRS Petitioners argue that the Commission should modify Part 18 of the Commission's rules to limit the emissions of ISM devices that operate in the ISM band centered at 2450 MHz (*i.e.*, the 2400-2500 MHz band).¹²⁰ Currently, the Commission's rules do not impose any radiated emission limits on ISM equipment within the bands specifically allocated for ISM equipment, although there are limits on those emissions outside the ISM bands.¹²¹ Even under this condition, we previously declined to relocate ISM devices, concluding that BRS could coexist with ISM operations present in the band.¹²² As background, ISM equipment is designed to generate and use radio frequency (RF) energy for industrial, scientific, medical, domestic, or similar purposes, excluding telecommunication applications. Common ISM equipment includes industrial heating, magnetic resonance, medical diathermy, and ultrasonic equipment, as well as consumer microwave equipment intended for use in a residential environment, such as domestic microwave ovens, jewelry cleaners, and ultrasonic humidifiers.¹²³

49. The BRS Petitioners contend that the Commission failed to demonstrate that BRS providers could share spectrum with ISM equipment operating in the 2400-2500 MHz band.¹²⁴ According to these Petitioners, AWS applications – a potential use for the BRS band – create a sharing scenario different from that which currently exists.¹²⁵ For example, WCA claims that because existing users of the band are more likely to operate in remote areas, and use high power, high-gain antenna systems, they are less likely to receive interference from ISM devices than will future BRS operations, which are anticipated to operate in urban areas where ISM devices are heavily used.¹²⁶

50. The BRS Petitioners propose that the Commission require that all ISM devices operating in the 2496-2500 MHz band and marketed after December 31, 2006, adhere to emissions limits of 500 microvolts/meter, measured at three meters, consistent with the emissions limits for unlicensed intentional radiators under Section 15.209 of the Commission's rules. WCA explains that, although this approach is less than ideal for BRS operators, it provides BRS licensees with the assurance that interference from ISM equipment should not worsen in that band.¹²⁷ The BRS Petitioners, in subsequent *ex parte*

¹²⁰ Sprint Petition at 6-7; WCA Petition at 23-26. *See also* Nextel Petition at 11. *See* 47 C.F.R. § 18.301 for a listing of frequency bands allocated for ISM.

¹²¹ *See* 47 C.F.R. § 18.305.

¹²² *Big LEO Spectrum Sharing Order*, 19 FCC Rcd at 13386 ¶ 67.

¹²³ 47 C.F.R. §§ 18.107(d)-(g), (j).

¹²⁴ *See* Nextel Petition at 9-10; Sprint Petition at 6; WCA Petition at 23-24.

¹²⁵ Sprint Petition at 6; WCA Petition at 24.

¹²⁶ WCA Petition at 24. *See also* Nextel Petition at 10; Sprint Petition at 6-7. WCA also argues that ISM emissions could worsen as filter technology evolves to permit ISM devices to operate with higher signal strengths unless the Commission amends Section 18.305(a) of its rules to limit signal strength in the 2496-2500 MHz band. WCA Petition at 24-25.

¹²⁷ WCA Petition at 25-26. *See also* Sprint Petition at 7; Nextel Petition at 11 n.31 (stating that the Commission could utilize the Part 15 emissions limits for ISM devices). The Association of Home Appliance Manufacturers (AHAM) opposes this proposal, citing the lack of a clear demonstration that any interference actually exists and the need to adhere to internationally-harmonized ISM standards. *See Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated (continued....))

communications, have set forth a proposal to expand the out-of-band emissions limits set forth in Section 18.305 of the Commission's Rules, which currently apply to ISM equipment emissions below 2400 MHz and above 2500 MHz, to ISM equipment emissions in the 2496-2500 MHz band. As with their other proposals, the BRS Petitioners maintain that such restrictions are necessary to protect future BRS operations in the band.¹²⁸

51. Fusion UV Systems, a manufacturer of industrial ISM equipment in the band, refutes the BRS Petitioners' claims, stating that the BRS Petitioners have failed to show how ISM equipment will interfere with the BRS systems planned for the band.¹²⁹ Fusion argues that the location of the BRS channel at the extreme top end of a 100 megahertz-wide ISM band serves to minimize the potential of harmful interference from ISM equipment to BRS because most ISM emissions are concentrated towards the center of the band. It further states that distance and shielding between ISM and BRS devices can serve to attenuate potentially harmful signals. Thus, Fusion contends, the BRS Petitions are substantively deficient.¹³⁰ AHAM contends that just because there are no in-band emission limits does not mean that there are no emission limits at all, and notes that the out-of-band limits on ISM devices' emissions effectively operate as a limit on the radio frequency energy that such devices, especially microwave ovens, can emit.¹³¹ Motorola, however, contends that reasonable power limits must be placed on ISM equipment operating in the 2496-2500 MHz band, including microwave ovens, in spite of their intermittent use, in order to allow other co-frequency systems to be planned around a certain level of

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September 27, 2005) at 1-2, 4. *See also Ex Parte* Letter from William Keane, Counsel for Fusion UV Systems, Inc., to Marlene H. Dortch, Federal Communications Commission (dated October 3, 2005).

¹²⁸ *See Ex Parte* Letter from Paul Sinderbrand, Counsel for WCA, to Marlene H. Dortch, Federal Communications Commission, at 4-5 (dated September 9, 2005); *Ex Parte* Letter from Trey Hanbury, Counsel for Sprint Nextel, to Marlene H. Dortch, Federal Communications Commission at 1 (dated September 20, 2005). *See also Ex Parte* Letter from Paul Sinderbrand, Counsel for WCA, to Marlene H. Dortch, Federal Communications Commission (dated October 19, 2005) at 1-2 and 15-20; *Ex Parte* Letter from Steve B. Sharkey, Director, Spectrum and Standards Strategy for Motorola, Inc. to Marlene H. Dortch, Federal Communications Commission (dated December 1, 2005); and *Ex Parte* Letter from Steve B. Sharkey, Director, Spectrum and Standards Strategy for Motorola, Inc. to Marlene H. Dortch, Federal Communications Commission (dated January 10, 2006) at 1-3.

¹²⁹ *See generally* Fusion Opposition. On March 1, 2005, the International Bureau granted the Motion for Leave to Accept Late-Filed Opposition of Fusion UV Systems, filed January 21, 2005, and the Joint Motion for Leave to File Replies of WCA, Sprint, and Nextel filed February 3, 2005.

¹³⁰ Fusion Opposition at 9-10. Fusion also claims that the petitions are untimely because the BRS Petitioners should have raised their ISM arguments earlier in the proceeding. Because we conclude, below, that our decision not to impose on ISM operations the in-band emission limits associated with Part 15 devices was proper, we need not address that procedural argument at this time. *See also Ex Parte* Letter from William Keane, Counsel for Fusion UV Systems, Inc., to Marlene H. Dortch, Federal Communications Commission (dated October 3, 2005) (discussing and refuting the BRS Petitioners' petitions as well as arguments contained in their subsequent *ex parte* submissions).

¹³¹ *See Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (filed January 23, 2006) at 1-2; *Ex Parte* Presentation from Russell H. Fox, Counsel for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated January 24, 2006) at 8-9; and *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated February 10, 2006) at 1.

interference.¹³² Manufacturers of consumer ISM equipment also claim that the BRS Petitioners have not offered a sufficient demonstration of harmful interference and contend that compliance with the proposed standards would result in more expensive and less effective consumer products.¹³³ AHAM contends that limitation of emissions within the ISM bands would not be consistent with international regulations.¹³⁴ AHAM also asserts that the BRS Petitioners' claims regarding the potential for interference to BRS devices from microwave ovens are faulty because they are based on invalid interpretations of outdated and improperly generated interference potential study data.¹³⁵

52. *Discussion.* As Fusion notes, the BRS Petitioners have failed to provide sufficient detail about the planned or proposed BRS operations in the band to support the conclusion that there would be harmful interference from ISM equipment.¹³⁶ Instead, the BRS Petitioners offer generalized conclusions about the inability of ubiquitous portable and mobile BRS equipment to coexist with ISM equipment.¹³⁷ Similarly, because the study cited by Motorola is several years old, and contains facts and analysis that are in dispute, we conclude that it is not useful as a basis for imposing restrictions on the use of ISM equipment. Based on the nature of use of the ISM band, however, as well as the proven ability of existing services to coexist successfully on these frequencies, we continue to believe that BRS operations can share the band with ISM equipment operating under the current Part 18 rules and find that the BRS

¹³² See *Ex Parte* Letter from Steve B. Sharkey, Director, Spectrum and Standards Strategy for Motorola, Inc. to Marlene H. Dortch, Federal Communications Commission (dated January 10, 2006) at 1-3.

¹³³ See, e.g., *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated January 21, 2005) at Appendix A (stating that a study by Panasonic shows that, in order to comply with the BRS Petitioners' proposal, it would have to alter the microwave oven design in a way that would substantially increase its weight and cost to produce, reduce its effectiveness, and more generally "shake the basics of microwave oven design"). See also GE Company Reply, Matsushita Electric Corporation of America Reply, and Whirlpool Reply.

¹³⁴ See *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated December 23, 2005) at 2-3 (refuting Motorola's *Ex Parte* assertions).

¹³⁵ See *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated December 23, 2005) at 1-2. Motorola had claimed that a study of microwave ovens conducted by the National Telecommunications and Information Administration (NTIA) in 1994 showed that all but one of the microwave ovens that met the Part 18 limits above 2500 MHz also met the Part 18 limits starting at 2496 MHz. See *Ex Parte* Letter from Steve B. Sharkey, Director, Spectrum and Standards Strategy for Motorola, Inc. to Marlene H. Dortch, Federal Communications Commission (dated December 15, 2005) Attachment, page 4. AHAM contends that the NTIA study, which had different measurement methods and load size than specified in Part 18 of the Commission's rules, was not designed to support the analyses or conclusions that Motorola presented in support of the BRS Petitioners' claims. In addition, AHAM refutes Motorola's claim that the NTIA study demonstrates that all but one of the microwaves tested that meet the Part 18 limits outside the 2400-2500 MHz band also meet those limits starting at 2496 MHz. See *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated December 23, 2005) at 1-2.

¹³⁶ Fusion Opposition at 10.

¹³⁷ See, e.g., Sprint Petition at 6 (describing BRS operations as "likely to be ubiquitously deployed, and operat[ing] at relatively lower power levels and in closer proximity to ISM operations [than current users of the band]"); WCA Petition at 23 (characterizing the combination as "a recipe for disaster").

Petitioners have failed to give us cause to deviate from the well established and internationally-harmonized ISM standards. As such, we deny the BRS Petitioners' request to modify our rules pertaining to ISM operations in the 2400-2500 MHz band.

53. We note that the frequencies in question represent only the upper four megahertz of the 100-megahertz-wide ISM band and are 46 megahertz away from the nominal operating frequency of most ISM equipment.¹³⁸ There is no requirement that ISM equipment use all 100 megahertz, and many ISM applications may not even radiate in the 2496-2500 MHz portion of the band that will be used by BRS. ISM equipment also must adhere to emission limits above 2500 MHz and below 2400 MHz, and therefore the emissions at the upper end of the band where sharing with BRS would occur will tend to be of lower magnitude than those of frequencies towards the center of the band.¹³⁹ We also find it significant that an analogous sharing situation occurs at the lower end of the ISM band where the Amateur Radio Service shares spectrum in the 2400-2450 MHz band.¹⁴⁰ As the Amateur Radio Service has successfully shared spectrum with ISM equipment over a wide swath of frequencies, we believe that BRS can similarly share spectrum with ISM equipment in the four megahertz in question here.

54. In addition to amateur operations, existing MSS, BAS, and private radio licenses successfully operate in this band with ISM equipment without significant interference problems. The ability of these services to share the spectrum suggests that it is not necessary to impose in-band restrictions on ISM equipment emissions, notwithstanding the BRS Petitioners' assertions to the contrary.¹⁴¹ Given these services' successful use of the band, we would, at a minimum, expect the BRS

¹³⁸ See Fusion Opposition at 10 (agreeing with the Commission's earlier conclusion that ISM energy is most often concentrated at the center of the ISM band). See also J. Park, S. Park, D. Kim, P. Cho, K. Cho, *Experiments on Radio Interference Between Wireless LAN and Other Radio Devices on a 2.4 GHz ISM Band*, in Proc. 57th IEEE Semiannual Vehicular Technology Conference, Jeju, Korea, April 2003, at 1798-1801; A. Kamerman, N. Erkocevic, *Microwave Oven Interference on Wireless LANs Operating in the 2.4 GHz ISM Band*, in Proc. 8th IEEE Int. Symp. Personal, Indoor and Mobile Radio Communications, Helsinki, Finland, Sept. 1997, at 1221-1227; B. Despres, France Telecom, CNET DMR/RMC, *Measurement of microwave oven radiation between 1 & 18 GHz in relation with the CISPR standardization activities*; and T. Rondeau, M. D'Souza, D. Sweeney, *Residential Microwave Oven Interference on Bluetooth Data Performance*, in IEEE Transactions on Consumer Electronics, Vol. 50, No. 3, August 2004.

¹³⁹ See 47 C.F.R. § 18.305(b). In a series of recent *ex parte* filings, Sprint Nextel and AHAM have discussed whether the lack of an in-band power restriction on microwave oven operations is incompatible with the low-power broadband BRS operations that are anticipated to be deployed in the band. See, e.g., *Ex Parte* Letters of Trey Hanbury, Director, Sprint Nextel Corporation to Marlene H. Dortch, Federal Communications Commission (dated September 20, 2005, October 3, 2005, and October 18, 2005); *Ex Parte* Letter from Russell H. Fox, Counsel for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated October 11, 2005); and *Ex Parte* Letters from David Calabrese, AHAM, to Marlene H. Dortch, Federal Communications Commission (dated October 21, 2005, and November 1, 2005). As AHAM notes in its filings, the existing Part 18 out-of-band emission limitations serve to restrict such microwave oven equipment power at the upper end of the ISM band – specifically within the 2496-2500 MHz band at issue. In a similar vein, while the BRS Petitioners have suggested that potential future efficiencies in filter design might allow for greater ISM use of the 2496-2500 MHz portion of the band, we note that future ISM equipment will continue to need to attenuate power at the upper end of the ISM band in order to meet these out-of-band limits. Because of this practical limit on ISM design, and the speculative nature of the BRS Petitioners' concerns, we cannot conclude that in-band ISM emission limitations should be imposed.

¹⁴⁰ Specifically, with respect to the Amateur Radio Service, the 2402-2417 MHz portion of the band is primary, while the remaining portion is secondary.

¹⁴¹ See, e.g., Sprint Petition at 6.

proponents to explain how, in planning their BRS at the 2496-2500 MHz band, they have considered and rejected interference mitigation designs – a discussion missing from the record – before we would consider whether we should resort to the imposition of in-band radiated emissions limits on ISM equipment.¹⁴² More fundamentally, we observe that the manufacturers do not view interference between ISM equipment and Part 15 devices as an impediment to use, as at least one ISM device manufacturer – Panasonic – also produces cordless telephones that operate in the same 2400 MHz band as its microwave ovens. Similarly, Wi-Fi systems have been widely deployed in the band and have become an important means for the delivery of broadband access in commercial and public settings.¹⁴³ The success of Wi-Fi systems operating in the 2400 MHz band, whose operations use the same spectrum as the ISM devices in question, has not been diminished by reported or anticipated interference from ISM operations. The ability of both unlicensed operations – such as Wi-Fi and cordless phones – and licensed services to thrive in the band strongly suggests that BRS operations will be able to do likewise.

55. Finally, we believe that a number of factors will mitigate the potential for interference to BRS systems from ISM equipment emissions and obviate the need to impose additional limits on those emissions. As an initial matter, when signal losses due to fading, antenna discrimination (angular and polarization), and antenna efficiency are taken into account, we believe there is little potential for interference from ISM operations in the band. Moreover, because ISM equipment generally operates in easily identifiable locations – whether within an industrial setting or a residence – mobile BRS equipment can easily be moved to areas where no interference exists and fixed BRS equipment can be sited such that the potential for interference is minimized.¹⁴⁴ For example, industrial ISM operations often take place in heavily shielded factory settings.¹⁴⁵ For consumer equipment, a further mitigating factor is that such

¹⁴² Readily available academic literature offers insight into the types of the techniques that can be used to allow for different types of applications to be deployed in the band. See, e.g., S. Vasudevan, J. Horne, and M.K. Varanasi, “Reliable Wireless Telephony using the 2.4 GHz ISM Band: Issues and Solutions,” *IEEE Fourth International Symposium on Spread Spectrum Techniques and Applications*, September 1996 (ISSSTA ’96), Mainz (Germany), pp. 790-94 (discussing how receivers that incorporate signal processing techniques such as interference cancellation algorithms are intrinsically more robust to any such interference and, hence, are more easily deployable). Those BRS licensees that intend to deploy entirely new types of services in the band will be able to incorporate a variety of interference mitigation designs into their system architecture as part of the overall planning and development process.

¹⁴³ See, e.g., Comments of the Wi-Fi Alliance in ET Docket 04-186 (filed Nov. 30, 2004) (stating that “[i]ndeed, over the past few years Wi-Fi has been the shining star of the telecom industry and has become a billion dollar industry”); *Cities ponder offering wireless coverage for free*, available at http://www.insidebayarea.com/businessnews/ci_2922941 (discussing efforts by municipalities to provide municipal Wi-Fi access covering “hot zones” that are geographically larger than the discrete “hot spots” typically offered in coffee shops and hotel lobbies).

¹⁴⁴ This situation is similar to consumers’ simultaneous use of microwave ovens and Part 15 unlicensed devices, such as cordless telephones and 802.11b equipment. Because no remedy is offered for interference to Part 15 equipment, consumers quickly learn how to operate their devices such that interference is not problematic. Additionally, we note that in many cases, ISM and BRS equipment will be separated by obstructions such as walls which offer significant attenuation in the 2400 MHz frequency band. For example, simply passing through one wall can result in 10 to 12 dB of attenuation. See J. Unger, *Deploying License-Free Wireless Wide-Area Networks*, Cisco Press, Feb. 2003, at 191.

¹⁴⁵ See, e.g., *Ex Parte* Letter from Dennis A. Robitaille, Vice President and Chief Patent Counsel for Axcelis Technologies Incorporated (Axcelis), to Chairman Martin and Commissioners Copps, Adelstein, and Tate, Federal Communications Commission (dated February 16, 2006) at 1-2, describing how Axcelis’ processes, which, *inter alia*, use microwave-excited ultraviolet lamps in the ISM band to produce high intensity, uniform wavelength (continued....)

equipment is generally operated for only short durations (such as while cooking foods).¹⁴⁶

56. While we continue to believe that there is insufficient evidence to conclude that additional restrictions on ISM equipment are necessary to enable use of BRS in the 2496-2500 MHz band, we are also convinced that granting the BRS Petitioners' request would come at a high cost to ISM users in the band. Such action would put the United States at odds with internationally-harmonized ISM standards, which would negatively affect both the quantity and cost of ISM equipment that would be developed for the U.S. market and would jeopardize the ability of domestic manufacturers to compete in the global marketplace.¹⁴⁷ We also note that, even if we did believe that there was a reasonable case for interference from ISM equipment, the remedy that the BRS Petitioners propose is not well crafted to address the alleged problem. ISM equipment that does not operate in the BRS portion of the band (*i.e.*, operates in the lower portion of the band) would be subject to costly in-band emission rules under the BRS Petitioners' initial proposal. Moreover, if ISM use in the band were problematic, the BRS Petitioners' proposal to grandfather existing ISM equipment indefinitely would afford BRS licensees minimal relief as the average lifespan of the approximately 115 million microwave ovens in use in the United States ranges from 9 to 14 years. Thus, a significant period of time would elapse before BRS would actually begin to reap any benefits of such an emission limitation.¹⁴⁸ For all of the reasons detailed above, we conclude that the BRS Petitioners' proposal does not represent a "reasonable measure" for mitigation of any claimed potential for interference, especially in light of the burdens such limits would impose on ISM users and the lack of demonstrated benefits to BRS licensees.¹⁴⁹ Thus, we reject the BRS Petitioners' petition with respect to the Part 18 ISM rules.¹⁵⁰ Because it would jeopardize international harmonization of the ISM band to address a problem we are not persuaded will occur, we likewise reject

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radiation for use in manufacturing semiconductor chips, take place deep within steel and concrete buildings nowhere near the general public, and are unlikely to interfere with BRS operations at 2496-2500 MHz.

¹⁴⁶ See *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated January 21, 2005) at 2-3 and n.5 and n.6. AHAM has noted that recent studies have determined that the average U.S. household uses its microwave oven nine minutes per day. *Ex Parte* Letter from Russell H. Fox, Counsel for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated July 22, 2005) at 1.

¹⁴⁷ See Fusion Opposition at 15-16. See also Fusion Opposition at 16 (stating that "international harmonization benefits manufacturers and consumers by lowering costs and increasing economies of scale"). See also *Ex Parte* Letter from David Calabrese, Vice President, Government Relations for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated January 21, 2005) at Appendix A (describing a Panasonic study that concluded that microwave ovens would have to be designed without front windows or air intake and exhaust ports, and would need to operate at a reduced output power that would necessitate longer cooking times). Furthermore, these redesign costs could not be spread on a world-wide basis because consumers residing outside the United States would likely continue to prefer the more useful traditional microwave oven designs.

¹⁴⁸ See *Ex Parte* Letter from Russell H. Fox, Counsel for AHAM, to Marlene H. Dortch, Federal Communications Commission (dated July 22, 2005) at 12. Both the BRS Petitioners' initial proposal and subsequent *ex parte* filings would permit existing ISM equipment to operate in the band indefinitely – even if it would not meet the proposed new emissions criteria.

¹⁴⁹ See Joint Reply at 2.

¹⁵⁰ We also find that WCA's suggestion that future filter technology may permit ISM equipment to operate at higher signal levels that could interfere with BRS users in the band is, at best, speculative. See WCA Petition at 24-25. Our decision does not preclude us from evaluating future technological developments and proposing appropriate rule changes, when warranted.

the BRS Petitioners' most recent proposal that would have us alter the spectrum range for the out-of-band emissions limits of ISM equipment set forth in Section 18.305.

6. Procedural issues

57. AHAM claims that we should deny the BRS Petitioners' ISM-related arguments for failure to present new facts or circumstances needed to justify reconsideration pursuant to Section 1.106 of the Commission's rules.¹⁵¹ Fusion similarly contends that the BRS Petitioners' do not satisfy the requirements under Sections 1.429(b)(2) and 1.106(c) of the Commission's rules because their petitions for reconsideration fail to raise any facts that they did not know about (or should have known about) prior to the Commission's decision on this issue.¹⁵²

58. *Discussion.* We deny AHAM's request to deny the BRS Petitioners' petition on procedural grounds. Under Section 1.429(b), the Commission may review the merits of a petition for reconsideration when: (1) it is based on new facts previously unknown to the petitioner or unknowable even with due diligence; (2) it is based on changed circumstances; or (3) reconsideration would serve the public interest.¹⁵³ Even if we were to determine that those petitions were procedurally flawed under Section 1.429(b)(1) and (2) of our rules, the importance of ensuring proper spectral management and spectral efficiency warrants our review of the substance of the petitions pursuant to Section 1.429(b)(3).

B. BRS/EBS 3rd MO&O

1. Transition

59. The rules governing the transition of the 2500-2690 MHz band adopted in the *BRS/EBS R&O* are designed to reconfigure the 2500-2690 MHz band to enable the provision of new and innovative wireless services.¹⁵⁴ To accomplish this goal, the transition rules create a market-oriented process for relocating EBS licensees and BRS licensees from their current interleaved channel locations to their new contiguous spectrum blocks in the LBS, MBS, or UBS. The transition rules also provide for the relocation of EBS and BRS licensees from 2500-2502 MHz and 2618-2624 MHz to allow for the relocation of BRS Channels No. 1 and No. 2/2A licensees from the 2150-2162 MHz band to the 2496-2690 MHz band.

60. According to the rules adopted by the Commission in the *BRS/EBS R&O*, the transition occurs by Major Economic Area (MEA) and is undertaken by a proponent or multiple proponents. The transition occurs in the following five phases: (1) initiating the transition process by filing a Initiation Plan with the Commission; (2) planning the transition; (3) reimbursing the costs of the transition; (4) terminating existing operations in transitioned markets; and (5) filing the post-transition notification.¹⁵⁵

¹⁵¹ AHAM Reply at 4. *See also* LG Electronics Comments at 2-3; Whirlpool Reply at 3. AHAM also contends that any objections to sharing the band with ISM devices should have been raised in response to the *Big LEO Spectrum Sharing Notice*. AHAM Reply at 3. *See also* LG Electronics Reply at 2.

¹⁵² Fusion Opposition at 6.

¹⁵³ 47 C.F.R. § 1.429(b).

¹⁵⁴ *See* 47 C.F.R. §§ 27.1230-27.1235 (2005).

¹⁵⁵ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14198 ¶ 74.

a. Transition areas

(i) Size

61. *Background.* As mentioned above, in the *BRS/EBS R&O*, the Commission decided that the 2.5 GHz band should be transitioned by Major Economic Area (MEA).¹⁵⁶ There are fifty-two MEAs in the United States which, in turn, are comprised of Economic Areas (EAs). In addition to the fifty-two MEAs in the United States, the Commission added the following three EA-like areas as transition areas: Guam and Northern Mariana Islands; Puerto Rico and the U.S. Virgin Islands; and American Samoa. Thus, under the Commission's plan, proponents would be responsible for transitioning 55 distinct areas. The Commission indicated that it believed that transitioning the 2.5 GHz band by MEA would enable proponents to transition large areas of the country at once, which will ensure that the 2.5 GHz band is transitioned quickly and will enable the provision of new and innovative services for all Americans, including those in rural areas.¹⁵⁷

62. Most of the petitioners on this issue ask that the Commission reconsider its decision and instead require the transition of the 2.5 GHz band by Basic Trading Area (BTA).¹⁵⁸ There are 493 BTAs including areas in all fifty states, the District of Columbia, and the following BTA-like areas added by the Commission: American Samoa; Guam; Northern Mariana Islands; San Juan, Puerto Rico; Mayaguez/Aguadilla-Ponce, Puerto Rico; and the U.S. Virgin Islands. Only one party, NY3G, supported the Commission's decision.¹⁵⁹ One commenter to the *FNPRM* argued that Section 307(b) of the Act requires the Commission to base the size of the transition area on discrete governmental jurisdictions, which should be counties because school districts tend to coincide with county boundaries.¹⁶⁰

63. According to the petitioners, the large size of MEAs would make it extraordinarily difficult to transition the 2.5 GHz band from an administrative, technical, and financial perspective, primarily because of the large number of licensees in such a large geographic area.¹⁶¹ Specifically,

¹⁵⁶ *Id.* at 14201 ¶ 82.

¹⁵⁷ *Id.*

¹⁵⁸ The following parties filed petitions for reconsideration (PFR) of the Commission's decision to transition by MEAs: BellSouth Corporation, BellSouth Wireless Cable, Inc. and South Florida Television, Inc. (collectively, BellSouth); BRS Rural Advocacy Group; C&W Enterprises, Inc. (C&W); Catholic Television Network (CTN); Cheboygan-Ostego-Presque Isle Educational Service District/Pace Telecommunications Consortium (Pace); Choice Communications, LLC (Choice); National ITFS Association (NIA); Digital Broadcast Corporation (DBC); Grand Wireless Company (Grand Wireless); Hispanic Information and Telecommunications Network (HITN); Illinois Institute of Technology (IIT); ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc. (IMWED); Luxon Wireless, Inc. (Luxon); Nextel Communications (Nextel); SpeedNet, LLC (SpeedNet); Sprint Corporation (Sprint); Wireless Communications Association, International (WCA); and Wireless Direct Broadcast System (WDBS). *See* BellSouth PFR Opposition; BRS Rural Advocacy Group PFR Reply; C&W PFR; CTN/NIA PFR; Pace PFR; Choice PFR; DBC PFR; Grand Wireless PFR; HITN PFR; IIT PFR Opposition; IMWED PFR; Luxon PFR Opposition; Nextel PFR; SpeedNet PFR; Sprint PFR; WCA PFR; WDBS PFR. *See also* EBS Parties Reply Comments; George Mason University Reply Comments.

¹⁵⁹ NY3G PFR Opposition at 7.

¹⁶⁰ Miami-Dade Comments at 2.

¹⁶¹ *See* Nextel PFR at 3-4; SpeedNet PFR at 4; HITN PFR at 4.

petitioners note that the use of MEAs will delay the transition because the large number of licensees in a given MEA is unlikely to uniformly agree to a proponent's transition plan.¹⁶² Petitioners further note that certain MEAs are extraordinarily large, and they specifically mention MEA Nos. 18, 20, and 33.¹⁶³ The Catholic Television Network (CTN) and the National ITFS Association (NIA), both organizations of EBS licensees, and the Hispanic Information Television Network (HITN), a large EBS licensee, argue that the large size of an MEA will prevent EBS licensees from acting as a proponent or a co-proponent in any transition.¹⁶⁴ Moreover, petitioners contend that the Commission's plan to permit more than one proponent to transition an MEA will not be practical. To the contrary, these petitioners argue, the Commission has inadvertently created a scenario in which no one proponent will want to transition an MEA single-handedly and most will wait to see if someone else will take the lead before they are forced to take action at the end of the process to save their license.¹⁶⁵ Instead of transitioning the 2.5 GHz band by MEA, most petitioners suggest that the band be transitioned by BTA.¹⁶⁶

64. *Discussion.* As mentioned above, almost all of the petitioners on this issue argued against the use of MEAs to transition the 2.5 GHz band and for the use of BTAs. In light of the record, we agree with petitioners that we should reconsider the Commission's decision to transition the 2.5 GHz band by MEA. While the Commission initially believed transitioning 2.5 GHz based on MEA would accelerate the transition of the band, on re-examination in light of the record, we now find that use of MEAs would actually thwart rather than advance the transition of the 2.5 GHz band, thus inhibiting the deployment of new and innovative wireless services. We agree with petitioners that MEAs are very large and bear no relation to the actual service area of most EBS and BRS licensees.¹⁶⁷ We note that EBS licensees are licensed based on a geographic service areas (GSA), which are derived from each EBS licensee's 35-mile protected service area (PSA). BRS licensees are licensed based on a GSA basis, derived from their original 35-mile PSA, or on a BTA basis in the case of BRS-BTA auction winners. Moreover, we reject Miami-Dade's interpretation of Section 307(b) as requiring the 2.5 GHz band be transitioned on a county-wide or school district basis. Section 307(b) addresses license applications and modifications for broadcasters and is not relevant here where we are discussing the size of the areas to be

¹⁶² See DBC PFR at 2-3; WDBS PFR at 2-3; HITN PFR at 3-4; Nextel PFR at 3-4; IMWED PFR at 4; WCA PFR at 9-10.

¹⁶³ MEA No. 18 exceeds 100,000 square miles, covers five states, including 94 counties (61 in Illinois, 25 in Indiana, 3 in Michigan, 3 in Missouri, and 2 in Wisconsin), includes a population of 15 million people, and contains 212 EBS licensees. IIT PFR Opposition at 4-5. MEA No. 20 covers the entire state of Minnesota, a portion of Western Wisconsin, all of North Dakota, most of South Dakota, and a small part of Montana. IMWED PFR at 3. MEA No. 33 covers almost all of Colorado, most of Wyoming, and parts of South Dakota, Nebraska, Kansas, and New Mexico. *Id.*

¹⁶⁴ See CTN/NIA PFR at 4; HITN PFR at 4.

¹⁶⁵ See DBC PFR at 2-3; WDBS PFR at 2-3; SpeedNet PFR at 2-3. Petitioners are concerned about losing their licenses if the Commission pursues an option to auction spectrum that will not be transitioned by a proponent. See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14201 ¶ 82.

¹⁶⁶ See WCA PFR; C&W PFR; Pace PFR; CTN/NIA PFR; DBC PFR; WDBS PFR; IMWED PFR; Nextel PFR; Grand Wireless PFR; SpeedNet PFR; Sprint PFR; BellSouth PFR Opposition; IIT PFR Opposition; BRS Rural Advocacy Group PFR Reply.

¹⁶⁷ See WCA PFR at 5.

transitioned.¹⁶⁸

65. We agree with petitioners that the 2.5 GHz band should be transitioned by BTA instead of by MEA. Because BTAs are significantly smaller than MEAs and involve fewer licensees and lessees, transitioning by BTA would be less costly, less complicated, and more manageable than transitioning by MEA.¹⁶⁹ Thus we believe that transitioning the band by BTA will provide the appropriate incentives to proponents to undertake the challenging task of transitioning licensees to the new band plan. Specifically, as mentioned above, BTAs correspond to the licensing area of many BRS licensees. Moreover, operators and licensees have developed interference and other interoperating relationships based on BTAs.¹⁷⁰ We believe that transitioning the 2.5 GHz band by BTA will facilitate the transition of the band to a reconfigured plan that fosters broadband deployment and efficient spectrum use. Accordingly, we require proponents to transition the 2.5 GHz band by BTA. We note that BTAs were designed and copyrighted by Rand McNally & Company and an agreement must be reached with Rand McNally to use BTAs to transition the 2.5 GHz band. Rand McNally has entered into an agreement to allow the use of BTAs for these purposes.¹⁷¹

(ii) Overlapping GSAs

66. *Background.* As mentioned above, EBS licensees are licensed by GSA, while BRS licensees are licensed by GSA or BTA. Frequently, a GSA overlaps two or more BTAs. Several petitioners asked the Commission to clarify how a GSA that overlaps two or more BTAs should be transitioned. WCA and Sprint recommend that all of the stations licensed in a BTA should be transitioned, along with all incumbent facilities associated with GSAs that have their geographic center points within the BTA.¹⁷² In addition, WCA and Sprint recommend that the proponent should be permitted, at its sole discretion, to transition: (i) any station outside the subject BTA that it believes necessary to transition to avoid interference within the BTA; and (ii) any station outside the subject BTA where the proponent believes that such a transition will assist it in meeting the interference protection obligations set forth in Section 27.1233(b)(3).¹⁷³ C&W, Pace, Speednet, DBC, and WDBS propose that if an incumbent licensee's GSA overlaps one or more BTAs the proponent should be able to elect to transition one or more BTAs as desired.¹⁷⁴ Where the proponent seeks to transition an incumbent within

¹⁶⁸ 47 U.S.C. § 307(b) states that:

In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequencies, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same.

¹⁶⁹ See Luxon PFR Opposition at 8; C&W PFR at 3; Pace PFR at 3; SpeedNet PFR at 3.

¹⁷⁰ See Sprint PFR at 2-3.

¹⁷¹ *Ex Parte* Letter from Paul J. Sinderbrand, Counsel to WCA to Marlene H. Dortch, Federal Communications Commission (dated Apr. 12, 2005) at 2 (stating that WCA had renegotiated its License Agreement with Rand McNally & Company).

¹⁷² WCA PFR at 5-6; Sprint PFR at 4.

¹⁷³ WCA PFR at 5-6.

¹⁷⁴ C&W PFR at 3-4; Pace PFR at 3-4.

its BTA that overlaps into an adjacent BTA, the proponent should only be obligated to transition the BTA plus that licensee's incumbent GSA, but not additional BTAs, unless the proponent chooses to do so either individually or as a co-proponent.¹⁷⁵

67. *Discussion.* We agree that a proponent should not be required to transition two or more BTAs when a GSA overlaps two or more BTAs. However, we are concerned about situations where stations inside a GSA, but outside of the BTA, may be stranded and not transitioned. We believe that it is in the interest of the public and the licensees in the 2.5 GHz band to avoid this result. Therefore, we conclude that if the geographic center point of a GSA¹⁷⁶ is located in a BTA, then the proponent must transition all facilities associated with the GSA within the BTA, and those stations within the GSA but outside the BTA, if the adjoining BTA is not being transitioned. We emphasize, however, that if the other BTA is being transitioned, the proponents from adjoining BTAs may reach an agreement on how to transition overlapping GSAs.¹⁷⁷

b. MVPD opt-out

(i) General discussion

68. *Background.* The Coalition originally proposed a plan to permit a certain category of wireless cable licensees to automatically "opt-out" of the transition. The purpose of the opt-out was to enable those licensees that have a viable business for high-power operations to continue to serve their customers. Specifically, the Coalition proposed that an MVPD licensee could opt-out if: (1) it certified to the Commission within 30 days of the effective date of the rules that it or its affiliate met the definition of an MVPD in Section 522 of the Act;¹⁷⁸ (2) as of the date of its certification, it provided MVPD service to five percent or more of the households within its GSA or it was part of a system that deployed digital technology on more than seven channels as of October 7, 2002; and (3) it certified again at the start of the transition that it still provided service to five percent or more of the households within its GSA.¹⁷⁹ The Coalition Proposal also allowed any BRS or EBS licensee to opt-out of the transition if it is collocated with any qualified MVPD licensee that elects to opt-out.¹⁸⁰

69. The Commission rejected the Coalition's automatic opt-out proposal.¹⁸¹ Instead, the Commission found that it is in the public interest to consider waivers on a case-by-case basis for those operators or their affiliates that: (1) meet the definition of a multichannel video programming distributor

¹⁷⁵ C&W PFR at 3-4; Pace PFR at 3-4; SpeedNet PFR at 3-4; DBC PFR at 3-4; WDBS PFR at 3-4.

¹⁷⁶ The center of an incumbent stations' GSA is the station's reference coordinates, which was the center of previous protected service area (PSA) listed in each license. See 47 C.F.R. 47.1206(a)(1).

¹⁷⁷ See *infra* ¶¶ 165-166 for a discussion of cost allocation for overlapping GSAs.

¹⁷⁸ 47 U.S.C. § 522.

¹⁷⁹ *Coalition Proposal*, Appendix B at 16-18. See also First Supplement to *Coalition Proposal* at 4-5 (filed Nov. 14, 2002); Reply Comments of WCA, the National ITFS Association, and the Catholic Television Network, WT Docket No. 03-66 at 45 (filed Oct. 23, 2003).

¹⁸⁰ *Coalition Proposal*, Appendix B at 18.

¹⁸¹ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14199 ¶ 77.

as defined in Section 522 of the Communications Act of 1934, as amended; and (2) provide MVPD service to five percent or more of the households within their respective GSAs, as calculated in accordance with the requirements Section 76.905(c) of the Commission's rules.¹⁸² The Commission further found that it is in the public interest to consider waivers for any BRS or EBS licensee that is collocated with any qualified MVPD licensee that seeks a waiver to opt-out.¹⁸³ The Commission further found that it is in the public interest to consider waivers for those BRS licensees that have a viable business for high-powered operations, but who need more than seven digitized high-powered MBS channels to deliver their service to their customers. The Commission stated that in reviewing requests to waive the rules, the Commission will consider the actions taken by MVPD or BRS licensees to minimize the effect of interference on neighboring markets, as well as the licensee's explanation as to why it cannot work within the transition rules. The Commission stated that waivers will be granted if it is shown that: (i) the underlying purpose of the rules(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) in view of the unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.¹⁸⁴

70. Several petitioners ask the Commission to reconsider its decision to waive the transition rules on a case-by-case basis.¹⁸⁵ Instead, they recommend that the Commission adopt the automatic "opt-out" as originally proposed by the Coalition, which would permit an entity to certify to the Commission, at two separate times, that it meets criteria specified above and has opted-out of the transition.¹⁸⁶ Generally, these petitioners argue that the Commission's waiver process would complicate the transition process rather than simplify it, while the adoption of definitive opt-out rules would provide long-term certainty for transition planning.¹⁸⁷ Petitioners argue that the waiver process is time-consuming and burdensome, that waivers are granted or not granted at regulator's discretion, that waiver guidelines are not measurable standards, and that the waiver process imposes additional delay without countervailing benefits.¹⁸⁸ Petitioners further argue that the Commission's waiver process promotes uncertainty by raising numerous questions, including the following: what are the justifications necessary or sufficient to receive a waiver, what are acceptable levels of interference mitigation, and must a licensee alter its system.¹⁸⁹ In contrast, petitioners argue, a self-effectuating opt-out standard provides MVPD licensees

¹⁸² 47 CFR § 76.905(c).

¹⁸³ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14199 ¶ 77.

¹⁸⁴ 47 C.F.R. § 1.925(b)(3).

¹⁸⁵ See BloostonLaw PFR at 9; BRS Rural Advocacy Group PFR at 2; Central Texas PFR at ii; Choice PFR Opposition at 2; C&W PFR at 3; Digital TV One PFR Reply at 3-4; NTCA Comments in Support of PFR at 2; WATCH TV PFR at 2; WCA PFR at 32; WDBS PFR Reply at 2.

¹⁸⁶ We note that BellSouth proposed specific automatic "opt-out" procedures. See BellSouth PFR Reply at 11-12. See also Ex Parte Comments of BellSouth Corporation from Karen B. Possmer, BellSouth Corporation to Marlene H. Dortch, Federal Communications Commission (filed May 20, 2005).

¹⁸⁷ Central Texas PFR at 8-9.

¹⁸⁸ See BRS Rural Advocacy Group PFR at 10-11; NTCA Comments in Support of PFR at 3.

¹⁸⁹ See BRS Rural Advocacy Group PFR at 10-11.

the certainty of a safety net. Specifically, an automatic opt-out allows MVPD licensees to guard their investment, make business plans, design their systems now, and allocate resources accordingly.¹⁹⁰ Petitioners further argue that an automatic opt-out is demonstrably less burdensome than requiring MVPD licensees to prepare and file a waiver, which would force both the MVPD licensee and the proponent to wait for Commission resolution of the request at some undetermined future date.¹⁹¹ Moreover, petitioners argue that requiring case-by-case adjudications is inconsistent with the Commission's general preference for streamlined regulatory processes.¹⁹²

71. In addition, two petitioners, Central Texas Communications and BRS Rural Advocacy Group, ask the Commission to expand the Coalition's criteria for an automatic "opt-out."¹⁹³ Specifically, they ask the Commission to permit a BRS/EBS licensee or its affiliate to automatically "opt out" of a transition if:

(a) the center of its geographic service area ("GSA") (*i.e.*, the site of its main transmitter) is located in a county that is a defined "rural area" under FCC rules;¹⁹⁴ and

(b)(i) it is part of system that provides MVPD and/or broadband service to more than 15 percent of the households within that "rural area" as of October 7, 2002; or

(ii) it is part of a system that provides MVPD service to at least 500 customers as of October 7, 2002; or

(iii) it is part of system composed of at least 20 collocated analog BRS/EBS channels that provides MVPD service (as few as 11 channels if the licensee can demonstrate that channels were not available because of the 1995 EBS filing "freeze").¹⁹⁵

They also request that licensees collocated with a licensee meeting any of the above criteria be eligible to automatically "opt out."¹⁹⁶

72. *Discussion.* We decline to reconsider our decision to waive the transition rules on a case-by-case basis.¹⁹⁷ We continue to believe that waiving the transition rules on a case-by-case basis will not

¹⁹⁰ *See id.* at 11.

¹⁹¹ WCA PFR at 32.

¹⁹² *Id.*

¹⁹³ *See Ex Parte* Letter from Stephen E. Coran, Rini Coran, PC and Donald L. Herman, Jr., Bennet & Bennet, PLLC to Marlene H. Dortch, Federal Communications Commission (filed June 29, 2005), Attachment at 1 (CTC-Rural Advocacy Group *Ex Parte*). *See also* Central Texas PFR at 11-12; BRS Rural Advocacy Group PFR at 14.

¹⁹⁴ Facilitating the Provision of Spectrum-Based Services to Rural Areas and providing Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, *Report and Order and Further Notice of Proposed Rule Making*, 19 FCC Rcd 19078 (2004) (*Rural Order*).

¹⁹⁵ *See* CTC-Rural Advocacy Group *Ex Parte* Attachment at 1.

¹⁹⁶ *Id.*

¹⁹⁷ *See infra* ¶¶ 75-84 for a discussion of the WATCH TV waiver request.

only protect the rights of all parties, but will also promote the transition of the 2.5 GHz band. Individually waiving the new technical rules and band plan permits us to make decisions based on the individual facts of the case rather than trying to craft an automatic “opt-out” rule that risks either “opting-out” too many or too few MVPD operators. Evaluating an individual waiver will also permit us to examine the effect of interference from the MVPD operator on other operators in the transitioning or adjacent market. The record is incomplete concerning how many licensees would qualify under the Coalition’s original proposal or under the expanded proposal set forth by Central Texas Communications and the BRS Rural Advocacy Group. Thus, we agree with Sprint that the automatic opt-out process itself could unintentionally result in opt-outs throughout the country, which may affect the transition in adjacent markets, thus creating uncertainty for the transition as a whole.¹⁹⁸

73. Because MVPD operators can deliver high power signals over very large geographic areas, we find that a case-by case review is in the best interests both of the MVPD operator seeking to opt-out and adjacent licensees seeking to transition to the new rules and band plan. We further believe that a waiver process balances the need of the MVPD operators to provide service to their customers with the interests of the public in the development of new and innovative wireless services throughout the nation, including rural areas.

74. To assist a proponent in transitioning a BTA, a MVPD operator that is intending to seek a waiver must so indicate to the proponent when it responds to the Pre-Transition Data Request.¹⁹⁹ In any event, the MVPD operator must then seek a waiver from the Commission by April 30, 2007. If a proponent files an Initiation Plan with the Commission prior to April 30, 2007, an MVPD operator must file its waiver request within sixty days after the Initiation Plan is filed with the Commission. We believe that establishing such a deadline will provide certainty to the process, permit the Commission to address each waiver before the Initiation Plans are due, and allow the proponent to draft the Transition Plan knowing which licensees will be exempted from the transition. Furthermore, to enable the transition of the 2.5 GHz band to proceed quickly and efficiently and to protect the operations of MVPD licensees that have developed successful systems under the old band plan, we expect the Bureau to act on unopposed requests for waiver within 180 days.

(ii) WATCH TV Waiver Request to “Opt-Out”

75. *Background.* On April 29, 2005, W.A.T.C.H. TV Company (WATCH TV) filed a request for waiver to allow it to opt out of transitioning to the new band plan.²⁰⁰ WATCH TV is the licensee of BRS spectrum and lessee of EBS spectrum in the Lima, Ohio area.²⁰¹ WATCH TV launched

¹⁹⁸ See Sprint PFR Reply at 3.

¹⁹⁹ See *infra* ¶¶ 96-102 for a discussion of Pre-Transition Data Requests.

²⁰⁰ Request for Waiver (filed Apr. 29, 2005) (WATCH TV Waiver Request).

²⁰¹ WATCH TV is the licensee of the following BRS stations: WMI386 (Channel BRS1), WMI390 (Channel BRS2), WMH228 (E Group), WMH528 (F Group), WNTH924 (H Group). It also leases capacity on the following EBS stations: WLX987 (Cory Rawson Local Schools, A Channel Group); WLX979 (Indian Lake Local Schools, B Channel Group); WLX977 (St. Mary’s City Schools, C Channel Group); WLX 762 (Parkway Local Schools, D Channel Group); and WLX905 (Lima City Schools, G Channel Group). WATCH TV Waiver Request at 5.

one of the first wireless cable systems in the United States in 1992, offering 11 channels.²⁰² In December 2000, WATCH TV became one of the first systems in the country to offer digital wireless cable service after the Commission revised its rules to allow digital technology.²⁰³ In October 2001, WATCH TV began offering high-speed internet service using BRS channels.²⁰⁴

76. WATCH TV currently provides over 200 channels of digital audio and video programming to over 12,000 subscribers in the Lima, Ohio area.²⁰⁵ It also provides high-speed internet access to over 4,000 subscribers as of the date it filed its Waiver Request, and it has the capability to serve up to 8,000 subscribers.²⁰⁶ WATCH TV represents that its parent telephone company has invested over \$22,000,000 in its system.²⁰⁷

77. WATCH TV requests waiver of Sections 27.1230 *et. seq.* of the Commission's Rules,²⁰⁸ and also requests that the Commission issue certain clarifications. In support of its waiver request, WATCH TV highlights that its system uses more than seven digitized channels to deliver digitally compressed multichannel video service.²⁰⁹ As such, WATCH TV's current operations cannot be accommodated in the seven channels designated for high-power transmissions in the Middle Band Segment.²¹⁰ Rather, WATCH TV calculates that if it was required to move all of its video programming into the MBS, it would lose 75 percent of its video programming.²¹¹ WATCH TV also notes that it is the only operator in the market that is able to provide both video programming and broadband services that are fully competitive with cable system operators.²¹² In fact, WATCH TV contends that many of its video subscribers live in remote areas in which over the air reception of television is not feasible.²¹³

78. In addition to a waiver of Sections 27.1230 *et. seq.* of the Commission's Rules, WATCH TV specifically requests that grant of its requested waiver state that:

(1) WATCH TV and its EBS channel lessors will have permanent authority to operate pursuant to Section 27.1209 on the "pre-transition" BRS/EBS band plan set forth in

²⁰² WATCH TV Waiver Request at 5.

²⁰³ *Id.* at 6.

²⁰⁴ *Id.*

²⁰⁵ *Id.* at 7.

²⁰⁶ *Id.* at 6-7.

²⁰⁷ *Id.* at 6.

²⁰⁸ 47 C.F.R. § 27.1230 *et. seq.*

²⁰⁹ WATCH TV Waiver Request at 2.

²¹⁰ *Id.*

²¹¹ *Id.* at 8.

²¹² *Id.* at 7.

²¹³ *Id.* at 8 n. 15.

Section 27.5(i)(1), as such may be modified in the future to accommodate the eventual displacement of WATCH TV's operations on BRS channels 1 and 2 from the 2150-2162 MHz band to new spectrum for the benefit of Advanced Wireless Service licensees at 2150-2155 MHz;

(2) WATCH TV and its EBS channel lessors must participate in good faith in any transition planning process relating to any geographic area that overlaps their GSAs. In conjunction with any transition, WATCH TV and its EBS channel lessors will subsequently make such modifications to their facilities at the Proponent's expense as the proponent may reasonably request in an effort to reduce interference to licensees in other markets that are transitioning, provided that such modifications can be accomplished without cumulatively resulting in more than a *de minimis* reduction in WATCH TV's ability to serve its then-existing subscribers;

(3) Every main, booster and base station currently used in conjunction with WATCH TV's system shall be permitted to continue operating under the maximum EIRP limits set forth for "pre-transition" operations in Section 27.50(h)(1)(i) and (ii);

(4) Any channels used for the transmission of digital video programming on WATCH TV's system shall be permitted to continue operating under the "pre-transition" emission limits for digital video programming channels set forth in Section 27.53(l)(3). In addition, per Section 27.53(l)(5), WATCH TV and its EBS channel lessors shall be permitted to operate fixed, temporary fixed and mobile data stations deployed as of January 10, 2005, provided that those facilities are in compliance with the emission limits set forth in former Sections 21.908 and 74.936;

(5) Consistent with Section 27.55(a)(4)(i), all of the BRS and EBS channels in WATCH TV's system will be permitted to operate at any point along their respective GSA boundaries at the greater signal strength of 47 dBu or the strength authorized in their underlying licenses as of January 10, 2005;

(6) Sections 27.1220 (regarding 5.5 MHz wide channels in the LBS and UBS) and 27.1222 (regarding the establishment of guard bands around the MBS) shall not be applicable to WATCH TV and its EBS channel lessors; and

(7) WATCH TV and its EBS channel lessors shall not be subject to the height benchmarking obligations set forth in Section 27.1221.

79. The waiver request has received support on the record. Prior to its merger with Nextel, Sprint expressed support for granting an opt-out to WATCH TV.²¹⁴ Similarly, Sprint/Nextel acknowledges that the facts surrounding the WATCH TV request represent a unique market circumstance that could justify a waiver to opt-out of the transition.²¹⁵ Sprint/Nextel's comments are notable for two reasons: (1) as a general matter, Sprint/Nextel opposes granting an automatic opt-out to MVPD providers; and (2) Sprint/Nextel and its subsidiaries currently hold all of the active BRS BTA authorizations in the

²¹⁴ Sprint PFR Reply at 4.

²¹⁵ *Ex Parte* Letter from Trey Hanbury, Director, Sprint Nextel Corporation to Marlene H. Dortch, Federal Communications Commission (filed Oct. 25, 2005) at 6.

Lima, Ohio and surrounding BTAs.

80. *Discussion.* The Commission has stated that it would be sympathetic to waiver requests from MVPD providers who needed more than seven digitized MBS channels to deliver service to their customers.²¹⁶ WATCH TV fits within that description because it currently offers over 200 channels of programming to its subscribers. Given the current state of digital technology, it would be impossible for WATCH TV to provide that much programming in the MBS using only seven channels. As noted above, WATCH TV was an early adopter of digital technology when it began offering digital wireless cable services in December 2000. Accordingly, we consider WATCH TV to be within the class of MVPD providers for which we would favorably consider waiver requests.

81. With respect to evaluating requests to opt-out of the transition, the Commission has stated:²¹⁷

In reviewing requests to waive the rules adopted today, we will consider the actions taken by MVPD or BRS licensees to minimize the affect of interference on neighboring markets, as well as the licensee's explanation as to why it cannot work within the transition rules we have adopted. Waivers will be granted if it is shown that: (i) the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) in view of the unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.

Based upon our evaluation of WATCH TV's request, we conclude that requiring WATCH TV to transition pursuant to the new band plan would be inequitable, unduly burdensome, and contrary to the public interest.

82. WATCH TV has developed an extensive business providing video, audio, and broadband service to customers in the Lima, Ohio area. The 12,000 customers that receive video programming and the 4,000 customers that receive wireless broadband service from WATCH TV represent a substantial customer base. WATCH TV has demonstrated that is a meaningful competitive presence in the Lima market. Requiring WATCH TV to move its video programming into the MBS would require it to drop over 75 percent of its video programming. Such a result would cause major disruption to WATCH TV's customers and would likely greatly diminish WATCH TV's ability to compete with cable television systems in its area.

83. In evaluating whether a grant of a waiver to WATCH TV would be in the public interest, we believe it is necessary to compare the harm that would result to WATCH TV and its customers from requiring a transition with the effect that allowing an opt out would have on neighboring licensees. As noted above, the record demonstrates that there would be substantial harm to WATCH TV and its customers if WATCH TV was required to transition to the new band plan. In contrast, it appears that the effect on neighboring licensees of allowing an opt out would be minimal. We first note that since WATCH TV holds licenses or leases for all of the BRS and EBS spectrum in the Lima, Ohio area, there is no other licensee in the immediate Lima area that would be negatively affected by allowing WATCH TV

²¹⁶ *BRS/EBS R&O & FNPRM*, 19 FCC Rcd at 14199 ¶ 77.

²¹⁷ *Id.*

to opt out. Second, we find it significant that Sprint/Nextel, which owns all of the active BRS BTA authorizations in Lima and the surrounding area, supports WATCH TV's waiver request. Third, WATCH TV has committed to participating in the transition planning process in adjacent areas and is willing to make modifications to its system so long as a proponent pays for such modifications and such modifications do not affect its ability to serve existing customers.²¹⁸ In light of these factors, we conclude that a grant of a waiver is in the public interest because any effect on neighboring licensees would be far outweighed by the harm that would result to WATCH TV and its customers if it was not allowed to opt out.

84. Finally, we have reviewed the waiver conditions proposed by WATCH TV and determined that they strike the appropriate balance between maintaining service to WATCH TV's customers and minimizing disruption to neighboring licensees. Accordingly, WATCH TV and the EBS licensees that lease WATCH TV excess capacity will be granted a permanent waiver to opt-out of the transition to the new BRS/EBS band plan, subject to conditions (1) through (7), *supra*.

c. Proponents

85. A proponent is critical to the success of a transition. During the Initiation Phase, a proponent is responsible for sending the Pre-Transition Data Request and transition notice to all BRS and EBS licensees in the BTA and for filing the Initiation Plan with the Commission. During the Transition Planning Phase, the proponent is responsible for developing the Transition Plan and for negotiating with the BRS and EBS licensees. Then the proponent is responsible for replacing downconverters at all eligible EBS receive sites, migrating eligible video and data transmission program tracks to the MBS, and filing the Post-Transition Notification along with the other EBS and BRS licensees. After the transition is completed, the proponent is responsible for seeking reimbursement for the costs of the transition.

(i) Eligibility to be a proponent

86. *Background.* WCA and other petitioners seek reconsideration of Section 27.1231(d)²¹⁹ of the Commission's rules, which permits BRS and EBS licensees or EBS lessees to serve as proponents of the 2.5 GHz band. Specifically, they request that Section 27.1231(d) be amended to permit BRS lessees to serve as a proponent.²²⁰

87. *Discussion.* We agree with WCA that we should clarify that BRS lessees are eligible to be a proponent. In addition, we believe that we should clarify the language of the *BRS/EBS R&O* and the language of Section 27.1231(d) of the Commission's rules. Paragraphs 78 and 79 of the *BRS/EBS R&O* can be read to mean that proponents *must* be BRS licensees or EBS licensees or lessees, whereas Section 27.1231(d) can be read to mean that a proponent *may* be a BRS or EBS licensee or lessee.²²¹ We hereby

²¹⁸ WATCH TV Waiver Request at 11.

²¹⁹ Section 27.1231(d) (2005).

²²⁰ See WCA PFR at 13-14. See also C&W PFR at 4; Pace PFR at 3-4; DBC PFR at 4; WDBS PFR at 4; SpeedNet PFR at 4; BellSouth PFR Opposition at 19; IMWED PFR Opposition at 8.

²²¹ Paragraph 78 states, in relevant part, that "During this three-year period, a proponent or multiple proponents, BRS or EBS licensees or EBS lessees, initiate a transition by filing an Initiation Plan with the Commission." Paragraph 79 states, in relevant part, that "As mentioned above, a transition is initiated by a proponent, which will (continued....)"

clarify that a proponent *must* be a BRS licensee or lessee or an EBS licensee or lessee.

(ii) Determining single and multiple proponents

88. *Background.* As mentioned above, the Commission originally required proponents to transition the 2.5 GHz band by MEA. In order to enable the 2500-2690 MHz band to be transitioned in an efficient manner and to give flexibility to proponents, the Commission adopted a rule that would permit more than one proponent to transition a given MEA.²²² The Commission further adopted a rule that would require multiple proponents to agree before they submit the Initiation Plan on how they will transition an MEA and to identify the specific portion of the MEA that each proponent will transition.²²³

89. Several petitioners seek reconsideration of the Commission's decision to allow multiple proponents to transition a given geographic area.²²⁴ In essence, petitioners maintain that the Commission's rules regarding multiple proponents are too open-ended. Specifically, petitioners maintain that the Commission failed to define when an entity becomes a proponent or even to impose a deadline (aside from the three-year deadline for submitting Initiation Plans) by which the universe of co-proponents must declare themselves.²²⁵ In effect, petitioners argue, this open-ended approach could award slow responders a veto right over the transition plans of licensees that are ready, willing, and able to deploy.²²⁶ In addition, petitioners argue, getting two or more competitors to agree on the complex details of transitioning the 2.5 GHz band will be expensive, time consuming, and perhaps impossible.²²⁷

90. In response to the deficiencies raised by the petitioners, Nextel proposes that the Commission either adopt a mechanism to determine a single proponent for a geographic area or adopt a "first-in-time" rule to ensure that the transition proceeds quickly.²²⁸ Nextel proposes that the Commission amend Section 27.1231 to specify that the first party to submit an Initiation Plan pursuant to Section 27.1231(d)²²⁹ is the proponent for the area in question, and that the addition of co-proponents should be at that proponent's discretion.²³⁰ Nextel further requests that the Commission change the "one-strike rule" adopted by the Commission in the *BRS/EBS R&O*, in which the Commission stated that an entity that withdraws an Initiation Plan may not then seek to transition that particular area in the future.²³¹ Nextel (Continued from previous page) _____
generally be either a current BRS or EBS licensee or EBS lessee." *BRS/EBS R&O*, 19 FCC Rcd 14165, 14200 ¶¶ 78-79.

²²² *Id.* at 14200 ¶ 80.

²²³ 47 C.F.R. § 27.1231(d)(6) (2005).

²²⁴ *See* WCA PFR at 10-11; C&W PFR at 3; Pace PFR at 2-3; DBC PFR at 3; Nextel PFR at 6.

²²⁵ *See* Nextel PFR Reply at 3.

²²⁶ *See id.*

²²⁷ *See* Nextel PFR at 6.

²²⁸ Nextel PFR Reply at 5.

²²⁹ 47 C.F.R. § 27.1231(d)(2005).

²³⁰ Nextel PFR Reply at 14.

²³¹ *See* Nextel PFR at 15. *See also* *BRS/EBS R&O*, 19 FCC Rcd 14165, 14203 ¶ 87.

maintains that even if a proponent exercises enormous diligence, it may have inadvertently omitted a licensee or made some other error.²³² Nextel recommends that the proponent be permitted to withdraw an Initiation Plan and resubmit a corrected version if no other entity has filed an Initiation Plan for that area in the interim.²³³ Nextel recommends that the Commission adopt a “two-strike” rule.²³⁴

91. *Discussion.* We agree with petitioners that we should clarify when an entity becomes a proponent and whether that entity must accept a co-proponent. At the outset, we note that because we have changed the size of the transition area from MEA to BTA, we believe that we have significantly reduced the burden on the proponent to transition one area, thus making co-proponents unnecessary in most instances. We reject the suggestion that the licensee with the most spectrum, licensed or leased, should be designated the proponent because we agree with Clearwire that the entity with the most spectrum in a BTA is not necessarily the entity with the greatest incentive to transition a given BTA.²³⁵ Our goal, as we have stated repeatedly, is to encourage a quick transition of the 2.5 GHz band. To encourage a quick transition of the band, we believe that it is necessary to encourage proponents to come forward. We believe that adopting a “first-in-time” rule, as suggested by Nextel, would help accomplish that goal. Not only is such a rule fair and unequivocal, but it will also encourage those entities most interested in transitioning an area and instituting service to quickly file an Initiation Plan and start the transition process.

92. We further believe that the adoption of a “first-in-time” rule will clarify who the proponent is and will avoid the problem of forcing competitors to be co-proponents in the event that more than one entity wishes to transition a BTA. We reiterate that the Commission permitted the use of co-proponents to give entities the flexibility to undertake the extremely challenging task of transitioning an entire MEA.²³⁶ We therefore reject SBC’s argument that a sole proponent has too much power to dictate the terms of the transition to non-proponent licensees.²³⁷ The transition process, through the development of the Transition Plan, is designed to be a process to satisfy the needs of both proponents and non-proponents alike, while enabling the transition to occur with a minimum of disputes. The proponent does not dictate the terms of the transition. The proponent negotiates with every EBS and BRS licensee in the BTA to reach a mutually agreeable Transition Plan. During the transition planning process, the non-proponent licensees may object to the terms of the Transition Plan. It is in the interest of the proponent to reach a mutually agreeable Transition Plan to ensure that the transition proceeds quickly and efficiently. We believe that the Transition Plan we have adopted balances the needs of the proponent with the needs of the EBS licensees and lessees and commercial operators in the 2.5 GHz band.

93. We now turn to determining the “first-in-time” rule. We believe that under the transition plan adopted by the Commission, we have the option of using one of the following three events to trigger a “first-in-time rule:” when the Pre-Transition Data Request is sent; when the Transition Notice is sent; or

²³² Nextel PFR at 15.

²³³ *Id.*

²³⁴ *Id.*

²³⁵ See Clearwire PFR Opposition at 11.

²³⁶ *BRS/EBS R&O*, 19 FCC Rcd 14164, 14200 ¶ 79.

²³⁷ See SBC PFR Opposition at 10.

when the Initiation Plan is filed. Of these three events, we believe that it is most appropriate to designate as the proponent the entity who first files the Initiation Plan for a given BTA. We do not designate the proponent at an earlier stage because any entity that sends a Pre-Transition Data Request or a Transition Notice is under no obligation to actually file an Initiation Plan with the Commission and then actually transition a given BTA. In light of the penalty assessed by the Commission for withdrawing an Initiation Plan, we believe that only those entities that are serious about transitioning a BTA will file an Initiation Plan.²³⁸ Moreover, we note that of these three documents, only the Initiation Plan is filed with the Secretary of the Commission, where it will be date-stamped, thus making it easy to determine which entity filed first. Therefore, the first entity to file an Initiation Plan with the Commission shall automatically be designated as the proponent for a given BTA without any action required by the Commission. We note, however, that several petitioners have asked the Commission to release a Public Notice whenever an entity files an Initiation Plan so that BRS and EBS licensees and lessees can stay informed.²³⁹ We hereby adopt that recommendation and direct the Bureau to release a Public Notice noting that Initiation Plans have been filed with the Commission. The purpose of the Public Notice will be for informational purposes only and will not be a Commission action designating the proponent.

94. Although we still believe that, in certain circumstances, the use of multiple proponents may promote the rapid transition of BTAs, we agree with petitioners that it would be difficult for competitors to work cooperatively to transition a particular BTA. Thus, we conclude that the use of co-proponents to transition a given BTA is voluntary and the parties have complete control over how they contact each other, when they contact each other, and if they reach an agreement at all. Because we have adopted a voluntary process, we reject the recommendations of petitioners to adopt a particular time frame for potential co-proponents to identify themselves or the adoption of a 30-day “Proponent Election Period.”²⁴⁰ We note that the transition process adopted by the Commission is a public process. At least twice during the Initiation Planning Period, entities that are interested in being a proponent contact all the EBS and BRS licensees in a given BTA.²⁴¹ Therefore, entities that are interested in being a proponent must know when other entities are interested as well. Thus, the parties may agree to be co-proponents either before or after the Initiation Plan is filed. As a practical matter, however, parties may wish to reach an agreement before the Initiation Plan is filed and the proponent is designated. Once an entity is designated the proponent, it may then permit a co-proponent at its sole discretion. Before the Initiation Plan is filed, however, neither party is the proponent, therefore both parties may be more open to reaching an agreement on transitioning a given BTA.

95. We now discuss Nextel’s suggestion to permit a proponent two opportunities to file an Initiation Plan with the Commission. Although we are sympathetic to the arguments presented by Nextel,

²³⁸ See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14203 ¶ 87.

²³⁹ See *C&W PFR* at 4; *Pace PFR* at 4. See also *WCA PFR Opposition* at 3.

²⁴⁰ See *Nextel PFR Reply* at 14; *BellSouth PFR Reply* at 6. Although the recommendations of petitioners differ somewhat, generally, they recommend that the entity that sends a Transition Notice to all BRS and EBS licensees in the BTA be considered the first mover. Other entities that desire to be co-proponents would be given a period of time following the sending of the Transition Notice to contact the first mover about being a co-proponent. Then they recommend that the first mover and the potential co-proponent be given a period of time to reach an agreement on transitioning a given BTA. If they cannot reach an agreement then the first to file an Initiation Plan or the entity with the most spectrum, licensed or leased, should be designated as the proponent.

²⁴¹ See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14202 ¶¶ 84-85.

we do not believe that changing the “one-strike” rule is the appropriate way to resolve them.²⁴² Instead we will permit a proponent to amend the Initiation Plan to correct minor or inadvertent errors. We believe that retaining the “one-strike” rule, but permitting amendments to the Initiation Plan will encourage entities to become proponents and hasten the transition of the 2.5 GHz band. Moreover, we believe that retaining the “one-strike” rule provides a date certain for determining who the proponent is and for establishing the time-line for the transition of that particular BTA.

d. Initiation Phase

(i) Pre-Transition Data Requests

96. The purpose of the Pre-Transition Data Request is to assist the potential proponent in assessing whether to transition a particular BTA.²⁴³ A potential proponent asks all EBS and BRS licensees in a BTA to provide it with certain information about their facilities.²⁴⁴ Petitioners ask that the Commission clarify Section 27.1231(f) of the Commission’s rules in four respects.²⁴⁵ First, they ask that the Commission require BRS and EBS licensees to provide additional information to the potential proponent.²⁴⁶ Second, they ask that the rule be clarified to ensure that BRS and EBS licensees must respond to the Pre-Transition Data Request.²⁴⁷ Third, they ask that the Commission establish a deadline for responding to the Pre-Transition Data Request.²⁴⁸ Fourth, they ask that penalties be assessed for BRS and EBS licensees who fail to respond within the newly established deadline.²⁴⁹

(a) Contents of the Pre-Transition Data Request

97. *Background.* Petitioners request that the Commission amend Section 27.1231(f)²⁵⁰ of the Commission’s rules to permit the proponent to ask the non-proponent BRS and EBS licensees to provide additional technical and contact information.²⁵¹ In addition, BellSouth requests that the Commission clarify Section 27.1231(f) to require potential proponents to send the Pre-Transition Data Request to the BTA authorization holder in addition to each BRS and EBS licensee in the transition area.²⁵²

²⁴² See *supra* ¶ 90 for a discussion of the issues raised by Nextel.

²⁴³ See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14202 ¶ 84.

²⁴⁴ See 47 C.F.R. § 27.1231(f)(2005); *BRS/EBS R&O*, 19 FCC Rcd 14165, 14202 ¶ 84.

²⁴⁵ See WCA PFR at 18; Nextel PFR at 9-10; BellSouth PFR Opposition at 19-20.

²⁴⁶ See WCA PFR at 19-20; Nextel PFR at 10-11; Clearwire PFR Opposition at 12.

²⁴⁷ See Nextel PFR at 9-10; BellSouth PFR Opposition at 19-20.

²⁴⁸ See WCA PFR at 18; Nextel PFR at 9-10; Clearwire PFR Opposition at 11.

²⁴⁹ See WCA PFR at 18; Clearwire PFR Opposition at 11.

²⁵⁰ 47 C.F.R. § 27.1231(f)(2005).

²⁵¹ See WCA PFR at 19; Nextel PFR at 10-11; Clearwire PFR Opposition at 12.

²⁵² BellSouth PFR Opposition at 19-20.

98. *Discussion.* To enable the proponent to arrange for the installation of the required equipment, we will amend Section 27.1231(f) of the Commission's rules to require BRS and EBS licensees to provide the following information to the potential proponent: the transitioning licensee's full name; postal mailing address, contact person; e-mail address; and phone and fax number.²⁵³ In addition, MVPD operators that intend to seek waivers from the Commission to "opt-out" of the transition also must inform the proponent that they are seeking waivers.²⁵⁴ We agree with WCA that because the Commission's ULS database does not contain information concerning the desired signal level at each EBS receive site entitled to protection during the transition, potential proponents must get this information directly from EBS licensees.²⁵⁵ Therefore, to provide EBS operations being migrated to the MBS with interference protection based on D/U ratios, we will amend Section 27.1231(f) of the rules to permit potential proponents to seek the following information from EBS licensees:

- The location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection;
- The make and model of the antenna for that main station or booster, along with the radiation pattern if it is not included within the Commission's database;
- The ground elevation, above mean sea level (AMSL), of the building or antenna supporting structure on which the main station or booster transmission antenna is installed, the height, above ground level (AGL), of the center of radiation of the transmission antenna, the orientation of the main lobe of the transmission antenna, and any mechanical beamtilt or electrical beamtilt not reflected in the radiation pattern provided or included within the Commission's database;
- The bandwidth of each channel or subchannel, the emission type for each channel or subchannel, and the EIRP measured in the main lobe for each channel or subchannel;
- The make and model of the receive antenna installed at that site, along with the radiation pattern if it is not included within the Commission's database.²⁵⁶

Moreover, in response to a request from Nextel, the Commission will work with industry to encourage all transitioning licensees to use a standard format, such as Microsoft Excel or ASCII text files, and a standard electronic medium, such as e-mail or an industry coalition website, for compiling and transmitting information in response to a Pre-Transition Data Request.²⁵⁷ Also, we agree with petitioners that permitting proponents to serve licensees based on information in the ULS database will encourage licensees to ensure that their information is accurate and up-to-date, which we believe is the obligation of every licensee.²⁵⁸

²⁵³ See Nextel PFR at 10-11.

²⁵⁴ See *supra* ¶ 73.

²⁵⁵ See WCA PFR at 19.

²⁵⁶ See *id* at 19-20.

²⁵⁷ See Nextel PFR at 10-11.

²⁵⁸ See C&W PFR at 4; Pace PFR at 4; DBC PFR at 4; WDBS PFR at 4; SpeedNet PFR at 4. See also WCA PFR Opposition at 3.

99. We do not, however, adopt the recommendation of Clearwire²⁵⁹ to require EBS licensees to certify that the receive site is, at the time the data request is received, actively using EBS distance learning services for the permissible purpose of formal education of full-time students at accredited schools.²⁶⁰ We believe that such a certification is unnecessary because EBS receive sites may be used for other purposes.²⁶¹ Moreover, certifications are generally used by the Federal Government to assure that a private party doing business with the Federal Government or receiving assistance from the Federal government is in compliance with certain Federal statutes and regulations. We do not believe that it is appropriate for us to require one private party to certify to another private party. Also, we will not amend Section 27.1231(f) to require potential proponents to send Pre-Transition Data Requests to BTA authorizations holders in addition to each BRS and EBS licensee in the transition area because it is unnecessary to do so.²⁶² BTA authorization holders are BRS licensees.

(b) Deadline for completing Pre-Transition Data Requests

100. *Background.* As mentioned above, petitioners ask that the Commission establish a deadline for responding to the Pre-Transition Data Request.²⁶³

101. *Discussion.* We agree with petitioners that Section 27.1231(f) of the Commission's rules should be amended to require that BRS and EBS licensees respond to the proponent's Pre-Transition Data Request within a specified deadline. While we agree with IMWED that it is in the interests of EBS and BRS licensees to respond voluntarily to the request and thereby facilitate the transition, we believe that proponents need to commence comprehensive planning activities by a date certain in order to expeditiously and efficiently transition a BTA.²⁶⁴ Establishing a deadline will provide proponents with the assurance that they can move forward toward a transition in conformance with their schedules and business plans. We note that WCA recommends that we require BRS and EBS licensees to respond within 21 days of the receipt of the Pre-Transition Data Request,²⁶⁵ while HITN recommends 45 days.²⁶⁶ In light of the information required in the Pre-Transition Data Request, we believe that 21 days may not provide a sufficient amount of time for licensees to gather, prepare, and deliver the required information. We also believe that 45 days is not an unreasonable, extended period of time that would cause undue delay to the transition. Thus, we will amend our rules to require BRS and EBS licensees to respond within 45 days of receiving the Pre-Transition Data Request.

²⁵⁹ See Clearwire PFR Opposition at 12.

²⁶⁰ See *infra* ¶ 146 for a complete discussion of this issue.

²⁶¹ See 47 C.F.R. § 27.1203.

²⁶² See BellSouth PFR Opposition at 19-20.

²⁶³ See WCA PFR at 18; Nextel PFR at 9-10; Clearwire PFR Opposition at 11.

²⁶⁴ See IMWED PFR Opposition at 7-8.

²⁶⁵ See WCA PFR at 18. See also Nextel PFR at 9-10; Sprint PFR Reply at 14; Clearwire PFR Opposition at 11.

²⁶⁶ See HITN PFR Opposition at 3.

102. We do not agree with petitioners, however, that we should adopt the penalties proposed by petitioners if licensees do not timely respond to the Pre-Transition Data Request. We believe that sanctions recommended by WCA and Clearwire, such as losing primary status and the right to compensation for migration and replacement downconverters, could be unnecessarily harsh and disproportionate to the violation, in some cases.²⁶⁷ We also believe that these penalties may raise legal concerns that implicate license revocation issues. Rather, in the event that a licensee fails to respond to the Pre-Transition Data Request, we will assess penalties, on a case-by-case basis, such as requiring the tardy licensee to forfeit its right to object to the Transition Plan, if the BRS or EBS licensee's failure to timely respond to the Pre-Transition Data Request has caused harm to the proponent or has delayed the transition in the BTA.

(ii) Initiation Plans

103. *Background.* In the *BRS/EBS R&O*, the Commission adopted a five-phased transition process, the first phase of which is initiating the transition.²⁶⁸ This first phase lasts a maximum of three years, beginning on the effective date of the rules, January 10, 2005 and ending on January 10, 2008.²⁶⁹ Section 27.1231(b) requires a proponent to file an Initiation Plan with the Commission that contains specific information on or before January 10, 2008.²⁷⁰ If an Initiation Plan is not on file with the Commission on or before January 10, 2008 for particular geographic areas, the Commission stated that it would use an alternative method of transitioning those areas.²⁷¹ Petitioners ask the Commission to extend the length of this phase of the transition process and modify the required contents of the Initiation Plan.

104. WCA, Sprint, and BellSouth request that the Commission extend the initiation planning period until 30 months (two and one-half years) following the effective date of the amendatory rules.²⁷² This additional time is necessary, they reason, because they cannot begin to transition the 2.5 GHz band until the Commission adopts smaller transition areas.²⁷³ NY3G, however, opposes any modifications that would delay the transition and argues that three years is sufficient time for licensees to initiate a transition.²⁷⁴ WCA further asks the Commission to remove two required components of the Initiation Plan, which are codified at Sections 27.1231(d)(3) and 27.1231(d)(4) of the Commission's rules. Section 27.1231(d)(3) requires the proponent to include a statement that an engineering analysis to transition all BRS and EBS licensees in the MEA has been completed.²⁷⁵ WCA maintains that an engineering analysis at the Initiation Planning stage is unnecessary because a proponent will not know the channel locations of various operations and their facilities and interference protection needs until the Transition Planning

²⁶⁷ See WCA PFR at 18; Clearwire PFR Opposition at 11.

²⁶⁸ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14200 ¶ 78.

²⁶⁹ *Id.*

²⁷⁰ See *id.* at 14202 ¶ 86.

²⁷¹ *Id.* at 14203 ¶ 87.

²⁷² WCA PFR at 13. See also Sprint PFR at 5; BellSouth PFR Opposition at 15-16.

²⁷³ WCA PFR at 13.

²⁷⁴ NY3G PFR Opposition at 9-10.

²⁷⁵ WCA PFR at 14-15. See also BellSouth PFR Opposition at 20; Sprint PFR at 9.

Period, which occurs after the Initiation Planning phase.²⁷⁶ Sprint agrees with WCA and adds that because the term “engineering analysis” is not defined anywhere in the *BRS/EBS R&O* or its accompanying rules, it is unclear what the Commission would expect of such analysis.²⁷⁷

105. Section 27.1231(d)(4) requires that the Initiation Plan include a statement of “when the transition plan will be completed.” WCA maintains that a potential proponent cannot possibly provide an accurate response to that inquiry until it has fully explored a variety of logistical issues during the Transition Planning Period.²⁷⁸ WCA further argues that compliance with Section 27.1232(b)(1)(vi), which requires that the Transition Plan provide an approximate timeline for the completion of the transition, is sufficient for the Commission’s purposes.²⁷⁹ IMWED, however, argues that Commission should retain Section 27.1231(d)(4) to ensure that a timely transition occurs.²⁸⁰

106. *Discussion.* We agree to extend the length of the Initiation Planning Period until 30 months after the effective date of the amended rules. We further agree to delete Section 27.1231(d)(3) and to modify Section 27.1231(d)(4) to require only that the proponent give its best available estimate of when the transition will be completed. With regard to Section 27.1231(d)(3), we agree that the requirement to complete an engineering analysis at the Initiation Planning stage is premature and thus we remove this requirement. With regard to the deadline for submitting Initiation Plans, we are sensitive to the concerns of petitioners that the Commission’s original adoption of MEAs as the transition area would make it difficult to complete all of the requirements of the Initiation Plan by January 10, 2008. Today we have adopted changes that significantly reduce the size of transition areas. In addition, by deleting Section 27.1231(d)(3) and modifying Section 27.1231(d)(4), we have significantly reduced the requirements of the Initiation Plan, especially for single proponents.²⁸¹ As a result of today’s actions, a single proponent would only be required to file a list of the BTAs to be transitioned, a list of the call signs of the stations to be transitioned, a best estimate of when the transition will be completed, and a certification that the proponent has sufficient funds to pay the reasonable expected costs of the transition. Despite these changes, we agree with petitioners that proponents may not be able to meet the original January 10, 2008 deadline under certain circumstances.²⁸² We note that to date, not one Initiation Plan has been filed with the Commission. We conclude, in light of the record, that potential proponents cannot or will not transition under the rules effective on January 10, 2005, which require the transition to occur by MEA and are significantly more burdensome than the rules we adopt today. In light of these factors,

²⁷⁶ WCA PFR at 14-15. *See also* BellSouth PFR Opposition at 20.

²⁷⁷ Sprint PFR at 9.

²⁷⁸ WCA PFR at 15.

²⁷⁹ *Id.*

²⁸⁰ IMWED PFR Opposition at 8-9.

²⁸¹ Multiple proponents, which we believe will be rarely used, will have two additional requirements. *See* 47 C.F.R. § 27.1231.

²⁸² We note that NextWave advocates retaining the January 10, 2008 deadline and argues that parties will have sufficient time to create and file initiation plans. *See* Letter from George Alex, Chief Financial Officer, NextWave Broadband Inc. to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Feb. 7, 2006). While NextWave may be correct with respect to some of the markets, given the number of BTAs that will have to be transitioned, we believe the best action is to grant a minor extension of the deadline.

we agree with petitioners that the Initiation Period should start from the effective date of the amended rules. We further agree with petitioners that 30 months is an adequate time for a proponent to transition one or several BTAs under the rules we adopt today, which streamline the requirements for filing an Initiation Plan. Although several large entities may seek to transition many BTAs, we believe that they will be able to meet this deadline because of their experience working with BRS and EBS licensees and the resources available to them. Although we decline to delete Section 27.1231(d)(4), we believe that submitting a best estimate of when the transition will be complete will not be burdensome to proponents and will provide the Commission with an overview of the state of the 2.5 GHz band transition.

e. Transition Planning Phase

107. When the proponent files the Initiation Plan, the second phase of the transition process begins: the Transition Planning Phase. The Transition Planning Phase is the ninety-day period that commences on the day after the proponent(s) files the Initiation Plan with the Commission. During this ninety-day period, the proponent sends a Transition Plan²⁸³ to all EBS and BRS licensees in the BTA being transitioned. The EBS or BRS licensees may then submit a counterproposal, so long as the counterproposal is submitted to the proponent ten days before the end of the Transition Planning Period. If a timely filed counterproposal is received, the proponent(s) may accept the counterproposal and modify the Transition Plan accordingly or invoke dispute resolution procedures for a determination of whether the Transition Plan is reasonable. If the proponent decides to seek dispute resolution, the proponent(s) may take no action to transition the BTA until the dispute is resolved or may continue to transition the BTA while it awaits the results of the dispute resolution process. The Transition Plan must include plans for relocating the EBS and BRS incumbents from spectrum that has been redesignated for BRS Channel No. 1 and BRS Channel No. 2/2A.²⁸⁴

(i) Safe Harbors

108. To reduce the potential for disputes, the Coalition originally had asked the Commission to adopt nine safe harbors. In the event of a dispute between a proponent and an EBS or BRS licensee, a proponent's offer would be automatically reasonable if it fell under one of the nine safe harbors. The Commission, however, declined to adopt all nine safe harbors. Instead, the Commission adopted two of the nine safe harbors, numbers 1 and 2, which the Commission found were of general applicability.²⁸⁵ The Commission also adopted the key principle of safe harbor numbers 6 and 7 into the requirements of the Transition Plan.²⁸⁶ Petitioners ask the Commission to adopt safe harbors numbers 3, 4, and 9 from the Coalition's original proposal.²⁸⁷

(a) Safe harbor No. 3

109. *Background.* Safe harbor No. 3 would apply when an EBS licensee is entitled to two or more video programming or data transmission tracks in the MBS. As WCA explains, safe harbor No. 3

²⁸³ See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14203 ¶ 88.

²⁸⁴ *Id.* at 14203 ¶ 88.

²⁸⁵ See *id.* at 14204 ¶ 90.

²⁸⁶ See 47 C.F.R. § 27.1232(b)(2)-(4).

²⁸⁷ See Coalition Proposal, Appendix B at 23-27.

permits the proponent either to digitize the EBS licensee's operations so that it can operate on its single default MBS channel or to arrange one or more channel swaps under which the EBS licensee would obtain additional channels in the MBS in exchange for an equal number of its Lower Band Segment ("LBS") or Upper Band Segment ("UBS") channels.²⁸⁸ If the proponent and the EBS licensee do not reach an agreement concerning these tracks during the Transition Planning Period, safe harbor No. 3 gives the proponent the following two options.

- First, the Transition Plan can call for migration of one of those programming tracks to the EBS licensee's default channels in the MBS (e.g. channel A4 in the case of the A Group licensee) and provide the EBS licensee an additional 6 MHz channel in the MBS for each additional EBS video programming or data transmission track. If the proponent chooses this option, it must assure that the additional MBS channels can operate with transmission parameters substantially similar to those of the channel(s) on which the EBS video or data tracks were broadcast pre-transition. In exchange, the contributor of each additional MBS channel will be entitled to one of the recipient EBS licensee's channels in the LBS or UBS (along with the associated guard band channel) for each additional MBS channel provided. The additional MBS channels can be ones that would have been licensed to the proponent under the default system, or can be made available by way of channel swapping arrangements with other licensees in the market orchestrated by the proponent. The channels the contributor receives in exchange for its MBS channel shall be located at one of the ends of the recipient EBS licensee's default allocation, rather than in the middle.²⁸⁹
- Second, the Transition Plan can call for pro rata segmentation of the default MBS channel for the group, provided that the proponent commits to provide each of the licensees with the technology necessary for its EBS video programming or data transmissions to be digitized, transmitted, and received utilizing the provided bandwidth. The non-MBS channels would be divided among the sharing licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment).²⁹⁰

110. Petitioners agree that there are numerous situations across the country where an EBS licensee will be entitled to more than one MBS track under the Commission's rules, but disagree over whether the Commission should adopt safe harbor No. 3.²⁹¹ At issue is whether a proponent, by using safe harbor No. 3, can compel an EBS licensee to give up one or more of its LBS or UBS channels in

²⁸⁸ WCA PFR Reply at 7-8.

²⁸⁹ The licensee contributing its MBS channel can select the channel in the LBS or UBS it will receive. For example, if the A Group licensee elects to take a second channel in the MBS, the MBS licensee contributing that channel may select either channel A1 or A3 (and associated guard band channels) to be exchanged for the second MBS channel. Such selection shall be made during the Transition Planning Period and reflected in the Transition Plan. In the event that more than one MBS channel is contributed to an EBS licensee (because it operates more than two EBS video programming tracks), the first set of channels in the LBS or UBS to be swapped shall be at one end of that EBS licensee's allocation, with additional channels to be swapped directly adjacent. For example, if the A Group licensee elects to take a third channel in the MBS, the Transition Plan may call for the exchange of either channels A1 and A2 or channels A2 and A3 (and associated guard band channels). Coalition Proposal, Appendix B, at 23-24 n.55.

²⁹⁰ *Id.* at 23-24.

²⁹¹ WCA PFR at 23. See also 47 C.F.R. § 27.1233(b).

exchange for more than one MBS channel. IMWED maintains that such a scenario is likely because it is much cheaper for a proponent to offer the EBS licensee analog video operations on more than one MBS channel in lieu of the more costly digital conversion that would allow a single MBS channel to carry many video tracks.²⁹² According to IMWED, under safe harbor No. 3, EBS licensees risk hampering or entirely losing their ability to offer broadband wireless services on the LBS or UBS if they insist on maintaining their current number of video tracks.²⁹³ IMWED instead urges the Commission to allow EBS and BRS licensees to voluntarily swap channels.²⁹⁴ Sprint and WCA disagree with IMWED's assessment of the effects of a proponent's use of safe harbor No. 3 on EBS licensees. Sprint argues that if an EBS licensee wants to keep all of its LBS and/or UBS channels under Safe Harbor No. 3, it should request a single programming track in the MBS.²⁹⁵ According to WCA, "IMWED believes that EBS licensees should be able to have their cake and eat it too – they should be able to demand two or more program tracks in the MBS while still retaining three channels in the LBS or UBS."²⁹⁶ According to WCA, adoption of IMWED's proposal would result in a windfall to the EBS licensee, while imposing unreasonable costs on the proponent.²⁹⁷

111. *Discussion.* We agree with IMWED that safe harbor No. 3 unduly favors the proponent and may result in the EBS licensee having to choose between curtailing its video operations or relinquishing its LBS or UBS channels. Safe harbor No. 3 permits the proponent to choose which of the two options to present to the EBS licensee. Thus, under safe harbor No. 3, a proponent may offer the first option, while the EBS licensee may prefer the second option. The EBS licensee, however, would not be able to object because an offer under a safe harbor, by definition, is reasonable. Because, as WCA notes, there are numerous instances throughout the country where an EBS licensee would want or need more than one programming track in the MBS, we believe that the proponent and the EBS licensee must find a solution that is mutually agreeable to both. We therefore decline to adopt safe harbor No. 3 because it does not strike the appropriate balance between proponents and EBS licensees.

(b) Safe harbor No. 4

112. *Background.* Safe harbor No. 4 addresses situations in which more than one licensee shares a channel group in a particular location.²⁹⁸ If a four-channel group is shared among multiple licensees in a given geographic area, the use of the post-transition three LBS/UBS channels and one MBS channel would be pro rated among them according to the number of channels they originally held.²⁹⁹ Basically, safe harbor No. 4 permits the LBS/UBS channels and the MBS channel to be disaggregated and split among the sharing EBS licensees.³⁰⁰ WCA reports that according to a study conducted by Hardin &

²⁹² IMWED PFR Opposition at 4-5.

²⁹³ *Id.*

²⁹⁴ *Id.*

²⁹⁵ Sprint PFR Reply at 12-13.

²⁹⁶ WCA PFR Reply at 7-8.

²⁹⁷ *Id.*

²⁹⁸ George Mason University Reply Comments at 4.

²⁹⁹ IMWED PFR Opposition at 4-5.

Associates, approximately 16 percent of all EBS stations share channel groups.³⁰¹ WCA, NIA, CTN, and Sprint urge the Commission to adopt safe harbor No. 4.

113. Under safe harbor No. 4, a proponent has two choices absent an agreement otherwise:

- First, it can secure a 6 MHz MBS channel for each licensee in exchange for the non-MBS channels assigned to the group. Following the channel swap(s) necessary to secure those additional MBS channels, the Transition Plan can provide for the licensing of the remaining channels in the LBS, UBS, and Guard Bands on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment).
- Second, the Transition Plan can call for pro rata segmentation of the default MBS channel for the group, provided that the proponent commits to provide each of the licensees with the technology necessary for its EBS video programming or data transmissions to be digitized, transmitted, and received utilizing the provided bandwidth. The non-MBS channels would be divided among the sharing licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment).
- Note: If only one of the sharing EBS licensees elects to migrate video programming or data transmissions to the MBS, the default MBS channel assigned to that channel group shall be licensed to that licensee. The remaining spectrum assigned to the group will be allocated among the licensees on a pro rata basis, with the 6 MHz in the MBS counting against that licensee's portion. To the extent necessary, the non-MBS spectrum can be disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment.³⁰²

114. Petitioners argue about whether the Commission should adopt safe harbor No. 4. IMWED argues that after subchannelizing or disaggregating the LBS and UBS channels, the licensees are left with an unusable quantity of spectrum. Sharing a single analog MBS channel would cause multiple licensees to share scheduling of a single program track, with no guidelines and all the possible contention that such cohabitation would create.³⁰³ Although sharing a digitized MBS channel would be easier, IMWED argues that safe harbor No. 4 offers no guidance regarding: how the capital and operating expenses of such a condominium arrangement would be handled; how the use of fractional digital channels would be apportioned; or what would happen when one licensee becomes ready to convert its MBS capacity to wireless broadband, but other residents of the condominium are not.³⁰⁴ IMWED suggests that the following alternative to safe harbor No. 4 would better meet the needs of licensees.³⁰⁵

(Continued from previous page) _____

³⁰⁰ WCA PFR Reply at 8.

³⁰¹ WCA PFR at 24.

³⁰² CTN/NIA PFR at 17-18.

³⁰³ IMWED PFR Opposition at 6.

³⁰⁴ *Id.*

³⁰⁵ *Id.* at 6-7.

The channel C-4 licensee would be given control over mid-band channel C-4 after the transition and it would be free to barter with those holding LBS channels C-1 through C-3, as well as other EBS licensees.³⁰⁶ If the C-4 channel licensee wished to trade its MBS capacity for capacity on low power channels, it would be up to the affected licensees to sort through the intricacies according to their needs.³⁰⁷ Similarly, the licensee, or licensees, holding channel C-1 through C-3 would be able to bargain for MBS capacity.³⁰⁸

115. CTN, NIA, and BellSouth ask the Commission to reject IMWED's plan as unfair to EBS licensees and transition proponents.³⁰⁹ CTN and NIA argue that IMWED's plan (always to give the whole MBS channel in a group to whichever EBS licensee happens to be holding the fourth channel in the group now) could deprive some EBS licensees (*i.e.*, those holding other than the fourth channel in a group) from having any continuing video transmission capability.³¹⁰ Sprint and WCA argue that IMWED is incorrect in arguing that under safe harbor No. 4, licensees would have no practical means of using the proration.³¹¹ WCA notes that today's digital technology allows the use of bandwidths far narrower than the standard 5.5 MHz (LBS/UBS) and 6 MHz (MBS) channels allocated under the new bandplan, and thus the disaggregated channels would be quite usable.³¹² Sprint notes that there are numerous technologies that operate on relatively narrow channels (such as CDMA, which operates over 1.25 MHz channels and GSM, which operates over 200 kHz channels) and numerous examples of relatively narrow channel assignments contained in the Commission's rules themselves (such as narrowband PCS, which includes 100 kHz, 50 kHz and 12.5 kHz channels).³¹³ WCA notes that IMWED incorrectly assumes that there would have to be what it deems a "condominium" sharing of the single MBS channel.³¹⁴ WCA further notes that under safe harbor No. 4, absent agreement among the sharing licensees, the proponent could disaggregate the spectrum and each of the licensees would have their own independent facilities operating on their 3 MHz share.³¹⁵ Furthermore, WCA argues, if the sharing licensees would prefer full channels, they merely need to agree to split the group in some other fashion.³¹⁶

116. *Discussion.* We adopt safe harbor No. 4. The record supports the finding that safe harbor No. 4 would be applicable to numerous licensees. Moreover, both options contained in safe harbor No. 4 enable EBS licensees to continue video operations. Thus, regardless of which option is selected by

³⁰⁶ *Id.*

³⁰⁷ *Id.*

³⁰⁸ *Id.*

³⁰⁹ BellSouth PFR Reply at 9; CTN/NIA PFR Reply at 4.

³¹⁰ CTN/NIA PFR Reply at 4.

³¹¹ WCA PFR Reply at 8.

³¹² *Id.*

³¹³ Sprint PFR Reply at 12-13.

³¹⁴ WCA PFR Reply at 8.

³¹⁵ *Id.* at 8 n.25.

³¹⁶ *Id.* at 8.

the proponent, EBS licensees will be able to maintain their existing video operations. We do not believe that would be the case under the alternative presented by IMWED, where one licensee obtains control of the MBS channel to the exclusion other licensees that may wish to retain high power video operations. We believe that once licensees are assured of being able to maintain their video operations, they can work out the details of how the channels are shared.

(c) Safe harbor No. 9.

117. *Background.* Petitioners ask the Commission to adopt safe harbor No. 9 contained in the Coalition Proposal.³¹⁷ Safe harbor No. 9 applies when an EBS licensee uses one or more of its channels for studio-to-transmitter links.³¹⁸ WCA states that this situation occurs frequently.³¹⁹

118. When an EBS licensee uses one or more of its channels for studio-to-transmitter links, safe harbor No. 9 allows a proponent to provide for one of the following options:

- the use of the LBS and/or UBS band for the point-to-point transmission of the EBS video or data (through superchannelization of the licensee's contiguous LBS or UBS channels), provided the proponent commits to retune the existing point-to-point equipment to operate on those channels or to replace the existing equipment with new equipment tuned to operate on those channels and the proposal complies with the LBS/UBS technical and interference protection rules;
- the migration of the EBS programming to the MBS by retuning the existing point-to-point equipment to operate in the MBS or replacing it with equipment tuned to operate in the MBS; or
- the replacement of the point-to-point link with point-to-point equipment licensed to the EBS licensee in alternative spectrum, so long as the replacement facilities meet the definition of "comparable facilities" set out in Section 101.75(b) of the Commission's microwave relocation rules.³²⁰

119. *Discussion.* Based upon our analysis of the available licensing records, EBS licensees frequently use some of their channels for studio-to-transmitter links. Therefore, we agree with WCA that this situation occurs frequently and that safe harbor No. 9 is of general applicability. Furthermore, we believe that the adoption of safe harbor No. 9 will be helpful both to the proponents and EBS licensees in transitioning the 2.5 GHz band by assuring EBS licensees that they can maintain their studio-to-transmitter links. We note that we did not receive any opposition to WCA's request on this matter. For all of these reasons, we conclude to adopt safe harbor No. 9.

³¹⁷ WCA PFR at 24; BellSouth PFR Reply at 9.

³¹⁸ WCA PFR at 24.

³¹⁹ *Id.*

³²⁰ WCA PFR at 24.

(ii) Eligibility restrictions/channel swapping

120. *Background.* Petitioners ask the Commission to clarify that BRS and EBS licensees may “channel swap” during the transition.³²¹ They believe that this may be prohibited under Section 27.5(i)(3) of the Commission’s rules, which they believe specifies that a given licensee is limited to one MBS channel and three LBS/UBS channels.³²² They further argue that channel swapping between EBS and BRS licensees may be prohibited by the Commission’s EBS eligibility restrictions.³²³ They ask that the Commission not apply the EBS eligibility restrictions to channel swaps that further the transition of the 2.5 GHz band.³²⁴

121. *Discussion.* We agree with petitioners that we should clarify how the band plan in Section 27.5 of the Commission’s rules relates to the transition. Section 27.5 of the Commission’s rules assigns specific frequencies to specific channels.³²⁵ It further assigns channels as EBS, BRS, BRS 1 and 2/2A, and Guard Bands J and K. Furthermore, Section 27.5 of the Commission’s rules limits an EBS licensee to the assignment of no more than one 6-MHz channel in the MBS and three channels in the LBS or UBS for use in one single area of operation.³²⁶

122. Section 27.5(i)(1) contains the frequency assignment for channels pre-transition while Section 27.5(i)(2) contains the frequency assignments post-transition. In essence, Section 27.5(i)(1) maps channels from the old band plan to their new default assignments in new band plan, which are set forth in Section 27.5(i)(2). During the transition, however, the proponent may seek agreement among licensees in a BTA to change their default assignments. For instance, the A group channels may change positions with another EBS licensee or with a BRS licensee. The same rationale applies to Section 27.5(i)(3): absent agreement, an EBS licensee receives one MBS channel by default. During the transition, however, the proponent may seek an agreement among the licensees in the BTA for an EBS licensee to receive more than one MBS channel in exchange for a LBS or UBS channel. Although the Commission retained the eligibility restrictions in the *BRS/EBS R&O*, those restrictions do not prohibit licensees from swapping channels to effectuate the transition. Accordingly, today we amend Section 27.5(i)(3) to clarify that EBS licensees are not restricted to four channels nor are they restricted to one MBS channel, and to clarify that the EBS eligibility restrictions do not prevent channel swapping to further the transition.³²⁷

(iii) Financial penalties in dispute resolution process

123. *Background.* As mentioned above, during the transition planning period, the proponent presents its offer in the form of a Transition Plan to the licensees. Licensees, covered by the plan may, in turn, submit a counterproposal to the Transition Plan. Then, the proponent may: (1) accept the

³²¹ Choice PFR at 8; IMWED Reply Comments at 9-10.

³²² Choice PFR at 8.

³²³ IMWED Reply Comments at 9-10.

³²⁴ *Id.*

³²⁵ 47 CFR § 27.5(i)(2).

³²⁶ 47 CFR § 27.5(i)(3).

³²⁷ See *infra* ¶ 358 for a more detailed discussion of the four-channel rule.

counterproposal and modify the Transition Plan accordingly; (2) reject the counterproposal, stay the transition, and seek dispute resolution; or (3) reject the counteroffer, but continue with the transition as modified by the counteroffer, and seek dispute resolution. The Commission was silent about assessing any financial penalties levied on licensees that reject a Transition Plan that is later determined to be reasonable in a dispute resolution process or financial penalties levied on the proponent if the Transition Plan is determined to be unreasonable.

124. Petitioners ask the Commission to adopt the Coalition's original proposal regarding costs incurred where a dispute has arisen between a proponent and a licensee over the terms of the Transition Plan.³²⁸ Specifically, the petitioners ask that the Commission permit a proponent to require a licensee to pay "those additional documented costs incurred by the proponent which were (i) over and above what the proponent proposed in its Transition Plan, and (ii) directly related to implementing the counterproposal" if the Transition Plan was determined to be reasonable in a dispute resolution process.³²⁹ The Coalition's Plan also proposed that the proponent reimburse the dispute-related costs of any licensee that objected to the initial transition plan if the Transition Plan is found to be unreasonable.³³⁰ The advantage of this approach, WCA argues, is that a proponent could move forward with the counterproposal and commence providing service under the new band plan rapidly, while secure in the knowledge that it will be made whole financially if its initial proposal is found to have been reasonable.³³¹ Because the Commission is silent about levying financial penalties, WCA argues that unless the proponent is prepared to accept the risks associated with implementing its own transition plan while a challenge is awaiting resolution, the market in issue will not be transitioned.³³² CTN and NIA support the penalties so long as both sides are penalized for unreasonable conduct.³³³ CTN and NIA note that such a rule would give both proponents and licensees a financial incentive to act reasonably.³³⁴

125. HITN and IMWED oppose the adoption of harsh penalties imposed on EBS licensees that submit counterproposals during the transition process.³³⁵ HITN argues that while WCA's concern regarding greenmail and delay brought on by objections or counterproposals to otherwise reasonable Transition Plans is understandable, the requested penalties would further chill EBS licensees from making any objection at all to a proponent's transition proposals.³³⁶ HITN notes the extremely tight time frames for EBS licensees to respond to transition plans.³³⁷ Under these circumstances, HITN argues that the

³²⁸ WCA PFR at 25.

³²⁹ *Id.*

³³⁰ *Id.* at 25-26.

³³¹ *Id.*

³³² *Id.*

³³³ CTN/NIA PFR Reply at 6.

³³⁴ *Id.*

³³⁵ HITN PFR Opposition at 4; IMWED PFR Opposition at 7.

³³⁶ HITN PFR Opposition at 4.

³³⁷ HITN notes that while the proponent is not required to supply the transition plan to the licensees until within 30 days of the end of the ninety-day transition planning period, licensees, in contrast, must submit any objection or (continued....)

combination of such a short response period coupled with a substantial penalty for innocent error would almost certainly deter any and all objections by affected EBS licensees.³³⁸ IMWED argues that the Coalition's Plan confers extensive powers on proponents that may lead to abuse.³³⁹ IMWED further notes that under the Coalition's Plan the standards for reasonableness are unclear, as are the mechanics for adjudicating reasonableness, which increases the risk for EBS licensees.³⁴⁰ IMWED believes that the Commission has created an environment that provides incentives for all parties to complete transitions in a timely manner.³⁴¹ To circumvent abusive transition plans, IMWED asks the Commission to permit EBS and BRS licensees to have the option of self-transitioning at their own expense, as an alternative to taking part in a proponent's plan.³⁴²

126. *Discussion.* We decline to reconsider the Commission's determination not to adopt financial penalties within the dispute resolution context. We believe that parties can adequately resolve disputes without mandating financial penalties, and we urge the parties to act in good faith to reach a mutually agreeable solution in all cases. We note that the rules allow the proponent to give non-proponent licensees a minimum of twenty days to respond to the proponent's Transition Plan.³⁴³ Therefore, we agree with HITN that the tight timeframes coupled with the imposition of financial penalties would deter non-proponent licensees from raising any objection to the Transition Plan. Furthermore, we note that we have adopted six of the nine safe harbors originally proposed by the Coalition, which we believe will reduce the number of disputes arising out of the development of the Transition Plan.³⁴⁴

(iv) Relocation of BRS Channels No. 1 and 2

127. *Background.* Currently, BRS operations in the 2150-2160/62 MHz band consist of two channels – Channel No. 1 (2150-2156 MHz) and Channel No. 2A/2 (2156-2160/62 MHz), collectively “BRS Channels No. 1 and 2.”³⁴⁵ The Commission reallocated and designated the 2150-2155 MHz
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counterproposal within ten days of the close of the planning period. This tight timeframe means that in those instances in which a proponent submits the Transition Plan to licensees within 30 days of the end of the transition planning period, licensees would have only twenty days to not only to read and understand the proponent's plan, but to arrange for and obtain any needed engineering analysis, and where necessary to craft and serve a counterproposal on the proponent. HITN Opposition PFR at 4.

³³⁸ HITN PFR Opposition at 4.

³³⁹ IMWED PFR Opposition at 7.

³⁴⁰ *Id.*

³⁴¹ *Id.* See *infra* ¶¶ 133-143 and ¶¶ 173-176 for a discussion of self-transitions.

³⁴² *Id.*

³⁴³ The Transition Planning Period lasts 90 days. No later than 30 days before the end of the Transition Planning Period, the proponent must provide the Transition Plan to each BRS and EBS licensee. The non-proponent BRS and EBS licensees must respond to the Transition Plan at least ten days before the end of the Transition Planning Period. 47 C.F.R. §27.1232.

³⁴⁴ See *supra* ¶¶ 108-119 for a discussion of transition safe harbors adopted by the Commission.

³⁴⁵ Licensees may use Channel No. 2 (2156-2162 MHz) on a limited basis in 50 cities. The Commission provided the BRS service with an extra two megahertz in the 50 largest metropolitan areas so that there would be sufficient bandwidth (6 MHz) for a second analog television channel. The two megahertz at 2160-2162 MHz can only be (continued....)

segment of the band for AWS use and stated that it would identify relocation spectrum for the incumbent BRS licensees in a later, separate proceeding,³⁴⁶ and further explored the relocation needs for the BRS licenses in the 2150-2160/62 MHz band.³⁴⁷ In the *BRS/EBS R&O*, the Commission designated spectrum in the new 2.5 GHz BRS band plan for BRS Channels No. 1 and 2 – 2496-2502 MHz for BRS Channel No. 1 and 2618-2624 MHz for BRS Channel No. 2.³⁴⁸ The Commission also stated that the Transition Plan must include plans for relocating the EBS and BRS incumbents from spectrum that has been redesignated for BRS Channel No. 1 and BRS Channel No. 2.³⁴⁹ Subsequently, the Commission reallocated and designated the remaining segment at 2155-2160 MHz for AWS use and sought comment on the specific relocation procedures applicable to BRS operations in the 2150-2160/62 MHz band.³⁵⁰

128. *Petitions.* WCA and Sprint ask the Commission to clarify its statement that “[t]he Transition Plan must include plans for relocating the EBS and BRS incumbents from spectrum that has been redesignated for MDS 1 and 2. . . .”³⁵¹ with regard to the relocation of BRS Channels No. 1 and No. 2 from 2150-2162 MHz to 2496-2502 MHz and 2618-2624 MHz, respectively. The parties claim that because the *BRS/EBS R&O* requires BRS licensees currently located in the 2500-2690 MHz band to pay their own transition costs, this language could be construed to require transition proponents to pay the costs to relocate BRS Channels No. 1 and No. 2 licensees from the 2.1 GHz band. In addition, WCA and the BRS Rural Advocacy Group claim that the *BRS/EBS R&O* does not provide replacement spectrum for BRS Channels No. 1 and No. 2 operations where the incumbent licensee in the 2.5 GHz band is operating on spectrum designated for BRS Channels No. 1 and No. 2/2A relocation but has “opted-out” of the

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assigned where there is evidence that no harmful interference would occur to any authorized co-frequency point-to-point facility. See 47 C.F.R. § 27.5(i)(1); *BRS/EBS R&O*, 19 FCC Rcd 14165, 14171-72 ¶ 11. In 1992, the Commission reallocated the 2160-2162 MHz band to emerging technologies. Therefore, any BRS licensee that applied for use of the 2160-2162 MHz band after January 16, 1992 would be granted a license only a secondary basis to emerging technology use. See 47 C.F.R. § 2.106, footnote NG 153. In 1996, the Commission auctioned licenses for BRS channels on a BTA basis but noted that BRS Channel No. 2 licenses using the 2160-2162 MHz band were secondary to emerging technology licenses. See FCC Auction [for] Multipoint and/or Multichannel Distribution Service (MDS) Authorizations for Basic Trading Areas, Bidder Information Package (1995), at 21 (available at <http://wireless.fcc.gov/auctions/06/releases.html>).

³⁴⁶ See 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, *Second Report and Order*, ET Docket No. 00-258, 17 FCC Rcd 23193 (2002).

³⁴⁷ See 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, *Third Report and Order, Third Notice of Proposed Rule Making, and Second Memorandum Opinion and Order*, ET Docket No. 00-258, 18 FCC Rcd 2223 (2003).

³⁴⁸ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14184 ¶ 38.

³⁴⁹ *Id.* at 14203 ¶ 88.

³⁵⁰ See *AWS 8th R&O and 5th NPRM*, 20 FCC Rcd 15866.

³⁵¹ Sprint PFR at 7-8; WCA PFR at 15-16. See also BellSouth PFR Opposition at 23; BRS Rural Advocacy Group PFR Opposition at 15; Choice PFR Opposition at 3; C&W PFR Reply at 2; WDBS PFR Reply at 3-4.

transition.³⁵² The BRS Rural Advocacy Group claims that because there is overlap between channels in the existing and new band plans, licensees in the 2.5 GHz band that have opted-out of the transition would remain to the detriment of newly relocated BRS Channels No. 1 and No. 2 operations in the band.³⁵³

129. *Discussion.* The obligations for the relocation of BRS Channels No. 1 and No. 2 licensees from the 2150-2160/62 MHz band have been addressed in ET Docket No. 00-258.³⁵⁴ In the *AWS 9th R&O*, the Commission has decided to generally apply its Emerging Technologies relocation policies to new AWS entrants in the 2150-2160/62 MHz band, with modifications to accommodate the type of BRS incumbent operations that are the subject of relocation.³⁵⁵ The Commission does not require that a proponent in the 2.5 GHz band be responsible for relocating BRS Channels No. 1 and No. 2 licensees. We note that this clarification does not alter the responsibility of a proponent in the 2.5 GHz band to transition the spectrum at 2500-2502 MHz and 2618-2624 MHz, which is designated for relocated BRS Channels No. 1 and No. 2 licensees, respectively, consistent with the rules adopted in this proceeding.

130. Because the relocation of BRS Channels No. 1 and 2 licensees and the transition of the 2.5 GHz band will occur on parallel but distinct timetables, we conclude here that the concerns raised by the parties about the availability of replacement spectrum for BRS Channels No. 1 and No. 2 licensees can be addressed by providing flexibility for their relocation to the 2.5 GHz band if the transition of the spectrum designated for their relocation has not yet occurred. For example, as discussed above, BRS Channel No. 1 licensees currently operate at 2150-2156 MHz (six megahertz of spectrum) and BRS Channels No. 2A/2 licensees currently operate at 2156-2160/62 (four or six megahertz of spectrum).³⁵⁶ In the new BRS band plan, BRS Channels No. 1 and 2 licensees each will be relocated to six megahertz spectrum blocks at 2496-2502 MHz and 2618-2624 MHz, respectively. Today, we affirm the decision to designate the 2496-2500 MHz band, combined with the restructured 2500-2690 MHz band, as suitable replacement spectrum for the provision of comparable facilities to accommodate BRS operations that currently operate in the 2150-2160/62 MHz band.³⁵⁷ Accordingly, four megahertz of spectrum at 2496-2500 MHz will be available for the relocation of BRS Channel No. 1 operations while the remaining two megahertz at 2500-2502 MHz will become available after the transition is complete. We will amend our

³⁵² See BRS Rural Advocacy Group PFR Opposition at 15-16; WCA PFR at 35-37. See also C&W PFR Reply at 2.

³⁵³ The new band plan, which specifies the relocation of BRS Channel No. 1 to 2496-2502 MHz and BRS Channel No. 2/2A to 2618-2624 MHz, overlaps channel A1 at 2500-2502 MHz, channel F2 at 2618-2620 MHz and channel E3 at 2620-2624 MHz in the existing band plan. See BRS Rural Advocacy Group PFR Opposition at 16.

³⁵⁴ See 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, *Ninth Report and Order and Order*, FCC 06-45 (rel. Apr. 21, 2006) ("*AWS 9th R&O*").

³⁵⁵ *Id.*

³⁵⁶ See *supra* ¶ 127.

³⁵⁷ See *supra* Section IV.A.

rules to designate 2496-2500 MHz as available pre-transition spectrum for BRS Channel No. 1.³⁵⁸ We believe, as WCA and the BRS Rural Advocacy Group acknowledge, that in most cases, the four megahertz of spectrum may be sufficient for BRS Channel No. 1 operations on an interim basis through the deployment of “cellularized systems that both accommodate the shorter path lengths at 2.5 GHz and provide for frequency reuse.”³⁵⁹

131. With respect to BRS Channel No. 2 licensees, there may be other segments of the 2.5 GHz band plan, such as the four megahertz at 2686-2690 MHz band (the I channels in the existing band plan), that may be available for the relocation of BRS Channel No. 2 operations pending the completion of the transition.³⁶⁰ We will amend our rules to designate 2686-2690 MHz as pre-transition spectrum for BRS Channel No. 2, subject to protection of existing facilities operating on the I channels. After the transition, BRS Channel No. 2 licensees would be relocated to their designated channel at 2618-2624 MHz. WCA notes that, “in most cases, this two-step approach could be implemented at little marginal cost, given that frequency-agile equipment could be installed as part of the first relocation and then readily returned to operate under the new band plan.”³⁶¹ However, we note that while the Commission has not yet set a timetable for the competitive bidding process nor established service rules for the 2155-2160/62 MHz band (which consists of BRS Channels No. 2 and No. 2A and the upper one megahertz of BRS Channel No. 1), the BRS transition in the 2.5 GHz band will have already begun. We therefore anticipate that many of the parties’ remaining concerns about the availability of the replacement spectrum may be addressed before relocation will occur.

132. Finally, as discussed above, we have affirmed our decision to waive the transition rules on a case-by-case basis, instead of adopting automatic opt-out criteria.³⁶² As such, we expect BRS Channels No. 1 and No. 2 licensees, who will be affected by a 2.5 GHz licensee’s request to opt-out of the transition, to participate in the waiver process so that the Commission will be able to consider the BRS Channels No. 1 and No. 2 licensees’ concerns about relocation spectrum in the 2.5 GHz band in its review of the waiver request.

f. Self-transitions

(i) Authority to self-transition

133. *Background.* Petitioners ask the Commission to allow licensees to self-transition. They

³⁵⁸ We clarify that licensees on BRS Channels No. 1 and 2 may operate on either 2150-2156 MHz or 2496-2500 MHz pre-transition, but not on both bands.

³⁵⁹ WCA PFR at 36 (noting also that relocation must be accomplished in a way that does not cause harmful interference to operations on adjacent channels). *See also* BRS Rural Advocacy Group PFR Opposition at 16 (noting that WCA’s proposed alternative whereby BRS Channel No. 1 would be relocated to 2496-2500 MHz, would be acceptable, so long as an overlap with a licensed channel exists).

³⁶⁰ WCA PFR at 36-37.

³⁶¹ *Ex Parte* Letter from Paul Sinderbrand, Counsel, WCA to Marlene H. Dortch, Federal Communications Commission (filed Aug. 5, 2005) at 3.

³⁶² *See supra* ¶¶ 72-73.

make this request in light of the Commission's proposal to use an alternative transition mechanism if a proponent has not filed an Initiation Plan with the Commission on or before January 10, 2008. Under this alternative proposal, if a proponent has not filed an Initiation Plan with the Commission on or before January 10, 2008, the Commission would transition the 2.5 GHz band by making spectrum previously licensed to incumbent licensees accessible pursuant to new licenses and granting incumbent licensees bidding credits that could be used to obtain spectrum access using new licenses of value comparable to that provided by their original license.

134. Petitioners uniformly oppose the Commission's alternative proposal and instead ask the Commission for the authority to self-transition. The petitioners disagree, however, over when licensees should be able to exercise this option. Most believe that the ability to self-transition should only occur after January 10, 2008 and only if a proponent has either not filed an Initiation Plan or has withdrawn an Initiation Plan on or before January 10, 2008. The Illinois Institute of Technology (IIT), however, recommends that all affected licensees be able to self-transition at any time if all of the affected licensees consent to the transition.³⁶³ IMWED recommends that licensees be able to self-transition at any time, at their own expense, as a means of circumventing abusive Transition Plans.³⁶⁴ Other petitioners argue that before January 10, 2008, proponent-driven transitions should be the exclusive process used to transition a BTA.³⁶⁵ They note a proponent-driven transition offers a coordinated planning process that would provide a near simultaneous method of transitioning all licensees in a BTA. They argue that self-transitions permitted before January 10, 2008 would cause patchwork transitions that would increase the potential for interference and ultimately delay proponent-driven transitions of the 2.5 GHz band.³⁶⁶

135. *Discussion.* In light of the record on this issue, we will allow licensees to self-transition. We further conclude, however, that this option may be exercised only after 30 months after the effective date of the amended rules, in markets where a proponent has not filed or has withdrawn an Initiation Plan. We agree with petitioners that allowing licensees to self-transition before 30 months after the effective date of the amended rules would negatively affect the incentives for proponents to transition their BTAs. While we endorse the concept of self-transitions, we believe that a proponent-driven transition will more quickly and efficiently transition the 2.5 GHz band. We believe that self-transitions should be used by licensees to preserve their authorizations in the event that their stations are in a BTA that is not being transitioned by a proponent.

(ii) Implementation of self-transitions

136. *Background.* Petitioners offer various suggestions on the mechanics of self-transitioning. WCA suggests that licensees, in areas that will not be transitioned by a proponent, electronically notify the Commission on or before March 11, 2008 (which is 60 days from January 10, 2008, the deadline for filing Initiation Plans with the Commission) whether they will self-transition, vacate their spectrum entirely for bidding credits, or vacate their LBS/UBS channels in exchange for financial assistance in migrating to the MBS channels.³⁶⁷ Then, WCA proposes that licensees seeking to self-transition be given

³⁶³ IIT PFR Opposition at 9, n.22.

³⁶⁴ IMWED PFR Opposition at 7.

³⁶⁵ See CTN/NIA PFR Reply at 8-9.

³⁶⁶ See *id.*

³⁶⁷ WCA PFR at 34; CTN/NIA PFR at 5-6; Sprint PFR at 4-5.

a reasonable amount of time to complete the self-transition.³⁶⁸ WCA recommends that licensees be given 18 months to complete the transition, whereas BellSouth recommends one year, and Sprint recommends eight months.³⁶⁹

137. BloostonLaw recommends a different approach to self-transitions. Under BloostonLaw's approach, licensees seeking to self-transition must file applications before January 10, 2009 to modify their licenses to operate under the new band plan.³⁷⁰ BloostonLaw indicates that this is a workable solution because licensees seeking to self-transition can be expected to frequency coordinate their technical proposals prior to filing so that mutually exclusive applications will not exist.³⁷¹ BellSouth, however, argues that filing modification applications should not be necessary to effectuate self-transitions.³⁷²

138. Other commenters recommend that the Commission adopt rules that require a licensee to notify other license holders in the BTA that it will self-transition.³⁷³ These commenters recommend that such rules should not require licensees to submit engineering analyses or allow for adjacent licensees who have not transitioned to object to such transitions on the basis of interference or other reasons.³⁷⁴

139. CTN/NIA recommends that the Commission adopt self-transition rules parallel to those adopted for a proponent-driven transition.³⁷⁵ Specifically, CTN/NIA recommends that licensees that self-transition LBS and UBS channels for two-way operation must install upgraded downconverters at EBS receive sites within the vicinity of the new LBS or UBS operations.³⁷⁶

³⁶⁸ WCA PFR at 35.

³⁶⁹ WCA PFR at 35; BellSouth Opposition PFR at 16; Sprint Reply Comments at 15.

³⁷⁰ BloostonLaw Comments at 3-4.

³⁷¹ *Id.*

³⁷² BellSouth Reply Comments at 14, n.48.

³⁷³ C&W Comments at 3-4; Pace Comments at 3-4; DBC Comments at 3; SpeedNet Comments at 3-4; WDBS Comments at 3-4.

³⁷⁴ C&W Comments at 3-4; Pace Comments at 3-4; DBC Comments at 3; SpeedNet Comments at 3-4; WDBS Comments at 3-4.

³⁷⁵ CTN/NIA PFR at 7.

³⁷⁶ Specifically, CTN/NIA recommends that the Commission require Two-Way Operators to send a written data request, called an EBS Data Request, to all EBS licensees within twenty miles of the nearest proposed LBS/UBS base station to be constructed by the Two Way Operator. Within 60 days of the receipt of the EBS Data Request, all EBS licensees must provide the location (by street address and geographic coordinates) of every EBS receive site that, as of the date of the EBS Data Request, would be entitled to a replacement downconverter pursuant to Section 27.1233(a) of the Commission's Rules. In the response to the EBS Data Request, the EBS licensee indicates whether the downconverting antenna is mounted on a structure attached to the building or on a free-standing structure, and specifies the approximate height above ground level of the downconverting antenna.³⁷⁶ According to CTN/NIA's proposal, any EBS licensee that fails to timely respond to the EBS Data Request would be ineligible to receive upgraded downconverters. On receipt of the responses to the EBS Data Request, the Two-Way Operator has the discretion whether to install replacement downconverters at all MBS receive sites located within 20 miles of (continued....)

140. IIT's proposal contrasts strongly with CTN/NIA's proposal. IIT argues that because self-transitioning licensees do not realize the same economic benefits as a commercial proponent might realize upon transition, the self-transition should be limited to those minimal changes required to assure that intra-market interference is not caused.³⁷⁷ Thus, IIT argues self-transitioning licensees should not be required to purchase or install upgraded downconverters.³⁷⁸ Stanford University also recommends that the Commission permit licensees to self-transition to the LBS, UBS, and MBS channels assigned to them under the new band plan.³⁷⁹

141. *Discussion.* We believe that it is necessary to coordinate self-transitions with proponent-driven transitions so that the 2.5 GHz band is transitioned in an orderly and timely manner. To accomplish this goal, we adopt the recommendations of several petitioners. Specifically, licensees in areas that will not be transitioned by a proponent must notify the Commission within 90 days of the date Initiation Plans must be filed with the Commission whether they will self-transition or be subject to whatever alternative transition process the Commission may adopt. Although WCA recommended 60 days, we believe that 90 days will enable EBS licensees to decide whether to undertake a self-transition. Moreover, a 90-day period corresponds to the 90-day Transition Planning Period in a proponent-driven transition. We believe that this notification, in addition to the Initiation Plans filed by proponents, will enable us to assess the state of the transition and provide us with information about the availability of spectrum to be auctioned under the rules set forth in the *Second R&O*.

142. Also, BRS and EBS licensees that seek to self-transition must notify other licensees in the BTA where their licensee's GSA geographic center point is located, as well as other licensees whose GSAs overlap with the self-transitioning licensee, that they will self-transition. We believe that this notification will allow licensees to address interference concerns. In this connection, we conclude that in order to effectuate self-transitions, an adjacent licensee that is not self-transitioning may not object to the

(Continued from previous page) _____

the nearest proposed LBS/UBS two-way base station to be constructed by the Two-Way Operator. CTN/NIA recommends that the Commission establish a deadline requiring all licensees to cease operating high power service on their LBS and UBS channels so that those licensees wishing to operate under the new rules may do so. CTN/NIA PFR at 6-8. WCA asks that the Commission make two modifications to CTN/NIA's proposal. First, WCA recommends that the Two-Way Operator notify any EBS MBS licensee with a GSA that overlaps or is within twenty miles of any of the Two-Way Operator's LBS or UBS base stations. WCA notes that although this proposal requires the Two-Way Operator to notify more licensees than required under CTN/NIA's proposal, this additional paperwork is necessary because with the use geographic area licensing public data is not available regarding the location of EBS facilities. Second, WCA recommends that EBS licensees respond to the EBS Data Request within twenty-one days. WCA PFR Opposition at 23-24.

³⁷⁷ IIT Reply Comments at 20-21.

³⁷⁸ IIT's proposal for the transition process is as follows. The licensee who first files a self-transition notice both with the Commission and with those licensees in the market with overlapping GSAs ("Affected Licensees") shall be deemed to have triggered a process whereby all Affected Licensees must cease operations not in conformance with the post-transition frequency assignments and characteristics within 180 days of this notice date, absent a consent to an extension approved by all Affected Licensees (and lasting no more than 180 days). At this time, operations conducted in accordance with the post-transition frequency plan should enjoy primary status as against adjacent market co-channel stations not in conformance with that plan. IIT notes that this would be a compulsory transition that would be deemed concluded when all operations not in conformance with the post-transition frequency plan cease. IIT Reply Comments at 20.

³⁷⁹ Stanford Reply Comments at 7.

transition. If, however, the adjacent licensee is also self-transitioning, we conclude that the licensees must work out interference issues. It is not necessary for licensees that self-transition to file engineering analyses with the Commission.³⁸⁰ Licensees may only self-transition to the LBS, UBS, or MBS channels assigned to them under the new band plan, however.³⁸¹

143. Licensees must file modification applications with the Commission to complete the self-transition. Although we agree that licensees should be given a reasonable amount of time to complete the transition, we decline to adopt any of the specific limitations proposed for the self-transition process by any of the petitioners. Instead, we decide to harmonize self-transitions with proponent-driven transitions, which if they followed the timeline prescribed in the rules, without any delays, would conclude 21 months after the Initiation Plans must be filed. Therefore, we conclude that licensees must complete the self-transition on or before 21 months after the Initiation Plans must be filed.³⁸²

g. Transition Completion Phase

144. Eighteen months after the Transition Planning Period ends, the transition must be completed, unless it has been stayed pending the resolution of a dispute.³⁸³ During the transition completion phase, the proponent(s) must replace downconverters and migrate video programming tracks for eligible EBS licensees.³⁸⁴ The replacement downconverters must meet certain technical criteria. At the end of this phase, the proponent(s) and all of the BRS and EBS licensees in the BTA must file a Post-Transition Notice that indicates that the BTA has been transitioned and the licensees are operating according to the new technical rules.

(i) Replacement Downconverters

145. *Background.* The Commission adopted a rule that required the proponent to install at every eligible EBS receive site a downconverter designed to minimize the reception of signals from outside the MBS.³⁸⁵ In addition to other criteria, the Commission found that only those receive sites that are within a licensee's thirty-five mile GSA are entitled to replacement downconverters.³⁸⁶

146. Several petitioners ask the Commission to require proponents to supply new downconverters to all receive sites of EBS stations located within the stations' old 35 mile protected service areas (PSA).³⁸⁷ The petitioners note that even though receive sites located outside of the new GSAs will not be entitled to interference protection under the geographic licensing approach, most if not

³⁸⁰ See *supra* ¶ 106 where we decided that in a proponent-driven transition that the Initiation Plan does not have to indicate that the proponent has completed an engineering analysis.

³⁸¹ See 47 C.F.R. § 27.5(i)(2) for default channel assignments.

³⁸² IIT Reply Comments at 20.

³⁸³ See 47 C.F.R. § 27.1232(b)(1)(vi).

³⁸⁴ See 47 C.F.R. § 27.1233(a).

³⁸⁵ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14205 ¶ 94.

³⁸⁶ 47 C.F.R. § 27.1233(a)(1)(iv).

³⁸⁷ EBS Parties Reply Comments at 4; George Mason Reply Comments at 4.

all receive sites that were formerly protected will continue to be used, and will be able to successfully receive signals, if they are provided downconverters that filter out all but the MBS band signals.³⁸⁸ Petitioners argue that providing new downconverters at these locations will actually result in less interference.³⁸⁹ In addition, Clearwire asks the Commission to refine the process for identifying receive sites that are entitled to replacement downconverters and require EBS licensees to certify, in writing, that the receive site is, at the time the data request is received, actively being used for EBS distance learning services for the permissible purpose of formal education of fulltime students at accredited schools.³⁹⁰ Clearwire is concerned that proponents will incur unnecessary transition expenses if they provide replacement downconverters to all receive sites that meet the criteria established in Section 27.1233(a) of the Commission's rules.³⁹¹

147. *Discussion.* We decline to require proponents to replace downconverters in an EBS licensee's PSA but outside its GSA as inconsistent with our decision to adopt GSAs, burdensome to proponents, and likely to slow the transition process. We further decline to adopt Clearwire's recommendation to refine the criteria for eligible receive sites under Section 27.1233(a) of the Commission's rules. We believe that Section 27.1233(a) of the Commission's rules is narrowly tailored to ensure that proponents are replacing only those downconverters that are used to receive educational or instructional programming and that the certification recommended by Clearwire is unnecessary and unduly burdensome to EBS licensees.³⁹²

(ii) Transition deadline

148. *Background.* Under Section 27.1232(b)(1)(vi), the transition must be completed within 18 months of the conclusion of the Transition Planning Period, unless the Transition Planning Period has been stayed pending dispute resolution.³⁹³ At the end of the transition, licensees must be in the new channel locations and operating according to the new technical rules.

149. BloostonLaw, on behalf of rural operators, asks the Commission to allow rural operators to continue providing service under the old band plan until January 10, 2013, which is approximately five years after the end of the transition.³⁹⁴ BloostonLaw maintains that the additional five years should be adequate to allow most licensees to recoup the cost of their investment in their existing equipment (equipment that would not have to be replaced but for the transition to the new band plan) and allow for its orderly replacement in the ordinary course of business.³⁹⁵ The MMDS Licensee Coalition asks the

³⁸⁸ EBS Parties Reply Comments at 4; George Mason Reply Comments at 4.

³⁸⁹ EBS Parties Reply Comments at 4; George Mason Reply Comments at 4.

³⁹⁰ Clearwire PFR Opposition at 11-12.

³⁹¹ *Id.* at 12.

³⁹² *See supra* ¶ 99 for a further discussion of this issue.

³⁹³ 47 CFR § 27.1232(b)(1)(vi).

³⁹⁴ BloostonLaw PFR at 7.

³⁹⁵ *Id.*

Commission to delay the effective date of the transition rules until the *FNPRM* is completed.³⁹⁶ The MMDS Licensee Coalition states that the availability of the proposed alternative process for non-transitioned markets may be attractive for both prospective transition proponents and non-proponent incumbent licensees.³⁹⁷ Thus, MMDS Licensee Coalition maintains that depending on how the alternative process comes out, it might make sense for prospective operators to use that as a spectrum-clearing or transition-accomplishing mechanism rather than undertaking the complex process of initiating a transition.³⁹⁸ But licensees will not be able to assess which option to use, the current transition process or an alternative, until the rules for the alternative process are final.³⁹⁹ MMDS Licensee Coalition further states that because any transition plan will be subject to reasonable objection by potential participants and the final rules governing the transition are not yet known, they therefore cannot rationally sign on to a particular plan.⁴⁰⁰

150. *Discussion.* We believe that any delay in transitioning the 2.5 GHz band would impose extraordinary costs on licensees and the public in terms of delay to new services and deployments denied.⁴⁰¹ Specifically, we believe that the continued operation of high-power, high-site facilities poses a real and present risk of cochannel interference to the base stations of two-way systems operating nearby and would defeat the underlying purpose of segmenting high-site, high-power operations within the MBS and low-site, low-power operations within the LBS and UBS.⁴⁰² We further believe that two-way system operators in the vicinity of such non-transitioned systems would be forced to suffer cochannel interference until 2013, interference which might make the deployment of wireless broadband services using the LBS and the UBS spectrum impossible.⁴⁰³ Furthermore, we believe that the comprehensive transition to the new 2.5 GHz band plan will only work if the plan is truly comprehensive; each additional exception, limitation, or other allowance to the comprehensive plan harms the public interest in effecting a long overdue restructuring of the historically underused 2.5 GHz band.⁴⁰⁴ Thus, we retain the transition deadline as adopted in the *BRS/EBS R&O*, i.e., the transition must be completed 18 months after the transition planning period ends. Finally, while complete information about alternative transitions might

³⁹⁶ MMDS Licensee Coalition at 3-4.

³⁹⁷ *Id.*

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.*

⁴⁰¹ See Nextel PFR Opposition at 3.

⁴⁰² WCA suggests that the best solution for the rural operators is adoption of the *FNPRM* proposal of a system under which a licensee could opt to return its spectrum in the LBS and the UBS and retain just its spectrum in the MBS. WCA notes that in exchange for its costs of migrating operations to the MBS, including the digitization of operations that today utilize analog technology, would be subject to reimbursement by the winner of the auction for the returned LBS/UBS spectrum. Under this approach, WCA maintains, rural markets will be transitioned on the same schedule as all other markets, but those rural operators that desire to continue high-power, high-site operations can do so through the use of digital technology in the MBS, and ultimately will not incur any costs. See WCA PFR Opposition at 10-11. See also Sprint PFR Opposition at 14-15.

⁴⁰³ See WCA PFR Opposition at 10-11.

⁴⁰⁴ See Nextel PFR Opposition at 3.

assist participants in the transition process, for reasons described in the accompanying *Second Report and Order*, we believe that it is premature to adopt rules governing alternative transitions until the results of the incumbent-driven transitions, particularly given the self-transition option adopted above, become apparent. Consequently, it presently is not possible to provide the complete information sought by the MMDS Licensee Coalition.

(iii) Post-transition Notification

151. *Background.* After the transition has been completed, the proponent(s) and all affected BRS and EBS licensees must jointly file a post-transition notification with the Commission indicating that the transition has been completed and that the licensees are operating according to the new rules.⁴⁰⁵ Nextel asks the Commission to amend Section 27.1235(a) of the Commission's rules to provide that the proponent alone may provide notification to the Commission following the successful completion of the transition.⁴⁰⁶ Nextel argues that that the proponent does not have the incentive or ability to mislead the Commission and that a joint-filing requirement is a costly mandate that needlessly forces hundreds or possibly thousands of licensees within any given transition area to produce paperwork for the government without any clear purpose.⁴⁰⁷ BellSouth argues that a statement provided by the transition proponent certifying on behalf of the affected licensees that the transition has been implemented would provide the Commission with sufficient notice that a transition has been completed for a given BTA while reducing the paperwork burden for BRS and EBS licensees.⁴⁰⁸

152. *Discussion.* We agree with BellSouth that a statement provided by the proponent certifying on behalf of the affected licensees that the transition has been implemented would provide us with sufficient notice that a transition has been completed for a given BTA, while reducing the paperwork burden for BRS and EBS licensees.⁴⁰⁹ We retain the requirement for the proponent to provide all parties to the transition with a copy of the post-transition notification, however. In addition, we note that petitioners have asked that, in order to stay informed about a proponent's actions, the Commission release a Public Notice whenever a proponent files a Post-Transition Notification.⁴¹⁰ We agree and direct the Wireless Telecommunications Bureau to release a Public Notice whenever a proponent files an Initiation Plan or a Post-Transition Notification. We will then require non-proponent licensees that wish to object to a Post-Transition Notification to file any objections with the Secretary of the Commission within 30 days from the time the Post-Transition Notification has been placed on Public Notice.

h. Transition Costs

(i) Proponent-driven transitions

153. In the *BRS/EBS R&O*, the Commission adopted rules requiring a proponent to pay certain

⁴⁰⁵ See 47 C.F.R. § 27.1235. See also *BRS/EBS R&O*, 19 FCC Rcd 14165, 14207 ¶ 102.

⁴⁰⁶ Nextel PFR at 16-17. See also WCA PFR Opposition at 3.

⁴⁰⁷ Nextel PFR at 16-17.

⁴⁰⁸ See BellSouth PFR Opposition at 21.

⁴⁰⁹ See *id.*

⁴¹⁰ See C&W PFR at 4; Pace PFR at 4. See also WCA PFR Opposition at 3.

transition expenses of EBS licensees; specifically, the proponent is required to pay for replacing downconverters that meet the requirements of Section 27.1233(a) of the Commission's rules and for migrating video programming and data transmission tracks that meet the requirements of Section 27.1233(b). The Commission also adopted rules requiring BRS licensees to pay for their own transition costs. Finally, the Commission adopted rules requiring BRS licensees operating on LBS or UBS channels to reimburse the proponent(s) a pro rata share of the cost of transitioning the facilities they use to provide commercial service, either directly or through a lease agreement with an EBS licensee.

154. Petitioners ask that the Commission clarify certain issues that were addressed in the *BRS/EBS R&O* and address other issues that were not specifically addressed in the *BRS/EBS R&O*. Specifically, the petitioners ask the Commission to address the following issues: who must share in the cost of transitioning a BTA; how are costs allocated among entities that are required to share costs; how should the reimbursement obligation be calculated for a GSA that overlaps more than one BTA; how should costs be allocated for an adjoining area that must be transitioned for technical reasons; how are costs sharing reimbursements to be handled by co-proponents; what costs are reimbursable; when must a proponent be reimbursed; how long does the reimbursement obligation last; and which EBS receive sites should receive replacement downconverters.

(a) Who must share in the costs of transitioning a BTA?

155. *Background.* Petitioners addressed the issue of who, besides the proponent and BRS licensees, must share in the costs of transitioning a BTA. According to WCA, the Commission must clarify this issue to address the "free rider" problem that could result from excluding those who provide commercial service through leased BRS channels or their own EBS channels from the requirement to share the costs of transitioning the 2.5 GHz band.⁴¹¹ To fix this problem, WCA recommends that the Commission clarify that anyone who uses a licensed or leased BRS/EBS channel for commercial purposes must share in the reimbursement obligation.⁴¹² WCA further recommends that once an EBS licensee offers a [commercial] service that is not used exclusively for educational purposes, a reimbursement obligation should attach.⁴¹³

156. IMWED recommends that the Commission base the reimbursement requirement on the user rather than the use.⁴¹⁴ When the service is offered by a for-profit entity, it should be considered commercial---even if it entails wireless broadband delivery to schools---and the proponent should be reimbursed.⁴¹⁵ When service is rendered by a non-profit EBS licensee, it should be exempt from the reimbursement requirement.⁴¹⁶

157. *Discussion.* We agree with petitioners that we should clarify who is responsible for reimbursing proponents for the costs of transitioning a BTA, and specifically reject IMLC's argument that

⁴¹¹ WCA PFR at 21.

⁴¹² WCA PFR at 21. *See also* Sprint PFR at 6-7.

⁴¹³ WCA PFR Reply at 11, n. 35.

⁴¹⁴ IMWED PFR Opposition at 11.

⁴¹⁵ *Id.*

⁴¹⁶ *Id.*

a non-proponent BRS incumbent should not be required to pay a proportionate share of the cost of the transition because it neither desires nor consents to a modification of its license.⁴¹⁷ We believe that non-proponent BRS licensees and other commercial users of the 2.5 GHz band derive a benefit from contiguous channels and flexible technical rules, and, therefore, they should reimburse the proponent for their pro rata share of the costs of receiving this benefit. The proponent bears a heavy burden in transitioning the 2.5 GHz band and, if the band is to be successfully transitioned, commercial operators must bear their fair share of the burden.

158. We further reject IMWED's recommendation that we adopt a reimbursement requirement based on the user rather than the use of spectrum.⁴¹⁸ We believe that adopting IMWED's recommendation ignores the fact that EBS licensees have for years leased their excess capacity to commercial operators. Moreover, we believe that adopting IMWED's recommendation forces us to make case-specific determinations regarding who is using the spectrum, the licensee or lessee. We further believe that adopting IMWED's recommendation may result in exempting some commercial lessees of EBS spectrum from sharing in the cost of transitioning the 2.5 GHz band, which, in turn, would cause the remaining commercial licensees to bear a disproportionate share of the cost of transitioning the 2.5 GHz band. We agree with Nextel that it is simpler to distinguish commercial operations from non-commercial operations than it is to distinguish commercial users from non-commercial users.⁴¹⁹ Therefore, we adopt the recommendation of WCA to clarify that commercial lessees of BRS channels, entities that lease EBS spectrum for a commercial purpose, and commercial EBS licensees also must share in the financial obligation to transition a BTA. We further clarify that a non-commercial EBS licensee must pay a pro rata share of the cost of transitioning a BTA if the EBS licensee offers a [commercial] service that is not entirely for educational purposes.⁴²⁰

(b) Cost allocation

(i) MHz/pops Formula

159. *Background.* Petitioners urge the Commission to adopt a clear, pre-defined formula to allocate reimbursement expenses among the proponent, commercial operators of EBS spectrum, and other commercial licensees and lessees.⁴²¹ By doing so, these petitioners argue, the Commission will minimize administrative overhead, time-consuming disputes, and possible litigation costs.⁴²² WCA, Sprint, and Nextel strongly urge the Commission to adopt a formula based on MHz/pops.⁴²³ They argue that a

⁴¹⁷ See IMLC PFR Opposition at 8-9.

⁴¹⁸ BellSouth, Nextel, and Sprint recommend that the Commission reject IMWED's proposal to exempt non-profit licensees from reimbursement obligations. See BellSouth PFR Reply at 9-10; Nextel PFR Reply at 16-17; Sprint PFR Reply at 7.

⁴¹⁹ See Nextel PFR Reply at 16-17.

⁴²⁰ MVPD operators that opt-out of the transition are exempt from paying a pro rata share of the costs of transitioning a particular BTA.

⁴²¹ See Nextel PFR at 21.

⁴²² See *id.*

⁴²³ Nextel PFR at 22; Sprint PFR Reply at 5; WCA PFR Reply at 12-13.

MHz/pops formula is a widely used measure of coverage in the communications industry and would serve as a comparatively simple means of assigning transition costs.⁴²⁴ In addition, they argue that a MHz/pops formula distributes expenses among transition beneficiaries roughly in proportion to the transition costs they generate for the proponent,⁴²⁵ spreads costs among commercial operations in proportion to the benefits received,⁴²⁶ and accommodates the widely varying size and irregularities of geographic-area licenses within the 2.5 GHz band.⁴²⁷

160. IMWED opposes the adoption of a reimbursement scheme based on MHz/pops. IMWED believes that such a scheme does not correlate to transition costs because some transitions will be more expensive than others, based not on the amount of spectrum a licensee has or the population of its GSA or BTA, but based on other factors, such as the number of downconverters to be replaced.⁴²⁸

161. *Discussion.* We believe that a formula based on MHz/pops allocates the costs of transitioning a BTA in a manner that is fair, equitable, and straight forward. Thus, we agree with petitioners that in a proponent-drive transition, costs should be allocated among the proponent and commercial licensees and lessees based on a MHz/pops formula. We reject IMWED's recommendations to approximate costs based on other factors as ambiguous and likely to engender disputes, which will slow the transition of the band.

162. Next, we discuss how the MHz/pops formula should be derived. The three petitioners that addressed this issue are in general agreement, and we adopt their recommendations.⁴²⁹ To determine the pro rata share of a commercial entity, multiply the total amount of spectrum licensed or leased to that entity by the total population of the service area, either GSA or BTA, serviced by the commercial entity. For example, for an individual station, the MHz/pops is the number of MHz (meaning the amount of spectrum covered by a given call sign after the transition, including the LBS/UBS channels, the MBS channel, and the J/K band channels reflected on the license) multiplied by the population in the licensee's GSA (population counts must be based on the 2000 United States Census). The overall MHz/pops is the sum of the MHz/pops for every licensee in the BTA. This formula adopts the recommendations of WCA to further define "MHz" and how the population counts are to be made.⁴³⁰

(ii) Base computation of costs

163. *Background.* In addition to adopting a clearly-defined reimbursement formula based on MHz-pops, Clearwire recommends that all costs associated with transitioning spectrum in a market should be included in the base computation of costs to be shared and reimbursed, similar to the categories

⁴²⁴ See Nextel PFR at 22.

⁴²⁵ See *id.*

⁴²⁶ See WCA PFR at 21-22.

⁴²⁷ *Id.*

⁴²⁸ IMWED PFR Opposition at 9-10.

⁴²⁹ See WCA PFR Reply at 12-13; Sprint PFR Reply at 5; Nextel PFR at 21-22.

⁴³⁰ See WCA PFR Reply at 11, n. 34.

of costs that are included in the PCS cost-sharing rules.⁴³¹ Clearwire notes that examples of costs that should be included are equipment, downconverters, costs to digitize program tracks, engineering, installation, system testing, FCC filing costs, disposal of old equipment, spare equipment, project management, legal costs, third party appraisal costs, etc.⁴³² In response to Clearwire's suggestion, Sprint developed a list of costs that should be included in the base computation.⁴³³ The list developed by Sprint is divided into five categories and includes costs relating to equipment, engineering, labor, and fees.⁴³⁴ IMLC, however, objects to the development of a list of reimbursable costs. Instead, IMLC recommends that the Commission establish a reimbursement cap of \$75,000 per four-channel group.⁴³⁵ IMLC argues that such a cap would not only eliminate much bickering about what costs are properly reimbursable, but will also encourage transition proponents to maintain a tight rein on the costs they incur.⁴³⁶

164. *Discussion.* We reject as unsupported IMLC's recommendation to establish a cap on the cost of the transition per four-channel group. We believe that the establishment of a cap would not approximate the real cost of a transition. We further believe that the adoption of a cap may discourage proponents from coming forward to transition a BTA if the proponent does not believe that it can recover most of its costs. Instead, we adopt the recommendation of Clearwire to develop a list of costs to be included in the base calculation. We believe that the development of such a list will facilitate the transition by reducing the likelihood of disagreement over which costs are to be shared. We note Sprint was the only petitioner to develop a list of eligible costs. This list is detailed, comprehensive, and well thought-out. Moreover, we believe that the adoption of the list developed by Sprint will achieve our goal of reducing disputes related to the transition. Thus, we adopt the list of eligible costs, developed by Sprint, which is the only list that is before us.

(c) Cost allocation between two or more proponents

165. *Background.* Petitioners ask the Commission to adopt rules addressing cost allocation between two or more proponents. The petitioners have identified three situations when this issue arises: first, when two or more co-proponents transition one BTA; second, when a GSA overlaps two or more BTAs; and third, when the proponent must transition licensees in an adjoining BTA to resolve interference issues. Under the first situation, the petitioners request that the co-proponents be permitted to resolve cost allocation reimbursements between themselves by private agreement, with the lead co-proponent receiving reimbursements and apportioning the proceeds to the co-proponent. Under the second situation, WCA recommends that the Commission adopt a rule in which the costs of transitioning the GSA licensee that overlaps more than one BTA be attributable to the BTA that contains the center point of the GSA. Under the third situation, Sprint and Clearwire recommend that the Commission adopt a rule requiring "Proponent B" (of the adjoining BTA) fully reimburse "Proponent A" (of the transitioning BTA) and then seek reimbursement from spectrum holders in its own BTA. Sprint

⁴³¹ Clearwire PFR at 6.

⁴³² *Id.*

⁴³³ Sprint PFR Reply, Attachment A. *See also* 47 CFR § 27.1238.

⁴³⁴ Sprint PFR Reply, Attachment A. *See also* 47 CFR § 27.1238.

⁴³⁵ IMLC PFR Opposition at 11.

⁴³⁶ *Id.*

recommends that proponent B should reimburse proponent A when proponent B files its Post-Transition Notification.

166. *Discussion.* We agree with petitioners that co-proponents be permitted to agree among themselves on how to share cost allocation reimbursements under the first situation explained above. We do not agree with petitioners' recommendations under the second situation detailed above. Instead, we conclude that the costs of transitioning a GSA that overlaps two or more BTAs should be attributable to each BTA in proportion to the amount of the GSA located in the BTA. We believe that this decision is consistent with our decision to transition by BTA. We agree with the recommendation in the third situation detailed above, which we believe is consistent with our decision to attribute the costs of transitioning facilities to the BTA where the facilities are located. We further adopt the recommendation of Sprint to require Proponent B to reimburse Proponent A when Proponent B files a Post-Transition Notification. We adopt this recommendation because it provides a time certain for the reimbursement to be made to Proponent B. We do not believe that this decision will cause a significant delay in the reimbursement of Proponent A because the transition process contains deadlines that may be tolled only in the event of a dispute resolution process.

(d) Reimbursements

(i) When are reimbursements due?

167. *Background.* There was much debate among the petitioners over when the proponent should be reimbursed by commercial operators in the BTA. At issue is whether reimbursements should be due from commercial operators when they start commercial service or when the BTA has been transitioned. Clearwire asks that the Commission adopt a rule that would allow the proponent to seek reimbursement after the market is fully transitioned and the proponent has filed the Post-Transition Notification.⁴³⁷ Moreover, Clearwire asks the Commission to adopt a rule that permits a proponent to submit invoices to the commercial operators within the BTA as soon as the proponent has, through documentation, ascertained the full and accurate cost of the transition.⁴³⁸ Clearwire then asks the Commission to adopt a rule that would require commercial operators in the BTA to reimburse the proponent within thirty days of receiving the invoice.⁴³⁹

168. Clearwire argues that in the PCS rules, the Commission specifically rejected as too difficult and cumbersome a requirement that either the Commission or the PCIA Microwave Clearinghouse ascertain the commercial launch date in order to determine when cost-reimbursements are owed; instead, the Commission required reimbursements due after the Prior Coordination Notification (PCN) has been filed.⁴⁴⁰ Clearwire further argues that because the cost-sharing rules apply only to transitions initiated before January 10, 2008, the logical inference is that the reimbursement must be made in connection with transitions, not later commercial launch.⁴⁴¹ Clearwire maintains that requiring

⁴³⁷ Clearwire PFR at 7.

⁴³⁸ Clearwire PFR Reply at 4.

⁴³⁹ *Id.*

⁴⁴⁰ *Id.* at 5-6.

⁴⁴¹ *Id.* at 3.

proponents to indefinitely bear all transition costs until other licensees launch commercial service is anti-competitive, financially punitive, and will inevitably result in transition of fewer markets at a slower pace.⁴⁴² Other petitioners ask that the Commission reject Clearwire's recommendations and instead require reimbursement when a commercial operator commences commercial service.⁴⁴³

169. *Discussion.* The proponent bears a heavy burden in transitioning a BTA. We disagree with WCA that the proponent's burden is outweighed by the benefit of being first to market.⁴⁴⁴ In addition to all of its other duties, the proponent, until it is reimbursed by other commercial operators, must totally bear the costs of transitioning EBS licensees because EBS licensees are never required to reimburse the proponent. In this connection, we note that WCA has stated that in many instances, a proponent may never be able to recoup its costs.⁴⁴⁵ Thus, we agree with Clearwire that the benefits of being first-in-time are offset by the disadvantage that proponents may suffer by financing the entire spectrum transition for other licensees, without interest.⁴⁴⁶ Moreover, we agree with Clearwire that non-proponent commercial operators receive a benefit when they transition to contiguous spectrum and flexible technical rules, and therefore, we disagree with IMLC's argument that they are not benefited until they begin to offer commercial service.⁴⁴⁷

170. Although non-proponent commercial operators may not realize a benefit until they begin commercial service, and thus, may not have a revenue stream from operations in the 2.5 GHz band out of which to pay reimbursement costs, we believe that any licensee's spectrum in the 2.5 GHz band is significantly more valuable after the transition than it was before the transition. Moreover, paying to transition the 2.5 GHz band is part of the cost of being able to deploy new and innovative services that are impossible to offer under the old interleaved band plan and inflexible technical rules. Thus, Sprint's argument that requiring non-proponent commercial operators to reimburse the proponent before it begins to offer commercial service would divert funds from deployment to reimbursement does not persuade us to adopt a different rule.⁴⁴⁸ Furthermore, we believe that allowing a licensee to defer paying its reimbursement obligation until it begins providing commercial service could discourage proponents from coming forward because the proponent would have to carry the entire financial burden of transitioning a BTA until its competitors began providing commercial service. Moreover, we believe that the financial burden of transitioning the 2.5 GHz band must be shared earlier rather than later to ensure the rapid transition of the 2.5 GHz band. Therefore, we conclude that reimbursements may be requested by the proponent after the Post-Transition Notification has been filed and the proponent has accumulated the documentation necessary to substantiate the full and accurate cost of the transition. This provides a date certain for both the proponent and the non-proponent commercial operators, which will eliminate disputes over when a licensee has initiated commercial service. We further believe that providing a date certain

⁴⁴² *Id.* at 5-6.

⁴⁴³ See WCA PFR Opposition at 17-18; Nextel PFR Opposition at 4; IMLC PFR Opposition at 10; Sprint PFR Opposition at 12.

⁴⁴⁴ See WCA PFR Opposition at 17-18.

⁴⁴⁵ See WCA PFR Reply at 12, n. 37.

⁴⁴⁶ Clearwire PFR Reply at 5-6.

⁴⁴⁷ See Clearwire PFR at 7-8. See also IMLC PFR Opposition at 10.

⁴⁴⁸ Sprint PFR Opposition at 13-14.

for the proponent to seek reimbursement will encourage proponents to initiate transitions, which will ultimately lead to the rapid transition of the 2.5 GHz band. We decline, however, to adopt a rule requiring commercial licensees to reimburse the proponent within thirty days of receiving the invoice. We believe that this issue should be based on common commercial practices in the wireless telecommunications industry.

(ii) How long do reimbursement obligations last?

171. *Background.* Petitioners also debated whether the reimbursement obligation should be phased out over a period of years or tied to the license. IMLC reasons that because the benefit to a later-entering licensee is less than the benefit to the proponent, the Commission should adopt a rule that phases-out the reimbursement obligation over ten years.⁴⁴⁹ WCA disagrees with IMLC's reasoning and argues that the BRS/EBS services are distinct from other services where the Commission phased out the reimbursement obligations. Here, WCA argues, the proponent must carry the costs of the transition until other licensees commence commercial service, plus they must carry the costs of EBS licensees, even though they do not have commercial access to EBS licensees' spectrum.⁴⁵⁰ WCA stresses that even without a phase-out the proponent may never recover all of the costs of the transition.⁴⁵¹

172. *Discussion.* We find that the cost-sharing obligations should be tied to the license because, as we stated above, the proponent bears a heavy burden in transitioning the 2.5 GHz band and may never be able to recover its costs.⁴⁵² Thus, when a license is transferred or assigned, the reimbursement obligation must be paid immediately, or the assignor/transferor and assignee/transferee remain jointly and severally liable to pay the reimbursement obligation. With regard to licenses that are partitioned or disaggregated, the parties to the partition or disaggregation must remain jointly and severally liable for repaying the proponent. We believe that establishing joint and several liability will provide maximum assurance that the proponent will be reimbursed and prevent the proponent from being harmed because the assignee/transferee is not able to pay. We further agree with Clearwire that an EBS license that is subsequently used for commercial service must reimburse the proponent for its pro rata share of the transition.⁴⁵³ The proponent, however, must reimburse non-proponent commercial licensees the amount attributable to the costs of transitioning an EBS license that is subsequently used for commercial service. We decline to adopt Clearwire's recommendation to treat as a rule violation any failure to satisfy cost-sharing obligations established today.⁴⁵⁴ We believe that the proponent has ample civil remedies to pursue any cost-sharing grievance.

(ii) Cost of EBS self-transitions

173. *Background.* Petitioners offer a variety of recommendations on how to recover the costs of self-transitioning EBS licensees. Although self-transitions will occur on a channel-by-channel or

⁴⁴⁹ IMLC PFR Opposition at 9-10.

⁴⁵⁰ WCA PFR Reply at 12, n. 37.

⁴⁵¹ *Id.*

⁴⁵² *See* Clearwire PFR at 5.

⁴⁵³ *See id.*

⁴⁵⁴ *See id.*

GSA-by-GSA basis, WCA nevertheless recommends that the Commission adopt a formula based on MHz/pops, which would allocate costs among commercial licensees and lessees based on spectrum and the population within the appropriate service area.⁴⁵⁵ WCA further recommends that the Commission establish limits on the expenses that an EBS licensee can incur during a self-transition to assure that no EBS licensee “gold plates” its system.⁴⁵⁶ WCA further recommends that the Commission clarify that where an EBS licensee engages in a commercial activity using its LBS or UBS spectrum, either directly or through leasing, it is responsible for reimbursing self-transition costs.⁴⁵⁷

174. CTN/NIA recommends that the expenses incurred by an EBS licensee to install upgraded downconverters should be reimbursed by any commercial entity that subsequently uses any LBS or UBS channels within any portion of the geographic areas served by the EBS licensee.⁴⁵⁸ Other commenters recommend that the BTA authorization holder should reimburse EBS licensees that have self-transitioned even if the BTA authorization holder cannot be determined until after an auction.⁴⁵⁹ BloostonLaw recommends that BRS and EBS licensees that self-transition bear their own transition costs.⁴⁶⁰ IMWED recommends that downconverter replacement costs be borne by the operator that commences two-way service.⁴⁶¹

175. *Discussion.* We agree with CTN and NIA that EBS licenses that self-transition should be able to recover their costs.⁴⁶² We also agree conceptually with CTN/NIA that the self-transition rules should parallel those adopted for a proponent-driven transition.⁴⁶³ We believe that establishing inconsistent procedures for proponent-based transitions and self-transitions would cause confusion and could unintentionally discourage the prompt transition of this band.

176. We decline, however, to adopt all of the specific cost recovery procedures recommended by CTN and NIA.⁴⁶⁴ We believe the best means of ensuring consistency between self-transitions and proponent-driven transitions is to require self-transitioning EBS licensees to send a Self-Transition Data Request. The Self-Transition Data Request must be sent to all BRS and EBS licensees in the BTA where the EBS licensee’s GSA geographic center point is located, as well as other licensees whose GSAs overlap with the self-transitioning licensee. The Self-Transition Data Request contains the same

⁴⁵⁵ WCA PFR Opposition at 22.

⁴⁵⁶ *Id.* at 21.

⁴⁵⁷ *Id.* at 21-22.

⁴⁵⁸ CTN/NIA PFR at 8-9.

⁴⁵⁹ C&W Comments at 3-4; Pace Comments at 3-4; DBC Comments at 3; Speednet Comments at 3-4; WDBS Comments at 3-4.

⁴⁶⁰ BloostonLaw Comments at 3-4.

⁴⁶¹ IMWED Reply Comments at 3.

⁴⁶² BRS licensees, commercial EBS licensees, and entities that lease EBS spectrum for a commercial purpose must pay their own self-transition costs.

⁴⁶³ CTN/NIA PFR at 7.

⁴⁶⁴ *See supra* n. 376.

information that is contained in the Pre-Transition Data Request which is used in the proponent-driven transition. EBS licensees may request reimbursement from all BRS licensees and lessees, entities that lease EBS spectrum for a commercial purpose, and commercial EBS licensees that are located in the BTA where the EBS licensee's GSA geographic center point is located, as well as other licensees whose GSAs overlap with the self-transitioning licensee. BRS licensees and lessees, entities that lease EBS spectrum for a commercial purpose, and commercial EBS licensees must pay a pro-rata share based on MHz/pops. The EBS licensee may seek reimbursement of the same costs that must be reimbursed in the proponent-based transition. The EBS licensee may request reimbursement after the EBS licensee has filed a modification application with the Commission. The cost-sharing obligation remains with the license. Thus, if a license with a reimbursement obligation is transferred or assigned, the reimbursement obligation must be paid immediately by the assignor or transferor, or the obligation remains with the license.

i. Dispute resolution

177. *Background.* Clearwire recommends that the Commission designate a clearinghouse as the first avenue of recourse for all transition-related disputes, including cost-sharing.⁴⁶⁵ Clearwire argues that having an experienced clearinghouse with a full understanding of transition issues for EBS and BRS would be extremely useful for the industry, and would help to expedite problem-solving and deployment of wireless broadband services.⁴⁶⁶ Clearwire notes that to implement the PCS cost-sharing scheme, the Commission selected a third party to serve, under delegated authority, as a neutral administrator (the PCIA Microwave Clearinghouse) of the cost-sharing plan, and to maintain cost and payment records.⁴⁶⁷ They suggest that a similar process be used for the BRS /EBS transition.⁴⁶⁸

178. *Discussion.* We believe that most of the disputes that will occur in transitioning the 2.5 GHz band will occur while negotiating over the Transition Plan and over cost-reimbursements. With regard to disputes over the Transition Plan, we have urged the parties to the dispute to seek dispute resolution through a third party. With regard to other disputes that may arise, we decline to mandate the use of a clearinghouse, although we encourage the BRS/EBS community to use a clearinghouse if they believe that this would be the most expedient means of resolving disputes. Furthermore, we note that parties have several options to resolve disputes that may arise including mediation, the voluntary use of a clearinghouse, or pursuing civil remedies in the court system. We will consider mandating a clearinghouse or other appropriate mechanism for resolving cost-sharing disputes in the future if we find that there are an inordinate number of such disputes.

j. Bureau Reports

179. *Background.* In the *BRS/EBS R&O*, the Commission noted that it would closely monitor the transition of the 2.5 GHz band and take additional action if the rules and procedures adopted in the *BRS/EBS R&O* are not sufficient to facilitate the swift transition of the 2.5 GHz band.⁴⁶⁹ The

⁴⁶⁵ Clearwire PFR at 9.

⁴⁶⁶ *Id.*

⁴⁶⁷ *Id.*

⁴⁶⁸ *Id.*

⁴⁶⁹ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14208 ¶ 103.

Commission then required WTB to report on July 10, 2006, January 10, 2008, and January 10, 2010 on the extent of the transition of the 2.5 GHz band.⁴⁷⁰

180. *Discussion.* Given that to date not one Initiation Plan has been filed with the Commission, we know that the transition of the 2.5 GHz band has not yet started. Thus, we extend the period for WTB to report to us. WTB must report to us on the status of the transition of the 2.5 GHz band at 18 months, three years, and five years after the effective date of the amended rules.

2. Technical issues

a. Interference Protection Rules

(i) Receive sites

181. *Background.* Under the newly-adopted Section 27.1233(b)(3), a proponent is required to protect qualifying EBS receive sites, with compliance based upon the D/U ratios at the receive site. WCA indicates that Section 27.1233(b)(3), which was adopted based upon its own proposal, does not include other specific and essential elements of its proposal.⁴⁷¹ WCA asserts that these elements were designed to avoid unnecessary interference protection - protection that under the regulatory scheme of the *BRS/EBS R&O* could preclude proponents from completing the transition. Thus, WCA asserts that those elements should be adopted here on reconsideration.⁴⁷²

182. First, WCA urges that the Commission should adopt the policy embodied in former Section 74.903(a)(4) of its rules to allow the proponent, as part of a Transition Plan, to upgrade reception antennas at eligible EBS receive sites (based on zoning structural or environmental considerations) if necessary to achieve the required D/U benchmarks.⁴⁷³ Further, the Commission should permit a Transition Plan that calls for the proponent to make other reasonable modifications at the receive site so as to assure that the appropriate protection is afforded. To avoid a requirement to protect EBS receive sites where the desired signal levels are unduly low, the proponent should not be required to provide D/U protection to any EBS receiver site that is not, prior to the transition, receiving a desired signal carrier level of ≥ -80 dBm.⁴⁷⁴ Finally, only a predicted undesired signal level greater than -106.2 dBm should be considered in determining whether an undesired signal level is unduly high.

183. *Discussion.* We have reviewed WCA's request regarding the specific elements outlined above, which WCA asserts are needed to avoid unnecessary interference protection to EBS receive sites. After considering the nature of typical EBS systems, which are designed to provide quality signals to their receive sites, we have concluded that essentially all EBS receive sites within a station's GSA will receive a signal ≥ 80 dBm as proposed by WCA. Therefore, in keeping with our commitment to protect EBS receive sites, and to ensure that all EBS stations can provide continuous educational service to their authorized receive sites without any disruption of their programming, we will clarify that all

⁴⁷⁰ *Id.*

⁴⁷¹ WCA PFR at 39.

⁴⁷² *Id.*

⁴⁷³ *Id.*

⁴⁷⁴ *Id.* at 39-40.

downconverters within the EBS GSA must be replaced regardless of the desired or undesired signal strength. In such instances where the proponent feels that it is necessary to replace an EBS receive antenna to ensure that the EBS site receives a higher desired signal, we will reinstitute the procedure established in former Section 74.903(a)(4) of the rules, and allow the proponent to upgrade the EBS reception equipment at such site(s).

(ii) Adjacent channel

184. *Background.* The Coalition's original proposal sought retention of the Commission's adjacent channel requirement, 0 dB D/U standards, for protection of operations in the MBS.⁴⁷⁵ However, after further evaluation, the Coalition later advised the Commission that it believed the adjacent channel standards could safely be changed from 0 dB to -10 dB D/U, and could be employed whether the victim system was using analog or digital modulation.⁴⁷⁶ The Coalition explained that given the widespread deployment of television receivers that could tolerate a -10 dB adjacent channel D/U signal ratio without suffering material signal degradation, it believed it would be overly preclusive to retain the 0 dB standard to protect the relatively few televisions receivers still in use that require such a high level of protection.⁴⁷⁷ Inasmuch as the Commission did not adopt the Coalition's revised proposal, WCA requests, on reconsideration, that Section 27.1233(b)(3)(ii) be amended to reflect that at the time of transition, an eligible EBS receive site should be entitled to no better than a -10 dB adjacent channel D/U signal ratio protection standard.

185. The Coalition recognizes that EBS licensees still utilize television receivers, which cannot tolerate a -10 dB adjacent channel D/U signal ratio, and those receivers would therefore suffer material signal degradation if the -10 dB adjacent channel D/U signal ratio is adopted. However, Section 27.1233(b)(3) of the Commission's rules provides that in the event that the receive site uses receivers or is upgraded by the proponent (s) as part of the Transition Plan to use receivers that can tolerate negative adjacent channel D/U ratios, the actual adjacent channel D/U ratio at such receive site must equal or exceed such negative adjacent channel D/U ratio.

186. *Discussion.* Because the proponent will replace the existing television receivers that cannot tolerate a negative adjacent channel D/U ratio (-10 dB) during the transition, we are amending this section of the rules to allow a -10 dB adjacent channel D/U signal ratio for EBS receive sites that are transitioned. However, in instances where EBS stations utilize older television receivers that are not transitioned, the adjacent channel D/U ratio will remain 0 dB. This will ensure that non-transitioned EBS receive sites are afforded adjacent channel protection, and will also enable EBS stations to provide continuing education to those receive sites until they are ultimately transitioned.

b. Signal Strength Limits

187. *Background.* The newly adopted Section 27.55 of the Commission's rules permits a licensee to exceed the authorized signal level at its GSA boundary provided no constructed licensee that is providing service is affected. WCA opposes licensees operating on the LBS and UBS exceeding the authorized signal level at their GSA boundary without the consent of the adjacent licensee, and suggests

⁴⁷⁵ *Id.* at 40.

⁴⁷⁶ *Id.*

⁴⁷⁷ *Id.*

instead that a licensee operating on LBS or UBS channels be required to limit its signal level to no greater than 47 dB μ V/m beyond its GSA.⁴⁷⁸ WCA renews this request in its Petition for Reconsideration and urges the Commission to repeal Section 27.55, and permit licensees to exceed the maximum permissible signal at its GSA boundary only when such licensee has obtained the consent of the affected co-channel licensee.⁴⁷⁹

188. Similarly, although Nextel supports allowing licensees operating on LBS and UBS channels to exceed the signal level at their GSA boundaries where no constructed licensees providing service are affected, Nextel is nonetheless concerned that Section 27.55 does not provide a mechanism for the new operator to notify an existing operating licensee of its existence. To remedy this problem, Nextel, like the Coalition, asserts that the Commission should permit licensees to exceed the maximum signal strength at the boundary only upon consent of the victim licensee.⁴⁸⁰ IMLC supports allowing licensees to exceed the maximum signal strength at the boundary “where there are no licensees in operation or customers in the adjacent area to be protected, and the real customers are being denied service.”⁴⁸¹

189. *Discussion.* After reviewing the petitions, we conclude that the current rule sufficiently addresses WCA and other petitioners’ concerns about harmful interference. Section 27.55 permits licensees to exceed the signal level where there is no affected licensee providing service. Section 27.55 also provides that when an affected licensee begins providing service, the licensee exceeding the signal level will be required to take whatever steps necessary to comply with the applicable power level at its GSA boundary, absent consent from the affected licensee, to continue exceeding the signal level at its border.”

190. Thus, the rule sufficiently protects affected licensees and requires their consent as requested by WCA and Nextel. Therefore we decline to make any changes to the rule at this time.

c. Emission Limits

(i) Documented Interference Complaint Requirement

191. *Background.* Newly-adopted Section 27.53(l) sets forth the out-of-band emissions limits imposed on BRS and EBS licensees. WCA and Nextel urge the Commission to eliminate the requirement that a licensee receive a documented interference complaint before being subject to a stricter emission mask for base stations.⁴⁸² WCA also suggests that the written request certify that the requesting licensee intends to initiate service on the affected adjacent channel group on a date certain (not more than one year after the date of the notice) and that the licensee making the request must after the date certain specified in its request manage its system to provide the same stringent level of attenuation for the benefit of the recipient licensee. WCA has also submitted a variation on this proposal for base stations located within

⁴⁷⁸ *Id.* at 41.

⁴⁷⁹ *Id.* at 42.

⁴⁸⁰ Nextel PFR at 30-31.

⁴⁸¹ IMLC PFR Opposition at 3-4.

⁴⁸² WCA PFR at 44; Nextel PFR at 26-28.

1.5 km of each other.⁴⁸³

192. WCA asserts that the fundamental problem with the documented complaint approach adopted in the *BRS/EBS R&O* is that it requires the victim operator to actually suffer interference to its operation in markets where non-synchronized technologies are utilized.⁴⁸⁴ Nextel supports WCA's position and states that stricter emission limits should apply upon the request of the victim licensee without the need to submit a formal interference complaint.⁴⁸⁵ Moreover, it asserts that any LBS or UBS licensee should be able to invoke the more stringent dual mask set forth in Section 27.53(1)(2) so long as such licensee has a GSA overlapping the GSA of the recipient of the request, regardless of whether it is licensed to operate on a first adjacent channel.⁴⁸⁶ Clearwire opposes elimination of the documented interference requirement.⁴⁸⁷ Clearwire states adoption of unnecessary rules and procedures for resolving potential interference between systems would undermine the new regulatory structure for BRS and EBS.⁴⁸⁸

193. *Discussion.* We disagree with WCA and Nextel and conclude that the documented interference procedure is best for this band and should be retained. Historically in these services, licensees often submitted unsupported interference complaints which required the Commission to devote much of its time and resources to reviewing and responding to those matters. We believe that if the Commission had required that such interference complaints be supported, many complaints would not have been submitted. Furthermore, a documented interference complaint eliminates the situation where a licensee, without just cause, is unnecessarily required to modify its facilities. We also believe that a documented interference complaint will expedite a resolution between parties, as parties should endeavor to resolve such complaints, and employ the necessary stricter emission standards to remedy all harmful interference. Absent a frequency coordinator, a documented interference complaint served on another licensee also promotes better cooperation and coordination among the parties to resolve their differences, while they continue to provide service to the community. Accordingly, we deny WCA's request for reconsideration, and affirm our decision in the *BRS/EBS R&O* that, all complaints of out-of-band emissions into an adjacent facility must be documented and submitted to the licensee.

(ii) Who can file a complaint

194. *Background.* Notwithstanding its opposition to the documented interference complaint procedure, WCA takes the position that any licensee operating on the LBS or UBS channels, that has an overlapping GSA, should be subject to filing a documented interference complaint against the interfering licensee.

195. *Discussion.* We agree with WCA that out-of-band emissions may emanate from any licensee in the band. However, the level of interference that would be most severe and most likely to

⁴⁸³ WCA PFR at 45.

⁴⁸⁴ *Id.* at 46-47.

⁴⁸⁵ Nextel PFR at 26.

⁴⁸⁶ WCA PFR at 47-48.

⁴⁸⁷ Clearwire PFR Opposition at 4.

⁴⁸⁸ *Id.* at 2-3.

affect a licensee would be from adjacent channel operations. Accordingly, we will maintain our emission requirements regarding a documented interference complaint only insofar as it is received from an adjacent channel licensee.

(iii) Deadline for interference complaints

196. *Background.* Nextel asserts that the Commission should establish deadlines to ensure licensees abate interference in a timely manner.⁴⁸⁹ Accordingly, Nextel suggests there should be a 60-day deadline, after the interfering licensee receives a documented interference complaint from an adjacent channel operator, in which the interfering licensee must make the necessary adjustments to its operations.⁴⁹⁰ Clearwire agrees with Nextel that licensees should be allowed 60 days to resolve the documented interference complaint.⁴⁹¹ Likewise, WCA also agrees that that Section 27.53(1) should be modified to establish a timeline for resolution of interference complaints.⁴⁹²

197. *Discussion.* We agree with the parties that licensees should be allowed sufficient time to mutually resolve any case of documented interference. In this connection, we encourage licensees to coordinate and cooperate to expeditiously resolve any documented interference complaint with regard to out-of-band emissions to minimize any disruption of service to the public. Licensees should keep in mind that rules are intended to resolve problems only when genuine attempts by both parties have failed. Accordingly, we are amending our rules to allow the interfering licensee, 60 days after receiving a documented interference complaint, to coordinate with affected licensee and resolve the situation by that time, if necessary, by employing a more rigorous emission mask.

(iv) User stations

198. *Background.* Section 27.53(l)(4) of the Commission's rules provides that "[f]or mobile digital stations, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB at the channel edge and $55 + 10 \log (P)$ at 5.5 MHz from the channel edges." WCA supports this provision, which is consistent with its proposal earlier on in this proceeding. However, WCA believes that this requirement should be applied to all user stations, not just those that are mobile, asserting there is no logical reason why only mobile user stations should be subject to this requirement.⁴⁹³ WCA further contends while the spectral mask adopted should be adequate in most situations, it does not sufficiently address the risk of interference caused by out-of-band emissions from fixed user stations that utilize a transmission antenna that is affixed to the outside of a building, non-antenna structure, appurtenance, fixed tower, mast or other structure installed outdoors for the purpose of supporting an antenna. These user stations will tend to be higher above ground level, and operate at a higher effective isotropic radiated power (EIRP) because of the use of higher gain antennas. WCA states its proposed change in emission standards will effectively address the potential for interference from those fixed user stations to base stations of another operator in the same market, without unduly restricting the ability of rural operators to deploy designs that rely on

⁴⁸⁹ Nextel PFR at 18.

⁴⁹⁰ *Id.* at 34.

⁴⁹¹ Clearwire PFR Opposition at 4.

⁴⁹² WCA PFR Opposition at 25-26.

⁴⁹³ WCA PFR at 48.

higher-gain outdoor antenna installations.⁴⁹⁴ Additionally, WCA asserts that the record before the Commission in this proceeding leaves no doubt that where licensees in the same market utilize non-synchronized technologies, interference is inevitable absent attenuation of out-of-band emissions from base stations by at least $67 + 10 \log(P)$. Thus, WCA contends that the need for a more stringent restriction on out-of-band emissions is patent.⁴⁹⁵

199. Nextel proposes that the Commission amend Section 27.53(l) of the Commission's rules so that emission measurements are taken at the outermost edge of the combined channels as originally recommended by the Coalition. Nextel reasons, that this method of measuring emission limits, whereby all of the various out-of-band emissions are to be measured at the outermost edges of the combined channels where two or more channels licensed to one or more licensees are used as part of the same system, will avoid confusion and minimize disputes.⁴⁹⁶

200. Clearwire opposes WCA and Nextel's proposed amendment to this section, which calls for more restrictive masks even in the absence of documented interference. Clearwire reasons that the Commission's newly-adopted rules adequately protect against documented interference from out-of-band emissions and require licensees to resolve interference issues.⁴⁹⁷ Clearwire further asserts that Nextel's proposal fails to provide any technical evidence to support more restrictive masks, especially for antennae mounted below 20 feet AGL. For antennae mounted below 20 feet, AGL emission will most likely be lost in ground clutter and/or terrain, and the associated losses will greatly reduce the likelihood of interference to neighboring systems.⁴⁹⁸

201. *Discussion.* We have reviewed the comments of the parties on these issues and are in agreement with Clearwire that the rules the Commission adopted in the *BRS/EBS R&O* are adequate to protect a licensee from out-of-band emissions. WCA also agrees that the spectral mask requirements which were adopted are adequate in most situations, except for certain types of antenna supporting structures. However, WCA did not provide any technical data in support of the antenna structures with which it was concerned. Clearwire notes, and we agree, that in the illustration present by WCA, where an antenna would be mounted less than 20 feet AGL, the emissions from such antenna structure will be mostly likely to be lost in ground clutter or terrain which would greatly reduce the likelihood of interference to neighboring systems. Since it has not been demonstrated by any party that the emission limits adopted in the *BRS/EBS R&O* for this service are inadequate, the emission limits will not be modified.

d. 2495-2496 MHz Guard Band

202. *Background.* WCA argues that to mitigate interference from BRS Channel No. 1 licensees the Commission created a guard band at 2495-2496 MHz and imposed certain spectral mask requirements on relocated BRS Channel No.1 licensees. WCA and Nextel believe that, on

⁴⁹⁴ *Id.* at 50.

⁴⁹⁵ *Id.* at 46-47.

⁴⁹⁶ Nextel PFR at 31.

⁴⁹⁷ Clearwire PFR Opposition at 4.

⁴⁹⁸ *Id.* at 5.

reconsideration, it is necessary to clarify one of those requirements, and eliminate the other.⁴⁹⁹ First, WCA and Nextel ask the Commission to clarify that the one megahertz guard-band at 2495-2496 MHz is to be considered in measuring compliance by the BRS Channel No.1 licensee with its spectral mask requirements. According to WCA and Nextel, Section 27.53(l)(2) allows the MSS licensee to file a documented complaint and force the BRS Channel No. 1 licensee to meet the 67 + 10 log (P) mask for its base station and fixed user operations.⁵⁰⁰ Read literally, this Section would require the BRS licensee to meet the 67 + log (P) requirements 3 MHz below 2496 MHz, the lower edge of its channel, and would deprive the BRS Channel No. 1 licensee of the benefit of the guard-band between 2495-2496 MHz. Accordingly, WCA asserts that Section 27.53(l)(2) should be amended to make clear that the more stringent 67 + 10 log (P) spectral mask only need be met at 2492 MHz, that is 3 MHz below the guard-band lower edge. WCA also seeks clarification of whether Section 27.53(l)(2) permits MSS licensees to file documented interference complaints against BRS Channel No. 1 licensees but precludes BRS Channel No.1 licensees from filing similar complaints against MSS licensees.⁵⁰¹

203. *Discussion.* The 2500-2690 MHz band was expanded by five megahertz, from 2495-2690 MHz to accommodate BRS Channels No. 1 and No. 2/2A. Accordingly, BRS Channel No. 1 licensees will now operate on a new 6 MHz channel, 2496-2502 MHz, in the expanded band. The one megahertz guard-band, 2495-2496 MHz, was created to separate incumbent operations below 2495 MHz and new BRS Channel No. 1 licensees that would operate at 2496-2502 MHz. We reject WCA's argument to allow BRS Channel No. 1 licensees to measure out-of band emissions from the lower edge of the guard band, 2495 MHz, because WCA's procedure would be inconsistent with the Commission's approach with regard to other services regulated under Part 27. Under Rule Section 27.53(a)(6) the licensee is required to measure emission limits from "as close to the edges, both upper and lower, of the licensee's bands of operation as the design permits."⁵⁰² We see no reason to depart from this general policy in this case. Therefore, BRS Channel No. 1 licensees would be required to measure out-of-band emissions from the lower edge of their channel and meet the 67 + 10 log (P) standard 3 MHz from that edge.⁵⁰³ Accordingly, BRS Channel 1 licensees must comply with the out-of-band emissions requirement of 67 + 10 log (P), at 2493 MHz, 3 MHz below its lower channel edge, when an adjacent channel interference complaint cannot be resolved.

204. As we stated earlier, all complaints of out-of-band emissions into an adjacent facility must be documented and submitted to the interfering licensee. We anticipate that any licensee receiving a documented interference complaint would coordinate and cooperate with an adjacent channel licensee to resolve the complaints of out-of-band emissions. Although the *BRS/EBS R&O* stated that MSS licensees may file a documented interference complaint against BRS Channel No. 1 licensees, we did not intend to imply by this statement that BRS Channel No. 1 licensees are precluded from filing documented

⁴⁹⁹ WCA PFR at 50; Nextel PFR at 29-30.

⁵⁰⁰ WCA PFR at 51; Nextel PFR at 30.

⁵⁰¹ WCA PFR at 51.

⁵⁰² See 47 C.F.R. § 27.53(a)(6).

⁵⁰³ *Id.* Neither WCA nor any other party challenges the Commission's decision to use 3 MHz from the appropriate reference frequency as a basis for determining compliance with out-of-band emission limits.

interference complaints against MSS licensees. Any licensee may file a documented interference complaint against another licensee at its own discretion. Although we believe it is very unlikely that MSS will cause interference to BRS Channel No. 1, in the event that interference is received by a BRS Channel No. 1 licensee from an MSS licensee, we expect that the licensees will fully cooperate and resolve any complaints of documented interference. Finally, the language that WCA asserts should be deleted in Sections 27.53(1)(2) and 27.53(1)(4), which applies to fixed and temporary fixed stations, and mobile digital stations, respectively, will not be deleted.

e. Geographic Service Areas

205. *Background.* WCA requests that the Commission modify Section 27.1206 to clarify how GSA boundaries will be established under certain circumstances. To avoid conflicts regarding GSA boundaries, WCA proposes that the Commission modify Section 27.1206 to clarify that a “great ellipses” should be used instead of straight lines or chords to “split the football.” WCA argues that if ellipses are not employed, there will be areas, sometimes as wide as one kilometer that will not be assigned to either GSA.⁵⁰⁴ WCA contends that specific knowledge about a licensee’s territory is essential from license valuation and interference abatement, to accounting for regulatory fees.

206. WCA suggests the following outcomes under the circumstances described:⁵⁰⁵

- Where there is pending as of January 10, 2005 an application for a new incumbent station with a PSA that overlaps that of a licensed incumbent station, the GSA of the incumbent station is created by “splitting the football” and, if the pending application is ultimately dismissed or denied, the territory covered by the GSA of the applied-for station reverts to the BRS BTA holder (if a BRS application) or to EBS white space (if an EBS application).⁵⁰⁶
- Where there is pending as of January 10, 2005 an application for a modification that would impact the location/size of an incumbent station's GSA and the resulting splitting of a football with another station, the GSAs should be calculated by “splitting the football” based on the current authorizations, and if the modification is granted, the GSAs will be immediately redrawn upon the grant of the modification.
- Where there is pending as of January 10, 2005 an application for review or petition for reconsideration of the dismissal or denial of an application for a new or modified station that has a PSA overlapping another station’s PSA, the facilities proposed in the dismissed or denied application should not be considered in establishing GSAs. However, the GSA of the incumbent licensee will be subject to carving back consistent with the “splitting the football” rules if the dismissed/denied application is reinstated.⁵⁰⁷
- Where there is pending as of January 10, 2005 an application for review or petition for reconsideration of the forfeiture or cancellation of a license that has a PSA overlapping another

⁵⁰⁴ WCA PFR at 52.

⁵⁰⁵ *Id.* at 52-53.

⁵⁰⁶ *Id.* at 53.

⁵⁰⁷ *Id.*

station's PSA, that license should not be considered in establishing GSAs. However, the GSAs of licensees with overlapping GSAs will be subject to carving back consistent with the "splitting the football" rules if the forfeited or cancelled license is reinstated.

- Where an incumbent station license was in existence as of January 10, 2005 and caused a splitting of the football, and that incumbent station license is later forfeited, the reclaimed territory reverts to the BRS BTA holder (if BRS spectrum) or to EBS white space (if EBS spectrum) regardless of whether the action/inaction that caused the forfeiture occurred prior to January 10, 2005.⁵⁰⁸

207. WCA asserts that with the adoption of the rule changes it has proposed and in its comments in response to the *FNPRM*, the Commission will have succeeded in dismantling the broadcast model regulatory scheme that plagued the 2.5 GHz band, and established a model that will promote the deployment of a wide variety of innovative service offerings.⁵⁰⁹ Noting that the industry has not done a good job on its own to resolve boundary issues, Nextel recommends that the Commission adopt the Coalition's proposal in its entirety to resolve boundary issues. Nextel further notes that clarification of the GSA boundaries will limit disputes among overlapping GSA licensees.⁵¹⁰ In addition, Nextel states that the Commission should indicate whether licensees should account for Earth Curvature.⁵¹¹

208. *Discussion.* Although commenters to the *NPRM* and petitioners overwhelmingly supported the Coalition's method of "splitting the football," to bifurcate and define the GSA boundaries that would overlap,⁵¹² WCA's more recent proposal to use ellipses received minimal support from other petitioners. Furthermore, we are not convinced that WCA's proposal is either necessary or beneficial. Therefore, the GSA boundaries that overlap will be defined by "splitting the football." We do conclude, however, that the above-outlined recommendations that WCA has presented as to how the GSA of pending applications (applications for new stations, applications for reconsideration, applications for review, etc.) that were on file January 10, 2005 should be defined would clarify situations that may commonly occur and would reduce disputes. Accordingly, we are adopting WCA's recommendations concerning the GSAs of pending applications on file January 10, 2005. In light of the record, we will retain the "splitting the football" methodology we adopted in the *BRS/EBS R&O*.

f. Modifications to Geographic Area Licensing

209. *Background.* Pursuant to Section 27.1206(a) of the Commission's rules, BRS and EBS licensees will be able to place transmitters anywhere within their GSA without prior authorization as long as their operations comply with applicable service rules. There is no requirement that notice be given to the Commission following construction of individual facilities, and compliance with the desired-to-undesired signal ratios will no longer be required. CTN and NIA do not oppose geographical area

⁵⁰⁸ *Id.*

⁵⁰⁹ *Id.* at 53-54.

⁵¹⁰ Nextel PFR at 20.

⁵¹¹ *Id.* at 19.

⁵¹² See *NPRM*, 18 FCC Rcd 6722, 6758-6759 ¶¶ 87-88. See also *BRS/EBS R&O*, 19 FCC Rcd 14165, 14192-14194 ¶¶ 59-67.

licensing *per se* but argue that the rules have two problems.⁵¹³

210. First, beginning on January 10, 2005, the rules permit two-way mobile operations throughout the entire 2.5 GHz band even though the channels in the band are still interleaved (BRS and EBS stations will not have transitioned to the new band, which segregates MBS from LBS and UBS that are low power operations). For this reason, the Coalition Proposal precluded new development prior to the transition to the new band plan, and established the J and K guard bands to avoid post-transition adjacent channel interference to fixed EBS receive sites in the MBS.⁵¹⁴

211. Second, with regard to fixed transmission facilities operations prior to transition to the new plan, the Commission deleted the old interference protection rules, which rely on desired-to-undesired (D/U) ratio protection for fixed EBS receive sites, applying instead, the same geographical area licensing rules which are designed to control interference among LBS and UBS licensees. Geographical area licensing rules alone are not adequate to control interference from fixed BRS and EBS transmitters, many of which will continue to operate at high sites. GSA protection alone is insufficient to protect MBS receive sites from changes made by BRS and EBS licensees.⁵¹⁵

212. HITN supports the Commission's adoption of a geographical licensing scheme. HITN observes that the relocating of a MBS station from collocated facilities may cause adjacent channel interference to receive sites. HITN has found that claims of predicted interference within a GSA can be used in bad faith to unreasonably obstruct necessary relocations of high-power stations. However, where actual interference is identified on adjacent channels, HITN does not believe that it is unreasonable to undertake to provide filters at the affected receive site of such station.⁵¹⁶

213. The Commission deleted the old interference protection rules (D/U) ratio protection for fixed EBS receive sites applying geographic area licensing rules, which were designed to control interference among LBS and UBS licensees. CTN and NIA argue that geographic area licensing alone is inadequate to control interference to fixed BRS and EBS transmitters, which will continue to operate at high power and high sights.⁵¹⁷ CTN and NIA ask the Commission to put all licensees on notice that if they elect to deploy two-way facilities on a pre-transition basis, they do so at their own risk. They also seek to require a streamlined D/U analysis in connection with deployment of or modified fixed transmitters throughout the 2.5 GHz band pre-transition, and in the MBS post-transition.⁵¹⁸ CTN and NIA further recommend that if the Commission chooses to permit such operations notwithstanding the risk of interference, it must ensure any licensee that elects to deploy such facilities is required to promptly address and resolve any actual interference that occurs.⁵¹⁹ CTN and NIA propose the following process to resolve interference from two-way operations deployed prior to transition:

⁵¹³ CTN/ NIA PFR at 10-11.

⁵¹⁴ *Id.* at 11-12.

⁵¹⁵ *Id.* at 12.

⁵¹⁶ HITN PFR at 7.

⁵¹⁷ CTN/NIA PFR at 12.

⁵¹⁸ *Id.* at 13.

⁵¹⁹ *Id.*

- (i) Require that prior to the commencement of two-way operations, the licensee or excess capacity lessee notify all other potentially affected EBS and BRS licensees of the operating parameters of two-way facilities.
- (ii) Require that such notifications include a telephone number and e-mail address where a representative of the modifying party can be reached within 24 hours in the event that harmful interference is believed to be caused to the facilities of an affected party.
- (iii) Require that upon being contacted by an affected party, the modifying party consult with the affected party and make good faith efforts to identify and eliminate the source of the interference.
- (iv) Require that absent the consent of the affected party, the modifying party must shut down its two-way facilities if it cannot eliminate interference with five (5) days of being contacted by the affected party.⁵²⁰

214. *Discussion.* The Commission deleted the technical standards (D/U ratios) that applied to EBS stations when the new rules that established GSA's were adopted for the new band. CTN and NIA contend that geographical licensing alone is inadequate to control interference for EBS stations which will continue to operate with high power. We note, however, that in the hypothetical example offered by CTN and NIA, the hypothetical base station could not be built by the licensee because it would actually be within the GSA of the EBS licensee.⁵²¹ Moreover, despite the fact that there have been several markets where two-way operations currently exist, we are unaware of any interference complaints that have been submitted to the Commission. It therefore appears that to the extent there have been any interference problems, the parties have been able to resolve those issues without Commission intervention. We therefore decline to adopt the rules requested by CTN and NIA. However, we will take prompt and decisive action in those instances where interference is caused to EBS operations and the two-way operator is unable or unwilling to resolve the problem promptly.

g. Unlicensed Operations

215. *Background.* Many parties seek reconsideration of the Commission's decision to allow low-power Part 15 unlicensed devices in the 2655-2690 MHz portion of the band.⁵²² Nextel observes that, "the fact that massively under-deployed types of operations managed to co-exist in the 2500-2655 MHz band in the past says nothing about whether licensed and unlicensed uses can continue to coexist in the 2655-2690 MHz band in the future, particularly where both uses are expected to grow substantially."⁵²³ In addition, petitioners contend allowing unlicensed devices to operate in the band limits the exclusive rights of BRS and EBS licensees to make full use of the spectrum, inhibits their ability to permit uses in

⁵²⁰ *Id.* at 13-14.

⁵²¹ The GSAs of the respective stations were incorrectly calculated by CTN and NIA.

⁵²² See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14218 ¶ 139.

⁵²³ Nextel PFR at 23.

the secondary market, and chills investment.⁵²⁴

216. Clearwire agrees with Nextel and WCA that the Commission should reconsider its decision to introduce new unlicensed uses into the band, reasoning that the BRS and EBS services are undergoing a major transition, and allowing new unknown services into the band will further complicate the transition and heighten the risk of future interference.⁵²⁵ It further notes that affording underlay rights could detrimentally affect the quality of EBS and BRS operators to build service, technically constrain deployments, complicate interference problems, and negatively impact the flexibility of EBS and BRS licensees for technical innovation.⁵²⁶

217. Similarly, Luxon Wireless states that the Commission should reconsider its decision to allow unlicensed operations in the 2655-2690 MHz band, asserting that permitting unlicensed devices to operate in the band will undermine a licensee's ability to use its spectrum flexibly, is premature in the absence of comprehensive testing, would harm investment in advanced services, and will chill innovation. Luxon asserts that it has a strong interest in seeing that its network and business operations are not compromised by a regulatory environment that could strip licensees of one of their greatest benefits -- exclusive use.⁵²⁷ A better solution would be to allow the market to function as the Commission intends by requiring prospective operators of unlicensed devices to negotiate with incumbent licensees to obtain access to spectrum that would operate in the licensee's authorized service area.⁵²⁸ NY3G supports and agrees with the petitioners that have asked the Commission to prohibit low-power unlicensed operations in the 2655-2690 MHz band, asserting that low power operations would add an additional layer of complexity that would delay deployment in this band by licensed operators, and would undermine the evolution of the new band plan.⁵²⁹ Grand Wireless adds that it has not been established that unlicensed operators need additional spectrum (beyond what the Commission has already provided) especially in rural areas.⁵³⁰

218. *Discussion.* We have reviewed and considered the comments of the parties on permitting low-power unlicensed operations in the 2655-2690 MHz portion of the band. We acknowledge that in any new service, there will always be concerns regarding impermissible interference. Nonetheless, we reiterate that there have been significant advances in technology that make it feasible to design new types of unlicensed equipment that would not cause interference to any existing services. Also, as noted in the *BRS/EBS R&O*, equipment could be designed to avoid interference by monitoring spectrum before transmitting.⁵³¹ We emphasize, once again, that unlicensed operations under our Part 15 rules are subject to the condition that the transmitters do not cause interference to authorized services. Further, there were

⁵²⁴ See BellSouth PFR Opposition at 23-24.

⁵²⁵ Clearwire PFR Opposition at 15.

⁵²⁶ *Id.* at 15-16.

⁵²⁷ Luxon Wireless PFR Opposition at 9.

⁵²⁸ *Id.*

⁵²⁹ NY3G PFR Opposition at 3.

⁵³⁰ Grand Wireless PFR at 2.

⁵³¹ See *BRS/EBS R&O*, 19 FCC Rcd 14165, 14217 ¶ 135.

no comments to this proceeding that included any technical analyses which would indicate permitting low-power unlicensed operation in the band would cause impermissible interference to stations that would operate in the UBS. Accordingly, we continue to permit low-power unlicensed operations in the 2655-2690 MHz portion of the band in accordance with Part 15 of our rules, as described in and to the extent indicated in the *BRS/EBS R&O*.

h. Minimum Performance Requirements for EBS receive sites

219. *Background.* WCA and Nextel urge the Commission to adopt a rule that EBS receive sites must meet minimum standards in order to receive interference protection. They assert that the omission of minimum standards from the rule was likely an oversight. However, if the omission was not an oversight, the Commission should reconsider its decision to protect poorly performing EBS receive sites during transition as unfair to BRS licensees and inconsistent with spectrum-policy recommendations.⁵³² The pre-transition desired signal should be greater than -80 dBm and the undesired signal should be greater than -106.2 dBm.

220. *Discussion.* As we have stated in the *BRS/EBS R&O*, all downconverters within the GSA of all EBS stations will be replaced during transition regardless of the desired or undesired signal received at their receive sites. Moreover, we indicated earlier that EBS stations are typically designed to provide a quality signal, ≥ 80 dBm as proposed by WCA and Nextel, to their receive sites. Inasmuch as the desired signal of a typical EBS system exceeds the value proposed by WCA and Nextel, we find it unnecessary to establish a minimum service signal in the EBS at this time. Accordingly, we will not adopt the minimum signal levels proposed.

i. Miscellaneous Corrections to Sections 27.5 and 27.1221

221. *Background.* CTN and NIA note that in Section 27.5(i) of the Commission's rules, the footnote to (i)(2) states "the 125 kHz channels previously associated with these channels have been reallocated to Channel H3 in the upper band segment."⁵³³ However, the frequencies are actually on channel G3. They further note that Section 27.1221(a) appears to contain a typographical error that omits interference protection to EBS on a station-by-station basis.⁵³⁴

222. *Discussion.* We agree with CTN and NIA. Accordingly, we are amending the footnote to Section 27.5 (i) (2) to read: "No 125 kHz channels are provided for operation in this service. The 125 kHz channels previously associated with these channels have been reallocated to channel G3 in the UBS." We are also correcting Section 27.1221(a) to refer to interference protection for both BRS and EBS on a station-by-station basis.

3. Minimum usage requirements

223. *Background.* IMWED requests that the Commission provide guidance on how EBS licensees should reserve 5% of the capacity of their channels for instructional programming.⁵³⁵ IMWED

⁵³² Nextel PFR at 25.

⁵³³ CTN/NIA PFR at 21.

⁵³⁴ *Id.* at 22-23.

⁵³⁵ IMWED PFR at 7.

recommends that the Commission mandate that the percentage minimum apply to overall system data throughput at all times at all locations.⁵³⁶ IMWED further maintains that a stronger standard is no less than 5% of full-day measured system throughput with data transmitted at such locations and times as the EBS licensee specifies in its discretion.⁵³⁷ BellSouth asks the Commission to reject IMWED's proposal to have the Commission define how to measure the 5% minimum reservation, pointing out that the Commission has already acknowledged that defining capacity is "difficult to measure in light of the varied forms that such usage can take," and that the best course is to rely on the good faith efforts of EBS licensees to meet the requirements.⁵³⁸ Similarly, Luxon Wireless argues that this proposal would unnecessarily limit the ability of operators and licensees to craft flexible market-specific solutions to meet their own capacity needs.⁵³⁹

224. IMWED further recommends that the minimum usage requirement should be raised because a service that is 95% commercial cannot legitimately be characterized as educational.⁵⁴⁰ IMWED notes that this is not a new issue, and notes that in preparation of the Commission's Fixed Two Way Order,⁵⁴¹ the industry devised a joint compromise which recommended an initial 5% floor, and the licensee had to retain the ability to reclaim at least a further 5% of capacity annually until such time as it used 25% of channel capacity for education.⁵⁴² IMWED seeks adoption of that joint compromise because: 1) it avoids the inefficiency of having a significant amount of throughput remain idle; 2) it provides for the gradual recapture of capacity, which protects an operator and its customers from sudden swings in available capacity; and 3) it insulates the educational community that locks up spectrum for 15 years despite a growing need for more.⁵⁴³

225. No commenters support IMWED's proposal. For example, Nextel asserts that raising the minimum usage requirements would create an artificial educational use requirement that bears no relationship to the actual goals of these licensees.⁵⁴⁴ Nextel also points out that the current limits allow licensees to receive nearly full value for their spectrum for commercial leases and to use the revenues to fund the production of programming and the provision of other educational and instructional services.⁵⁴⁵ Nextel argues that EBS licensees remain free to negotiate lease agreements that dedicate more channel

⁵³⁶ *Id.*

⁵³⁷ *Id.*

⁵³⁸ BellSouth PFR Opposition at 9 citing *Two-Way Order* at 19162. *See also* Luxon Wireless PFR Opposition at 4.

⁵³⁹ Luxon Wireless PFR Opposition at 4.

⁵⁴⁰ IMWED PFR at 8.

⁵⁴¹ *See* Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, *Report and Order*, 13 FCC Rcd 19112, 19157 ¶¶ 86-87 (1998) (*Two-Way R&O*).

⁵⁴² IMWED PFR at 8-9.

⁵⁴³ *Id.* at 9.

⁵⁴⁴ Nextel PFR Opposition at 26.

⁵⁴⁵ *Id.*

capacity to educational programming than the Commission's minimum requirements.⁵⁴⁶

226. Similarly, Sprint argues that IMWED has not demonstrated why the 5% standard is inadequate to preserve the educational nature of EBS.⁵⁴⁷ For example, the higher compression rates of digital technology enable an EBS licensee using digital systems to provide more programming using its reserved 5% of its channel capacity than an analog EBS licensee would be able to provide reserving 25% of its channel capacity.⁵⁴⁸ Sprint further argues that the proposal also contradicts the Commission's market oriented approach for EBS leases, and imposes opportunity costs in the form of lost lease revenues that might otherwise be used to achieve the licensees' overall educational missions more efficiently.⁵⁴⁹

227. *Discussion.* We reject IMWED's proposal and decline to specify the manner in which the 5% minimum usage requirement should be applied. We agree with the arguments proffered by Nextel and Sprint, and other commenters such as BellSouth and Luxon, that IMWED's proposal to increase the minimum educational usage requirements is unnecessary, unsupported by the record, and should be rejected.⁵⁵⁰ As BellSouth correctly points out, the Commission has already rejected this idea.⁵⁵¹ Furthermore, we agree with Luxon that the Commission's reasons for rejecting this proposal in 1998 are even more applicable today, as it promotes flexibility in accommodating the needs of EBS licensees that have different educational goals and different spectrum requirements while safeguarding the primary educational purpose of the ITFS spectrum allocation.⁵⁵² Moreover, in a climate where the Commission is making great strides towards making its rules flexible and granting maximum flexibility to licensees, to reconsider this long-resolved issue in a manner that would impede upon such flexibility would do a great disservice to the public interest. We continue to believe defining capacity is difficult, and in any event unnecessary. Therefore, we decline to make any changes to the minimum educational usage requirements for EBS licensees. We will continue to rely on the good faith efforts of EBS licensees to meet these requirements.

228. CTN and NIA point out that the language in section 27.1214(c), which states a licensee must reserve 5% of the capacity of its channels for instructional purposes is technically inaccurate and should read, as does section 27.1203(b), that the reservation must be for "educational uses consistent with Section 27.1203(b) and (c) of the rules." We agree and will amend the rules accordingly.

4. Cable/ILEC Cross Ownership

229. *Background.* In the *BRS/EBS R&O*, the Commission amended its rules to allow cable operators and ILECs to acquire or lease BRS or EBS spectrum. The Commission stated that eligibility restrictions are only imposed when they can effectively address a significant likelihood of substantial

⁵⁴⁶ *Id.*

⁵⁴⁷ Sprint PFR Opposition at 7.

⁵⁴⁸ *Id.* at 7-8.

⁵⁴⁹ *Id.* at 8.

⁵⁵⁰ BellSouth PFR Opposition at 8.

⁵⁵¹ *Id.* at 8-9.

⁵⁵² Luxon Wireless PFR Opposition at 4.

competitive harm in specific markets.⁵⁵³ In this instance, the Commission found that opponents to the proposed rule change did not show a significant likelihood of substantial competitive harm from allowing BRS/EBS leasing or acquisition by cable companies or ILECS. However, cable operators are still prohibited from acquiring BRS or EBS spectrum for the purpose of providing video service.⁵⁵⁴

230. In their petitions, Speednet, C&W Enterprises, DBC, WDBS, and Pace assert that the Commission did not have sufficient market information on which to base the rule change.⁵⁵⁵ They propose that cable operators and ILECs be required to provide the relevant market information because small operators in the BRS and EBS band have modest budgets.⁵⁵⁶ Alternatively, DBC and WDBS request that the Commission restrict cable operators and ILECs from spectrum access and ownership in the MBS channels of BRS, asserting that the MBS channels are designated as high power video channels.⁵⁵⁷

231. *Discussion.* We find that there is no basis to reconsider our decision to allow cable operators and ILECs to acquire or lease BRS or EBS spectrum. Under Commission precedent, eligibility restrictions are only imposed when a significant likelihood of substantial competitive harm exists in specific markets, and when those restrictions are an effective way to address those competitive harms.⁵⁵⁸ We affirm our conclusion that opponents have not supplied relevant market information to show a significant likelihood of substantial competitive harm in specific markets, and therefore have not shown that this standard is met.

232. Further, we continue to conclude that Section 613(a) of the Act was not intended to prohibit cable operators from acquiring or leasing BRS or EBS spectrum for the provision of broadband data service. In the *BRS/EBS R&O*, we carefully considered Section 613(a) of the Act⁵⁵⁹ and the legislative intent behind that law, concluding that Congress intended to encourage competition in the video distribution market.⁵⁶⁰ We applied that conclusion by continuing to prevent cable operators to acquire BRS/EBS licenses outright for the purpose of providing MVPD service, and by retaining the ban on cable operators leasing BRS/EBS spectrum within their franchise areas to supply MVPD service. The

⁵⁵³ *BRS/EBS R&O*, 19 FCC Rcd. 14165, 14232 ¶ 175.

⁵⁵⁴ *BRS/EBS R&O*, 19 FCC Rcd. 14165, 14230-14231, ¶¶ 171-172; 47 U.S.C. § 553(a).

⁵⁵⁵ C&W PFR at 5; DBC PFR at 5; WDBS PFR at 5; Pace PFR at 5.

⁵⁵⁶ PACE PFR at 5; SpeedNet PFR at 5; C&W PFR at 5-6; DBC PFR at 6; WDBS PFR at 5.

⁵⁵⁷ DBC PFR at 6; WDBS PFR at 5-6.

⁵⁵⁸ See, e.g., Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, ET Docket No. 95-183, Implementation of Section 309(J) of the Communications Act – Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz Bands, PP Docket No. 93-253, *Third Notice of Proposed Rulemaking*, 19 FCC Rcd. 8232, 8245-8246, ¶ 33 (2004); Allocations and Service Rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands, WT Docket No. 02-146, *Notice of Proposed Rulemaking*, 17 FCC Rcd. 12182, 12211-12212, ¶¶ 77-78 (2002).

⁵⁵⁹ 47 U.S.C. § 553(a).

⁵⁶⁰ See *BRS/EBS R&O*, 19 FCC Rcd. 14165, 14231 ¶¶ 172-174.

decision follows congressional intent,⁵⁶¹ and will promote competition in the high-speed wireless market.

5. Mutually exclusive applications

233. *Background.* In the *BRS/EBS R&O*, we dismissed each mutually exclusive BRS/EBS application that was not subject to a settlement agreement to eliminate the mutual exclusivity as of April 2, 2003, the release date of the *NPRM*.⁵⁶² We stated that the Commission has used this approach for services that transitioned to geographic licensing, rejecting a suggestion that the Commission auction the mutually exclusive channels to the highest-bidding mutually exclusive applicant.⁵⁶³

234. Eleven dismissed applicants filed Petitions for Reconsideration of the dismissal.⁵⁶⁴ Many petitioners made procedural arguments, contending that their applications were not mutually exclusive because the Commission should have dismissed the other mutually exclusive applications.⁵⁶⁵ A number of petitioners from South Florida requested reconsideration based on a Marketwide Settlement Agreement filed with the Commission.⁵⁶⁶

235. HITN and Santa Rosa Junior College argue that we did not meet our statutory obligations under Section 309 of the Act.⁵⁶⁷ In their view, the Commission should not have treated the mutually exclusive applications as a procedural matter, but rather as a substantive matter.⁵⁶⁸ Similarly, the North American Catholic Educational Programming Foundation, Inc. (NACEPF) argues that the Commission did not provide a reasonable analysis in dismissing the mutually exclusive applications. Further, HITN and Santa Rosa Junior College argue that the mutually exclusive applications in the EBS are not comparable to the applications dismissed in the Maritime Communications Rulemaking because the applicants in this case are non-commercial, there are only a small number of mutually exclusive applications, and the affected areas are easily defined.⁵⁶⁹

236. *Discussion.* With one exception, we affirm the dismissal of the applications. We are not persuaded by arguments that mutual exclusivity no longer exists because other applications should have been dismissed prior to the release of the *NPRM*. HITN, NACEPF, and Santa Rosa Junior College argue that the Commission's decision to dismiss mutually exclusive applications was not a well-reasoned decision in the public interest. Our precedent of dismissing pending mutually exclusive applications

⁵⁶¹ See S. REP.NO. 102-92, at 46-47 (1991), reprinted in 1992 U.S.C.C.A.N. 1133, 1179-1180.

⁵⁶² *NPRM*, 18 FCC Rcd 6722, 6813-14, ¶ 228. See also *BRS/EBS R&O*, 19 FCC Rcd. 14165, 14264 n. 572.

⁵⁶³ *BRS/EBS R&O*, 19 FCC Rcd. 14165, 14264-14265 ¶ 263.

⁵⁶⁴ See Petitions for Reconsideration and Clarification of Action in Rulemaking Proceeding, *Public Notice*, Report No. 2691 (rel. Jan. 31, 2005).

⁵⁶⁵ See, e.g., Florida Atlantic University PFR at 4; Michigan Center School District PFR at 2; Creighton University PFR at 2.

⁵⁶⁶ See, e.g., WBSWP PFR at Exhibit 1.

⁵⁶⁷ HITN PFR at 8; Santa Rosa Junior College PFR at 6.

⁵⁶⁸ HITN PFR at 8; Santa Rosa Junior College PFR at 6.

⁵⁶⁹ See HITN PFR at 16; Santa Rosa Junior College PFR at 10-14.

when converting to geographic area licensing is well established.⁵⁷⁰ The public interest is served by an efficient transition toward geographic licensing, and dismissing mutually exclusive applications in the current instance furthers that public interest goal. Additionally, dismissal of these mutually exclusive applications resolves these long-standing issues that had shown no signs of solution by settlement. The *NPRM* set forth in very clear terms that if the mutual exclusivity had not been resolved as of the release date, the mutually exclusive applications would be dismissed.⁵⁷¹ Therefore, we will not reinstate any dismissed applications unless the petitioner had filed an approved settlement agreement before the release date of the *NPRM*.

237. Upon further contemplation, we conclude that we will only reinstate the dismissed applications if the petitioner had filed an approved settlement agreement before the release date of the *NPRM*. We note that a series of applicants in South Florida filed petitions for reconsideration based upon a Marketwide Settlement Agreement filed on May 24, 1995.⁵⁷² We deny those petitions because the settlement could not be implemented as proposed. Specifically, the application filed by the School Board of Palm Beach County (File No. 19950524DM) to relocate EBS Station KZB29 was mutually exclusive with an application filed by the School Board of Miami-Dade County (File No. 19950915HW) to move EBS Station KTB85 to the G channel group. Because the Marketwide Settlement Agreement contemplated a series of interdependent channel switches and transmitter site relocations, the failure of the Marketwide Settlement Agreement to resolve the mutual exclusivity on the G channel group renders the agreement defective. Therefore, we will not reinstate any of the applications that were the subject of that settlement agreement.

238. We also reject arguments from applicants who argue that their applications should not have been mutually exclusive because the application they were mutually exclusive with was defective.⁵⁷³ The pertinent consideration is that, as of the date of the *NPRM*, a mutually exclusive application was pending.

239. Petitioner Shekinah Network presented evidence in its Petition for Reconsideration that it had filed, and the Commission approved, a settlement agreement before the April 2, 2003 deadline.⁵⁷⁴ We will therefore grant Shekinah's petition and reinstate its application.

6. Leasing Issues

240. We have before us a Petition for Reconsideration and a separate Petition for Extraordinary Relief filed by the IMWED. IMWED has also filed Reply Comments and a Consolidated

⁵⁷⁰ See, e.g., Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems, WT Docket No. 96-18, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 12 FCC Rcd. 2732, 2739, ¶ 6 (1997); Amendment of the Commission's Rules Regarding Maritime Communications, PR Docket No. 92-257, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 12 FCC Rcd. 16949, 17015-17016 (1997).

⁵⁷¹ *BRS/EBS NPRM*, 18 FCC Rcd. 6722, 6813-14, ¶ 228.

⁵⁷² See Florida Atlantic University PFR; School Board of Palm Beach County; Florida PFR; Southern Florida Instructional Television, Inc. PFR; WBSWP Licensing Corporation PFR.

⁵⁷³ See Concord Community Schools PFR; Creighton University PFR; Michigan Center School District PFR.

⁵⁷⁴ Shekinah Network PFR at Attachment B.

Opposition to Petitions for Reconsideration in this proceeding.⁵⁷⁵ In these combined pleadings, IMWED asks the Commission to: 1) prohibit the inclusion of license purchase rights in EBS lease agreements; 2) require that all EBS excess capacity leases be filed with the Commission in unredacted form, or, in the alternative, be made available by EBS licensees for public inspection; and 3) retain the current 15-year maximum term for EBS lease agreements.

241. Leasing has been a staple of EBS since 1983, and has represented the Commission's pioneering movements toward flexible use. Although this flexible use policy has led to a reduction in the proportion of EBS channel capacity used for educational purposes, it has nonetheless served the very critical function of providing much needed revenue to educational entities, while allowing such institutions the autonomy to utilize the proceeds in the manner that suited its particular needs. Such revenue has enabled educational institutions to fund the construction of stations and to develop educational programming.

242. In the *BRS/EBS NPRM*, the Commission stated that it did not propose to prevent licensees from entering into new lease arrangements, and that it preferred to let the market determine the outcome of such arrangements without imposing limits, unless specific reasons justified a contrary policy. The Commission also proposed to relieve ITFS operators of the burden of filing copies of every channel lease agreement with the Commission, with the proviso that licensees retain copies of channel lease agreements in their files and make them available to the Commission upon request.

243. In 2003, the Commission took significant steps to facilitate the development of Secondary Markets in spectrum usage rights involving wireless radio services when it adopted the *Secondary Markets Report and Order* and *Further Notice of Proposed Rulemaking*.⁵⁷⁶ In that *Report and Order*, the Commission established policies and rules to enable spectrum users to gain access to licensed spectrum by entering into different types of spectrum leasing arrangements with licensees in most wireless radio services.⁵⁷⁷ In the *BRS/EBS R&O*, the Commission extended the rules and policies adopted in the *Secondary Markets Report and Order* to the BRS/EBS spectrum. Furthermore, the Commission grandfathered existing EBS leases, so long as the leases remained in effect and were not materially changed. Moreover, the Commission allowed pre-existing ITFS leases to remain in effect for up to fifteen years, consistent with then current rules,⁵⁷⁸ but limited the spectrum lease term to the length of the license term in question. Finally, the Commission retained the following EBS substantive use requirements.

⁵⁷⁵ In the Sprint-Nextel Merger Proceeding, IMWED asserted that the combined entity should not be able to hold EBS leases for longer than 15 years, and that EBS leases should automatically be filed at the Commission in unredacted form. The Commission concluded that IMWED's concerns relating to the Sprint-Nextel merger would be more appropriately addressed herein. Applications of Nextel Communications, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, WT Docket No. 05-63, FCC 05-148 at ¶ 153 n. 350 (rel. Aug. 8, 2005).

⁵⁷⁶ See generally Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) (*Secondary Markets Report and Order* and *Further Notice*, respectively) Erratum, 18 FCC Rcd 24817 (2003).

⁵⁷⁷ See generally *Secondary Markets Report and Order*, 18 FCC Rcd at 20607-82 ¶¶ 1-194.

⁵⁷⁸ *BRS/EBS R&O*, 19 FCC Rcd 14165, 14233-14234 ¶ 180.

“(i) there must be certain minimum educational uses of ITFS spectrum (typically, a minimum of 20 hours per 6 MHz channel per week); (ii) for analog facilities, there must be a right to recapture an additional amount of capacity for educational purposes (typically, 20 more hours per channel per week); for digital facilities, the licensee must reserve at least 5% of its transmission capacity for educational purposes; (iii) the lease term may not exceed 15 years; (iv) the ITFS licensee must retain responsibility for compliance with FCC rules regarding station construction and operation; (v) only the ITFS licensee can file FCC applications for modifications to its station’s facilities; and (vi) the ITFS licensee must retain some right to acquire the ITFS transmission equipment, or comparable equipment, upon termination of the lease agreement.”⁵⁷⁹

The Commission stated that it believed that the continued application of these substantial use limitations, as well as the retention of ITFS eligibility requirements would facilitate the traditional educational purposes of ITFS. The *BRS/EBS R&O* did not, however, address the issue of requiring licensees to file leases with the Commission.

a. License Purchase Rights

244. *Background.* IMWED’s first concern relates to prohibiting the inclusion of license purchase rights in EBS lease agreements. IMWED states that it is concerned that for-profit operators commonly seek to insert provisions in EBS lease agreements that give them the right to purchase the EBS license in the event that the Commission changes eligibility standards.⁵⁸⁰ IMWED argues that it is inappropriate for commercial entities to be lining up EBS purchase deals when the Commission has barred the commercial purchase of EBS spectrum, and that these actions ensure that the eligibility question can never be resolved hence creating a lasting incentive to subvert the Commission’s policy.⁵⁸¹ IMWED further argues that since the Commission has unambiguously held that EBS licenses may not be sold to commercial entities, and has determined that EBS should be preserved as an educational service, it would be counterproductive to create a constituency of organizations that hold purchase options on EBS spectrum that cannot be exercised until the eligibility restriction is lifted.⁵⁸² Such a constituency, IMWED contends, would badger every future Commission until the constituency’s members could cash in such options.⁵⁸³

245. WCA urges rejection of IMWED’s proposed ban on purchase options, stating that IMWED has failed to establish any harm to the public interest in allowing EBS licensees to provide such purchase options, which are generally recognized by the Commission as benign vehicles that do not raise eligibility concerns until they are exercised.⁵⁸⁴ Similarly, BellSouth contends that IMWED ignores the fact that such a clause would be effective only if the Commission changed its eligibility rules to permit

⁵⁷⁹ *Id.* at 14234 ¶ 181.

⁵⁸⁰ IMWED PFR at 10.

⁵⁸¹ *Id.*

⁵⁸² IMWED PFR Reply at 11.

⁵⁸³ *Id.* at 11-12.

⁵⁸⁴ WCA PFR Opposition at 41-42.

commercial entities to hold EBS licenses, and absent such a clause the lessee would have no way to ensure it could retain access to the spectrum should the licensee elect to sell its license, leaving the lessee nothing to show for its substantial long-term investment.⁵⁸⁵

246. C&W, DBC, SpeedNet, and WDBS also oppose IMWED's request to prohibit license purchase rights from being included in EBS leases, arguing that market factors should determine the finer points of lease agreements, and that the safeguards now incorporated in the rules are adequate.⁵⁸⁶ Sprint notes that the Commission has elected to retain its EBS eligibility restrictions in the *BRS/EBS R&O*, rendering IMWED's proposal unnecessary.⁵⁸⁷ Sprint contends, however, that if at some point in the future the Commission elects to remove the eligibility restrictions, EBS entities understand how best to utilize their spectrum resources to meet their own unique and vital education missions, and they should then be permitted to dispose of their spectrum in whatever manner they see fit.⁵⁸⁸

247. *Discussion.* We agree with the substantial majority of commenters that IMWED's proposal to prohibit purchase option provisions in EBS leases is unnecessary. Of particular importance to this analysis, as opponents of IMWED's request correctly point out, is the fact that the Commission has reaffirmed its commitment to preserving the educational nature of EBS hence maintaining eligibility restrictions in the band. Inasmuch as the Commission's recent ruling in the *BRS/EBS R&O* continues to prevent commercial entities from becoming EBS licensees, and we have no intention of revisiting EBS eligibility, the purchase options provisions can have no practical effect.

248. Banning purchase option provisions in EBS leases is also unwarranted because the Commission has repeatedly stated that it prefers to let the market forces operate and determine outcomes instead of imposing limits, unless specific reasons justify a contrary policy. Here, IMWED has not provided a reason that would justify Commission intrusion in a private contractual arrangement. Although we agree with IMWED's view that such provisions are "inappropriate", IMWED fails to demonstrate that they result in any real public interest harm. As previously indicated, the *BRS/EBS R&O* retained EBS eligibility restrictions that generally bar commercial entities from becoming license holders in this band. Although IMWED states that such arrangements are counterproductive, IMWED has failed to establish that any real harm results from these provisions to purchase a license at a future time, which, unless and until exercised, do not actually convey EBS licenses. Furthermore, even if the Commission were to revise its rules, such provisions could not be exercised without Commission approval. Thus, in the extremely unlikely event that EBS license eligibility is expanded to include commercial entities, the Commission will still have the opportunity to review the transaction and decide whether allowing such a transfer would be in the public interest. Consequently, we deny IMWED's request to ban purchase options from EBS lease agreements.

b. Filing of Excess Capacity Leases

249. *Background.* IMWED next requests that the Commission require that all EBS excess

⁵⁸⁵ BellSouth PFR Opposition at 10, citing IMWED PFR at 10.

⁵⁸⁶ C&W PFR Opposition at 3; DBC PFR Opposition at 2; SpeedNet PFR Opposition at 3; WDBS PFR Opposition at 3.

⁵⁸⁷ Sprint PFR Opposition at 3, citing *BRS/EBS R&O* at ¶ 152.

⁵⁸⁸ Sprint PFR Opposition at 3.

capacity leases be filed with the Commission in unredacted form, or, in the alternative, be made available by EBS licensees for public inspection. IMWED argues that such a requirement is necessitated by the fact that numerous excess capacity lease provisions bear upon the public interest obligations of EBS licensees, since they govern facilities, operations, and financial support that influence educational service.⁵⁸⁹ IMWED posits that if leases continue to be available for public inspection, it is likely that abusive practices will come to light promptly, and many may be deterred entirely.⁵⁹⁰ IMWED denies Nextel's suggestion that the public filing of leases could lead to collusion, arguing that each lease would be finalized prior to filing so the lease terms could not be altered following disclosure due to collusion with another entity.⁵⁹¹ IMWED maintains that colluding licensees would be in such close contact that they would share information outside of Commission processes.⁵⁹² Given the prevalence of electronic filing, IMWED maintains that it is not unduly burdensome to attach a file containing the text of a lease.⁵⁹³

250. WCA argues that the Commission should reject IMWED's proposal that all leases of EBS excess capacity be filed with the Commission without the redaction of commercially sensitive information, stating that the Commission in the Secondary Markets proceeding has recognized that the submission of unredacted leases is dangerous as they could disclose a company's business plans or sensitive information to its competitors.⁵⁹⁴ BellSouth states that IMWED ignores the fact that: (1) lessors and lessees are already required to make numerous certifications certifying compliance with Commission rules and eligibility restrictions before spectrum leasing activities can commence, thus assuring the Commission that the leasing arrangement is legal; and (2) the licensee and the lessee must retain a copy of the lease in their files and submit copies to the Commission upon request.⁵⁹⁵ BellSouth, C&W, DBC, SpeedNet, and WDBS characterize IMWED's request as an attempt to gain access to the financial leasing terms of other EBS licensees for its own negotiating purposes.⁵⁹⁶ Sprint characterizes IMWED's proposal as both inefficient and burdensome.⁵⁹⁷

251. *Discussion.* We agree with commenters that IMWED's proposal to require licensees to file unredacted copies of EBS leases should be rejected. First, we conclude that requiring licensees to file unredacted copies of leases would not provide a public interest benefit in this case. We reject IMWED's concern that requiring such filings protects the public interest by bringing abusive practices to light

⁵⁸⁹ IMWED PFR Reply at 9-10.

⁵⁹⁰ *Id.* at 10.

⁵⁹¹ *Id.*

⁵⁹² *Id.*

⁵⁹³ *Id.* at 10-11.

⁵⁹⁴ WCA PFR Opposition at 35 and 37 citing *Secondary Markets Report and Order*, 18 FCC Rcd at 20669, 20660.

⁵⁹⁵ BellSouth PFR Opposition at 13.

⁵⁹⁶ BellSouth PFR Opposition at 13; C&W PFR Opposition at 3-4; DBC PFR Opposition at 2-3; SpeedNet PFR Opposition at 4; WDBS PFR Opposition at 3-4.

⁵⁹⁷ Sprint PFR Opposition at 4.

because there is no evidence in the record that abusive practices exist in EBS leases. Furthermore, in the twenty plus years since EBS leasing commenced, the Commission has not discovered any evidence that abusive practices exist and are so pervasive as to necessitate heightened scrutiny. Instead, we believe that any concern whatsoever regarding the contents of a lease agreement is adequately addressed by requiring licensees to make copies of such leases available to the Commission upon request.

252. Moreover, we reject IMWED's assertion that the burden of filing such leases is essentially cured by the prevalence of electronic filing because the ease of filing does not dissipate the actual burden of an unnecessary filing. Information collection roles for the Commission should not be imposed unless it is established that such a role would bring important benefits that would not otherwise be adequately addressed.⁵⁹⁸ Here, IMWED has not established a need for nor set forth any public interest benefits of such collection that are not adequately addressed by a policy where the Commission can inspect such agreements upon request.

253. Furthermore, we conclude that requiring licensees to file unredacted leases is problematic insofar as such leases may contain commercially sensitive information. The Commission has long been sensitive to protecting confidential financial, commercial, or proprietary information.⁵⁹⁹ We agree with commenters that IMWED has failed to establish any justification for requiring licensees to file documents that could reveal such sensitive information. Consequently, we will not impose an automatic filing requirement for EBS leases. All such leases must, however, be made available for inspection by the Commission upon its request.

c. Limitation on Length of EBS Leases

254. *Background.* As indicated above, IMWED's Petition requests that the Commission retain the 15-year lease limitation. IMWED argues that retention of this limitation is necessary because EBS licensees' educational needs change over time, and thus leasing arrangements that exceed 15 years eliminate the flexibility needed to respond to changing circumstances.⁶⁰⁰ IMWED states that commercial entities often argue that longer lease terms are required for them to recover their capital investments, but notes that rights of first refusal are not barred in EBS agreements, and thus incumbent lessees can be assured of renewal upon the expiration of a 15-year term.⁶⁰¹ IMWED notes that several EBS licensees have entered into lease agreements that extend beyond 15 years.⁶⁰² IMWED argues that a 15-year limit will not cripple the leasing of EBS excess capacity as argued by several parties.⁶⁰³ IMWED states that it has years of experience in leasing excess capacity of EBS systems and argues that a 15-year term with a "right of first refusal" would give a lessee access to spectrum for 30 years.⁶⁰⁴ IMWED further argues that

⁵⁹⁸ See *Secondary Markets Report and Order*, 18 FCC Rcd 20604, 20681 ¶ 197 (2003).

⁵⁹⁹ See *id.*

⁶⁰⁰ IMWED PFR Opposition at 15.

⁶⁰¹ *Id.* at 16.

⁶⁰² See *Ex Parte* Letter from John B. Schwartz, Director to IMWED to Marlene H. Dortch, Federal Communications Commission (dated Jan. 10, 2006) at 2 (IMWED *Ex Parte*).

⁶⁰³ *Id.*

⁶⁰⁴ *Id.*

maximizing revenue should not be the goal of EBS licensees if it is to the detriment of responsive educational service.⁶⁰⁵ IMWED maintains that 15-year lease terms are pro-competitive because new entrants will be able to obtain a constant supply of spectrum as leases expire.⁶⁰⁶ IMWED claims that Sprint Nextel has entered into perpetual leases and noted Sprint Nextel's dominant position in the 2.5 GHz band.⁶⁰⁷ IMWED argues that perpetual leases are analogous to reallocation of EBS spectrum to commercial use.⁶⁰⁸ IMWED notes that *de facto* transfer leases are opaque with respect to the actual length of the lease.⁶⁰⁹

255. Media Access Project and NY3G support IMWED's position.⁶¹⁰ The Media Access Project maintains that because licensees have no guarantee of renewal, there is no merit to the argument that lessees will only invest in equipment if they have the certainty of leases longer than the license term.⁶¹¹ Moreover, Media Access Project maintains that because the life expectancy of the network equipment is much shorter than 15 years, any commercial entity will receive more than adequate return from a 15-year lease.⁶¹² Media Access Project further maintains that allowing leases longer than 15 years undermines the Commission's decision declining to permit EBS licensees to sell their licenses to commercial entities.⁶¹³ Media Access Project also asserts that EBS licensees cannot claim that the Secondary Markets rules introduced greater flexibility because the EBS rules remain intact.⁶¹⁴ NY3G Partnership asks that the Commission (1) prohibit "rights of first refusal" or rights of automatic renewal in EBS lease agreements, where such rights could extend the cumulative lease term beyond ten years; (2) require existing EBS lease agreements to be conformed to these restrictions; and (3) require EBS lease

⁶⁰⁵ *Id.*

⁶⁰⁶ *Id.* at 2-3.

⁶⁰⁷ *Id.* at 3. Prior to their merger, Sprint and Nextel were the two largest holders of rights to spectrum in the 2.5 GHz band. Sprint held spectrum rights in 190 BTAs, on average 26.8 MHz licensed and 57.7 MHz leased in each BTA. Nextel held spectrum rights in 281 BTAs, on average 35.7 MHz licensed and 53.7 MHz leased in each BTA. In most cases, the spectrum holdings did not significantly overlap. The merger combined Sprint and Nextel's holdings into a virtually nationwide footprint in the 2.5 GHz band (nearly 85 percent of the pops in the top 100 markets). Applications of Nextel Communications, Inc. and Sprint Corporation, WT Docket No. 05-63, *Memorandum Opinion and Order*, 20 FCC Rcd 13967, 14021 ¶ 147 (2005).

⁶⁰⁸ IMWED *Ex Parte* at 2.

⁶⁰⁹ *Id.*

⁶¹⁰ See *Ex Parte* Letter from Harold Feld, Senior Vice President to Media Access Project to Marlene H. Dortch, Federal Communications Commission (dated Jan. 30, 2006) at 1 (*Media Access Ex Parte*). See *Ex Parte* Letter from Bruce D. Jacobs, Counsel to NY3G Partnership to Marlene H. Dortch, Federal Communications Commission (dated Dec. 9, 2005) at 1 (*NY3G Partnership Ex Parte*).

⁶¹¹ *Media Access Ex Parte* at 1-2.

⁶¹² *Id.* at 2.

⁶¹³ *Id.*

⁶¹⁴ *Id.*

agreements to be filed with the Commission for public inspection.⁶¹⁵

256. Although CTN and NIA and state that the 15-year lease limitation furthers the educational purposes of EBS by ensuring an opportunity for educators to re-evaluate their changing educational needs, spectrum requirements, and technologies on a periodic basis, they indicate that certain changes to the lease term limit may be in the public interest to ensure that investment will be made in support of wireless broadband deployments.⁶¹⁶ CTN and NIA believe that lease-term limitations are appropriate because if the Commission permitted leases to continue indefinitely or for very long terms, leases will be transformed into outright purchases of the spectrum for commercial purposes, in contravention of the Commission's public interest determination to retain EBS eligibility restrictions.⁶¹⁷ CTN and NIA, however, disagree on the conditions under which long lease terms should be permitted.

257. Specifically, NIA states that a 20-year term would probably be sufficient to ensure that investment can and will support the 2.5 GHz band.⁶¹⁸ NIA, states, however, that it is willing to support a 25-year lease term, subject to the following conditions: (1) that the limit is strictly adhered to (*i.e.*, lease terms to evade the limit, such as penalties for non-renewal would not be permitted); (2) all existing EBS excess capacity leases with terms longer than 25 years be required to conform to the new 25-year limit; and (3) sufficient information be filed with the Commission to ensure compliance with the lease term limit.⁶¹⁹ CTN supports a maximum lease term of up to 30 years if the Commission adopts a rule that provides EBS licensees the ability to review their educational use requirements every 5 years beginning on the 15th year of the lease.⁶²⁰ They state that a right of periodic review is important because it is impossible for any educator to predict now what its educational, technological, and spectrum needs will be decades from now.⁶²¹ WCA supports CTN's position.⁶²² Clearwire asks that the Commission

⁶¹⁵ NY3G Partnership *Ex Parte* at 1.

⁶¹⁶ In their joint petition for reconsideration, CTN and NIA sought clarification of the 15-year term limitation because the *BRS/EBS R&O* indicated that the Commission was retaining the 15-year limitation, but that limitation was not codified in new Section 27.1214 of the BRS/EBS Rules. *See* CTN/NIA PFR at 20. During the course of this proceeding, however, CTN and NIA changed their original position with regard to the length of EBS leases and now support longer terms under certain conditions. *See Ex Parte* Letter from Edwin N. Lavergne, Counsel, Catholic Television Network and Todd D. Gray, Counsel, National ITFS Association to Marlene H. Dortch, Federal Communications Commission (dated Mar. 17, 2006) at 1.

⁶¹⁷ *Ex Parte* Letter from Edwin N. Lavergne, Counsel, Catholic Television Network and Todd D. Gray, Counsel, National ITFS Association to Marlene H. Dortch, Federal Communications Commission (dated Mar. 28, 2006) at 1-2.

⁶¹⁸ *Ex Parte* Letter from Edwin N. Lavergne, Counsel, Catholic Television Network and Todd D. Gray, Counsel, National ITFS Association to Marlene H. Dortch, Federal Communications Commission (dated Mar. 17, 2006) at 1-2.

⁶¹⁹ *Id.* at 1-2.

⁶²⁰ *Id.* at 2.

⁶²¹ *Id.*

⁶²² *Ex Parte* Letter from Edwin N. Lavergne, Counsel to the Catholic Television Network and Paul Sinderbrand, Counsel to WCA to Marlene H. Dortch, Federal Communications Commission (dated Apr. 5, 2006) at 1 (*WCA/CTN April 5 Ex Parte*). Before WCA reached an agreement with CTN on April 5, 2006, WCA had (continued....)

“grandfather” all leases that complied with applicable lease terms limits, including automatic renewal provisions, in effect at the time in which they were entered.⁶²³

258. Madison Dearborn Partners, Inc., a private equity investment firm, states that if the Commission imposes a lease term limit of less than 30 or 40 years or includes provisions that require periodic re-assessment of the lease terms as a condition to long-term leases, insufficient capital will flow to businesses that want to develop EBS spectrum for intensive broadband use.⁶²⁴ Madison Dearborn Partners further states that proposals to “re-evaluate” the terms and conditions of a lease at periodic intervals after an initial 15-year term are not different from a lease with an abbreviated term.⁶²⁵

259. Several schools and universities have written that as long as they continue to meet the educational needs of their students and remain in compliance with the Commission’s rules, they do not believe that a regulatory restriction on lease terms is necessary.⁶²⁶ These licensees insist that they have substantial experience with leasing their excess capacity and can decide for themselves the type of lease that meets the needs of their individual institutions.⁶²⁷ Moreover, they note that during lease negotiations with commercial operators they have learned that spectrum lessees are willing to pay considerably more for a longer lease because it gives the commercial lessee greater certainty that they will realize a return on their substantial investment in constructing wireless broadband facilities.⁶²⁸ They argue that long-term leases provide a “win-win” for both sides: the higher lease payments advance their educational mission, while the longer lease term enable the lessee to develop a viable business model for its broadband service.⁶²⁹ HITN argues that limiting the maximum duration of usage by a commercial operator will

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advocated that the Commission apply the Secondary Markets rules and policies to EBS leases. *See* WCA PFR Opposition at 31. During the course of the proceeding WCA had submitted economic analyses supporting their original position. *See Ex Parte* Letter from Paul Sinderbrand, Counsel to WCA to Marlene H. Dortch, Federal Communications Commission (dated Feb. 17, 2006), attachment “Phoenix Center Policy Bulletin No. 15.” *See also Ex Parte* Letter from Paul Sinderbrand, Counsel to WCA to Marlene H. Dortch, Federal Communications Commission (dated Mar. 10, 2006), attachment “Declaration of Dr. Michael D. Pelcovits.”

⁶²³ *Ex Parte* Letter from Terri B. Natoli, Clearwire to Marlene H. Dortch, Federal Communications Commission (dated Apr. 4, 2006) at 1.

⁶²⁴ *Ex Parte* Letter from James N. Perry, Jr., Managing Director for Madison Dearborn Partners, LLC to Marlene H. Dortch, Federal Communications Commission (dated Mar. 31, 2006) at 1.

⁶²⁵ *Id.*

⁶²⁶ *Ex Parte* Letter from Kemp R. Harshman, President to Clarendon Foundation to Marlene H. Dortch, Federal Communications Commission (dated Dec. 5, 2005) at 1 (Clarendon Foundation *Ex Parte*). The following schools, universities, and religious institutions have submitted letters requesting that the Commission not limit EBS lease terms: Concordia University; Diocese of Rockville Centre; Pearsall Independent School District; School District of Clay County; HITN; Patoka Community Unit School District No. 100; Morrisonville C.U.S.D. #1; Abilene Christian University; Evangeline Parish Schools; Diocese of Lafayette; Dana College; Heritage Church & Christian Academy; and Franciscan Canticle, Inc.

⁶²⁷ *Ex Parte* Letter from Father Jim Vlaun, President & CEO to Diocesan Television Operations (Diocese of Rockville Centre) to Marlene H. Dortch, Federal Communications Commission (dated Dec. 6, 2005) at 1 (Rockville Centre *Ex Parte*).

⁶²⁸ *Id.*

create further uncertainty for an industry that is attempting to achieve long term use of EBS spectrum to deliver new and innovative services to consumers, as well as non-profit and educational users.⁶³⁰

260. George Mason University Instructional Foundation, Inc. (GMUIF), an operator of one of the most extensive 2.5 GHz systems in the United States, operating since 1981, strongly opposes the proposals by CTN and NIA to restrict the maximum permissible term of EBS spectrum leases.⁶³¹ GMUIF argues that the overwhelming majority of EBS licensees in the United States would not be able to provide any educational service without the financial and operational support generated through excess capacity leasing.⁶³² GMUIF further argues that there is no evidence that a mandated maximum lease term of less than 30 years, or of 30 years with Commission imposed restrictions, will attract the billions of dollars in capital needed to roll out new broadband services at 2.5 GHz.⁶³³ GMUIF encourages CTN and NIA to launch a campaign to educate their constituents about leasing issues such as the need to consider future needs when negotiating spectrum lease agreements.⁶³⁴

261. NextWave Broadband Inc. (NextWave) argues that the Commission should continue to apply the Secondary Markets rules and policies to EBS leases and that the adoption of other rules applicable to EBS leases would create uncertainty in the EBS leasing marketplace.⁶³⁵ Contrary to the arguments of CTN and NIA, NextWave maintains that allowing flexible, secondary markets leasing for EBS spectrum is not equivalent to a sale or a reallocation of spectrum for a commercial purpose because only educators can be licensed on EBS spectrum.⁶³⁶ Moreover, NextWave continues, as the Commission indicated in the *Secondary Markets Order*, the Commission does not consider *de facto* spectrum leases as outright purchases.⁶³⁷ NextWave also argues that there has been no 15-year lease limitation since January 10, 2005, when the Secondary Markets rules became effective for EBS leases and that it would be unconstitutional to impose new EBS lease term limitations on previously approved EBS lease agreements.⁶³⁸

262. The School District of Clay County and the Heritage Baptist Church & Christian

(Continued from previous page) _____

⁶²⁹ Rockville Centre *Ex Parte* at 1.

⁶³⁰ *Ex Parte* Letter from Rudolph J. Geist, Counsel to HITN to Marlene H. Dortch, Federal Communications Commission (dated Dec. 16, 2005) at 1.

⁶³¹ *Ex Parte* Letter from Michael R. Kelley, Ph.D., President of George Mason University Instructional Foundation, Inc. to Marlene H. Dortch, Federal Communications Commission (filed Mar. 30, 2006) at 1.

⁶³² *Id.*

⁶³³ *Id.* at 2.

⁶³⁴ *Id.* at 2-3.

⁶³⁵ *Ex Parte* Letter from George Alex, Chief Financial Officer to NextWave Broadband Inc. to Marlene H. Dortch, Federal Communications Commission (filed Apr. 3, 2006) at 1.

⁶³⁶ *Id.* at 2.

⁶³⁷ *Id.*

⁶³⁸ *Id.* at 1.

Academy note that they have entered into leases with commercial operators that are longer than 15 years.⁶³⁹ They indicate that they are permitted to do so under the Commission's Secondary Markets rules governing *de facto* leasing, which they say, permits spectrum leasing parties to extend the spectrum leasing arrangement beyond the term of the license authorization if the license is renewed.⁶⁴⁰

263. BellSouth also urges the Commission to reject the efforts to revive the fifteen-year limit on EBS leases,⁶⁴¹ noting that, in 1998, the Commission, in extending the maximum lease term from ten to fifteen years, acknowledged that a longer lease term would help place wireless cable on a more equal footing with its competitors, and that EBS licensees would gain greater certainty from the assurance of long-term, stable maintenance and operational support offered by a longer lease term.⁶⁴² Luxon argues that restricting the lease term would contravene the Commission's recent decisions promoting flexibility and market-based transactions, and would require the Commission to expend unnecessary administrative resources to supervise individual EBS leasing relationships.⁶⁴³

264. Nextel argues that there is no legitimate rationale for a regulatory prohibition against automatic renewal provisions.⁶⁴⁴ Nextel maintains that the Commission should not presume that EBS licensees are incapable of protecting their own interests and that an across-the-board regulatory prohibition is preferable to individual marketplace negotiations.⁶⁴⁵ Nextel states that the Commission can help encourage this large investment and the resulting new and innovative services by allowing parties to negotiate renewal terms in EBS leases, which flexibility will allow lessees to bargain for extended leases that will provide certainty and help justify the capital investment they will be making, as well as providing regulatory parity.⁶⁴⁶ Sprint Nextel argues that the Commission should ensure regulatory parity between EBS licensees and other licensees subject to the *Secondary Markets Order*.⁶⁴⁷

265. In response to these oppositions to its proposal, IMWED argues that these attacks are an

⁶³⁹ *Ex Parte* Letter from Alisa Jones, Supervisor of Instructional Support Services to Clay County School District to Marlene H. Dortch, Federal Communications Commission (filed Feb. 3, 2006) at 1 (Clay County *Ex Parte*). *Ex Parte* Letter from Melisse S. Kager, Principal to Baptist Church & Christian Academy to Marlene H. Dortch, Federal Communications Commission (filed Feb. 3, 2006) at 1 (Baptist Church & Christian Academy *Ex Parte*).

⁶⁴⁰ Clay County *Ex Parte* at 2 and n. 6. Baptist Church & Christian Academy *Ex Parte* at 2 and n. 6. Both citing Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Second Report and Order, Order on Reconsideration and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd. 17503, 17572 at ¶ 151 (2004) (*Secondary Markets Second Report and Order*).

⁶⁴¹ BellSouth PFR Opposition at 11.

⁶⁴² BellSouth PFR Opposition at 11, citing *Two-Way Order* at 19183.

⁶⁴³ Luxon PFR Opposition at 3, citing *Secondary Markets Order*.

⁶⁴⁴ Nextel PFR Opposition at 18.

⁶⁴⁵ *Id.*

⁶⁴⁶ *Id.* at 19.

⁶⁴⁷ *Ex Parte* Letter from Lawrence R. Krevor, Vice President to Sprint Nextel to Marlene H. Dortch, Federal Communications Commission, Attachment at 1. (dated Dec. 5, 2005).

indication that the industry plans to use leasing practices to marginalize education in the 2.5 GHz band – in effect to obtain a *de facto* ownership through leasing – though the public interest mandates that EBS be preserved as an educational service.⁶⁴⁸ In opposition to WCA’s contention that IMWED seeks Commission micro-management of the EBS service, IMWED states that it asks the Commission to impose concrete requirements and to maintain public data about what the Commission’s rules identify as the primary purpose of the EBS service.⁶⁴⁹ IMWED notes that the Commission has long limited the length of EBS (formerly ITFS) excess capacity lease terms, and maintains that although EBS is being transformed through the advent of wireless broadband, the service has a long history of regulation that supports its educational mission, as well as a continuing obligation to deliver educational service.⁶⁵⁰ Accordingly, maintains IMWED, standard Secondary Markets procedures are inadequate as they pertain to EBS.⁶⁵¹ IMWED believes that it would be helpful, though not absolutely necessary, to include a 15-year limit in the EBS rules, but that in light of the record in this proceeding, the Commission must make an unambiguous policy statement that the limit continues to apply.⁶⁵²

266. *Discussion.* The comments we have received on this issue demonstrate the need to clarify the Commission’s intentions as they relate to the length of EBS leases and the validity of automatic renewal provisions in such leases. First, as CTN and NIA correctly point out, in paragraph 180 of the *BRS/EBS R&O*, the Commission concluded that leases entered into prior to the effective date of the new EBS rules would be grandfathered under the then-existing EBS leasing framework, thus, such leases would be subject to the existing 15-year lease limitation.

267. With the exceptions noted below, spectrum leasing arrangements entered into after the effective date of the new EBS rules, however, are subject to the Commission’s Secondary Markets rules. With respect to the Secondary Markets rules, we must distinguish between restrictions on the terms in any lease agreement between the parties, and the length of any spectrum leasing arrangement that the licensee and spectrum lessee have filed with Commission under our Part 1 rules. Under our Secondary Markets rules and policies, “no spectrum manager lease notification or *de facto* transfer lease application can propose a lease term that extends beyond the term of the license authorization itself.”⁶⁵³ This limitation is necessary “because spectrum lessees cannot have any greater right to the use of licensed spectrum than the licensee.”⁶⁵⁴ We see no reason to depart from this rule here because the Commission’s interest in making sure that spectrum lessees do not acquire greater rights than the licensee is fully applicable in EBS. On the other hand, our Secondary Markets rules and policies ordinarily do not restrict the parties’ ability to enter into a lease agreement with a term longer than the license term, so long as the license is renewed.⁶⁵⁵ Based upon the record, we must determine whether to establish a rule that limits the term of

⁶⁴⁸ IMWED PFR Reply at 4.

⁶⁴⁹ *Id.*

⁶⁵⁰ *Id.* at 5-8.

⁶⁵¹ *Id.* at 8.

⁶⁵² *Id.*

⁶⁵³ *Secondary Markets Second Report and Order*, 19 FCC Rcd at 17572 ¶ 151.

⁶⁵⁴ *Id.*

⁶⁵⁵ *Id.*

any lease contract entered into by an EBS licensee.

268. After further consideration, we conclude that EBS licensees may enter into a lease with a maximum term of thirty years, subject to conditions designed to ensure that EBS licensees have a fair opportunity to re-evaluate their educational needs. We are persuaded by the analyses presented by commenters indicating the difficulty that commercial lessees may have in obtaining financing if leases are limited to a shorter duration. We agree with WCA and CTN, however, that EBS licensees must have a mechanism to ensure that their educational, technological, and spectrum needs are being met. Therefore, we adopt a requirement for all EBS leases with a term of fifteen years or longer to include a right to review the educational use requirements of their leases every five years starting at year fifteen of the lease agreement. We agree with WCA and CTN that a spectrum leasing arrangement may include any mutually agreeable terms designed to accommodate changes in the EBS licensee's educational use requirements and the commercial lessee's wireless broadband operations.⁶⁵⁶

269. With regard to EBS leases entered into between the effective date of the existing BRS/EBS rules (January 10, 2005) and the effective date of the amended rules adopted today, however, we clarify those leases were governed by the Secondary Markets rules and policies that did not restrict the parties' ability to have lease agreements with terms longer than the license term. Thus, the length of EBS leases entered into between January 10, 2005 and the effective date of the amended rules adopted today was not limited under the Commission's Rules.

270. Although we will not permit automatic renewal of an EBS lease beyond 30 years, we will maintain the Commission's existing policy of allowing EBS licensees to afford lessees a right of first refusal, as well as allowing agreements to grant the EBS licensee (but not a lessee) the unilateral right to extend a lease. That is, at the end of any particular EBS lease term, the EBS licensee must retain the ability to re-evaluate the use of their licensed spectrum to identify new educational uses, and to renegotiate such leases as they relate to the licensee's current needs. We agree with IMWED that EBS licensees' educational needs change over time, and thus, leasing arrangements that result in automatic renewals eliminate the flexibility needed to respond to changing circumstances. Conversely, we disagree with commenters like WCA and Nextel who believe that marketplace negotiations that result in automatic renewal provisions are preferable and will help encourage investment and services.⁶⁵⁷ Although the Commission does generally encourage marketplace negotiations and solutions, the unique nature of EBS, as well its importance, must not be overlooked here. The Commission has taken numerous steps to increase the flexibility of EBS licensees because such flexibility is crucial to ensuring that the educational mission is accomplished, and we believe that any action that can perpetually bind an EBS licensee to an agreement that might cease to serve its interests, without the opportunity to renegotiate the terms thereof, would be seriously detrimental to the educational mission. Thus, for all EBS leases, we continue to permit renewal options or rights of first refusal for lessees, while prohibiting automatic renewal provisions that do not afford licensees the opportunity to renegotiate their leases at the end of the lease term.

d. Other Leasing Issues

271. *Background.* CTN/NIA points out that our new rules do not correctly incorporate the

⁶⁵⁶ WCA/CTN April 5 Ex Parte.

⁶⁵⁷ Nextel PFR Opposition at 19; WCA PFR Opposition at 30-31.

Commission's policy regarding the acquisition of equipment at the end of the lease.⁶⁵⁸ Specifically, CTN/NIA notes that new Section 27.1214(c) only affords EBS licensees the right to purchase or lease EBS equipment in the event that the spectrum leasing arrangement is terminated as a result of action by the spectrum lessee while the Commission's actual policy on equipment recapture for EBS licensees is much more expansive and applicable to both dedicated and common equipment. C&W, DBC, and WDBS oppose mandating in EBS excess capacity leases a provision for an option to purchase equipment upon termination of a lease.⁶⁵⁹ Likewise, WCA strenuously opposes expansion of the circumstances under which a lessee must sell equipment to the lessor upon conclusion of the leasing relationship.⁶⁶⁰

272. *Discussion.* We agree with CTN/NIA that, as currently written, our rules do not accurately reflect the Commission's established policy with regard to an EBS licensee's right to purchase or lease equipment at the end of the lease. In 1993, the Commission held that EBS leases must include a provision that affords EBS licensees the right to purchase or lease EBS equipment in the event that the spectrum leasing arrangement is terminated as a result of action by the spectrum lessee.⁶⁶¹ Five years later, in the *Two-Way Order*, the Commission expanded that holding to afford EBS licensees the right to access all equipment necessary for continued distribution of its signal consistent with that during the lease term.⁶⁶² This policy has remained in effect since that time. We continue to believe, as stated in the *Two-Way Order*, that such a policy is necessary to ensure that service over the licensee's system is not interrupted in the event that the leasing relationship should end. Furthermore, the Commission's failure to codify this long-standing policy in Section 27.1214(c) was merely an oversight and was not a deliberate attempt to retreat from this policy. Therefore, we will amend Section 27.1214(c) to reflect that EBS licensees retain the right to purchase or lease dedicated or common equipment regardless of whether the relationship terminates as a result of action by the lessee.

273. CTN and NIA note that two of the EBS substantive use requirements, (iv) and (v) listed above and which the Commission indicated in the *BRS/EBS R&O* apply to EBS leases, are not appropriate under the *de facto* transfer model.⁶⁶³ CTN and NIA explain that EBS licensees may not want to retain responsibility for compliance with rules regarding station construction and operation.⁶⁶⁴ Moreover, CTN and NIA explain, an EBS licensee may not want to have all station modification applications submitted through the EBS licensee, particularly for leased capacity that under the new band plan would be used for low-power cellularized two-way services.⁶⁶⁵ We agree with CTN and NIA that

⁶⁵⁸ CTN/NIA PFR at 20.

⁶⁵⁹ C&W PFR Reply at 5-6; DBC PFR Reply at 3-4; WDBS PFR Reply at 5.

⁶⁶⁰ WCA PFR Opposition at 31.

⁶⁶¹ See *Turner Independent School District*, 8 FCC Rcd 3153, 3155 (1993).

⁶⁶² *Two-Way Order*, 13 FCC Rcd at 19178.

⁶⁶³ CTN/NIA PFR at 20-21. Substantive use number (iv) states "that the ITFS licensee must retain responsibility for compliance with FCC rules regarding station construction and operation" and substantive use requirement (v) states that "only the ITFS licensee can file FCC applications for modifications to its station's facilities," See *supra* ¶ 243 for a list of the EBS substantive use requirements.

⁶⁶⁴ CTN/NIA PFR at 21.

⁶⁶⁵ *Id.* at 21.

substantive use requirements (iv) and (v) are not applicable to *de facto* transfer of EBS leases for the reasons cited by CTN and NIA. Also, as recommended by CTN and NIA, we amend Section 27.1214(b) of our rules to reflect that EBS stations in the two-way data environment may not always be used for in-classroom instruction.⁶⁶⁶ Thus, as recommended by CTN and NIA, we amend the first sentence of Section 27.1214(b)(1) to indicate that EBS licensees must reserve a minimum of 5 percent of the capacity of its channels for educational uses consistent with Sections 27.1203(b) and (c) of our rules.

C. BRS/EBS Second Report and Order

1. Performance Requirements

a. Use of Substantial Service

274. *Background.* In the *NPRM*, the Commission sought comment on what performance requirements should be applicable to MDS BTA authorization holders and site-based MDS and ITFS licensees.⁶⁶⁷ In the *FNPRM*, the Commission tentatively concluded that it would adopt substantial service requirements for BRS and EBS,⁶⁶⁸ but it sought comment on specific safe harbors that would satisfy the substantial service requirements tentatively adopted for BRS and EBS services.⁶⁶⁹

275. WCA, C&W, Pace, DBC, WDBS, Sprint, and SpeedNet support the adoption of substantial service performance requirements and safe harbors as used in Part 27 for other wireless services.⁶⁷⁰ Clearwire, on the other hand, suggests that the former MDS build-out standard, contained at former Section 21.930 of the rules, could form a basis for future performance requirements. That rule provided that “within five years of the grant of a BTA authorization, the authorization holder must construct MDS stations to provide signals... that are capable of reaching at least two-thirds of the population of the applicable service area.”⁶⁷¹ Clearwire takes the position that if coverage to two-thirds of the population was achievable under the former regulatory regime, then it should be achievable under the new regulatory regime.⁶⁷² Clearwire, however, suggests modifying this standard to specify that the signal must be of a quality that can provide reliable broadband service.⁶⁷³ Clearwire reasons that otherwise a licensee could meet its construction requirement simply by erecting a tower or installing equipment that may not be strong enough to provide “sound, favorable, and substantially above mediocre” service to

⁶⁶⁶ *Id.* at 20 n.37.

⁶⁶⁷ See *NPRM*, 18 FCC Rcd 6722, 6799-6804 ¶¶ 190-198.

⁶⁶⁸ *FNPRM*, 19 FCC Rcd 14165, 14283 ¶ 321.

⁶⁶⁹ See *FNPRM*, 19 FCC Rcd 14165, 14282-14283 ¶ 321.

⁶⁷⁰ WCA Comments at 2-3; C&W Comments at 2; Pace Comments at 2; DBC Comments at 2; WDBS Comments at 2; Sprint Comments at 7; SpeedNet Comments at 2. See also BloostonLaw Reply Comments at 2-3

⁶⁷¹ 47 C.F.R. § 21.930(c)(1).

⁶⁷² Clearwire Comments at 15.

⁶⁷³ *Id.* at 17.

subscribers.⁶⁷⁴

276. *Discussion.* We believe that construction benchmarks focusing solely on population served or geography covered may not necessarily reflect the most important underlying goal of ensuring public access to quality, widespread service.⁶⁷⁵ This, however, should not be interpreted to suggest that build out requirements that follow fixed milestones are not an important tool in certain circumstances to ensure the public receives a requisite level of service. For example, in the *Sprint/Nextel Merger Order* the Commission deemed fixed milestones an appropriate tool to ensure service to the public. We reiterate that the conditions in the *Sprint/Nextel Merger Order* still apply to Sprint/Nextel in addition to our decision today to adopt a substantial service standard.⁶⁷⁶ Construction benchmarks focusing solely on population served or geography covered may not take into account qualitative factors important to end-users, such as reliability of service, and the availability of technologically sophisticated premium services.⁶⁷⁷ While it may be argued that market forces ensure a requisite level of quality in the services

⁶⁷⁴ *Id.* at 17.

⁶⁷⁵ See *NPRM*, 18 FCC Rcd 6722, 6803 ¶ 195 (“[F]ocusing solely on the population served via stations authorized pursuant to a particular license hardly tells the story as to whether the licensee is providing adequate service to the public.”). See also *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, Notice of Proposed Rulemaking*, 18 FCC Rcd 20802, 20820 ¶ 35 (2003) (*Rural NPRM*) (“[G]iven the unique characteristics and considerations inherent in constructing within rural areas, we believe that applying an inflexible construction standard that is based upon coverage of a requisite percentage of an area’s population may be an inappropriate measure of levels of rural construction.”).

⁶⁷⁶ See *Applications of Nextel Communications, Inc. and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations*, WT Docket No. 05-63, *Memorandum Opinion and Order*, 20 FCC Rcd 13967, 14028-14029, ¶¶ 163-166 (2005) (*Sprint/Nextel Merger Order*). We note that in the *Sprint/Nextel Merger Order* the Commission conditioned our grant of the Application on Sprint Nextel’s commitment to meet the following two milestones. “First, within four years from the effective date of [the *Sprint/Nextel Merger Order*], the merged company will offer service in the 2.5 GHz band to a population of no less than 15 million Americans. This deployment will include areas within a minimum of nine of the nation’s most populous 100 BTAs and at least one BTA less populous than the nation’s 200th most populous BTA. In these ten BTAs, the deployment will cover at least one-third of each BTA’s population. Second, within six years from the effective date of [the *Sprint/Nextel Merger Order*], the merged company will offer service in the 2.5 GHz band to at least 15 million more Americans in areas within a minimum of nine additional BTAs in the 100 most populous BTAs, and at least one additional BTA less populous than the nation’s 200th most populous BTA. In these additional ten BTAs, the deployment will cover at least one-third of each BTA’s population. Accordingly, based on the four and six year commitments, within six years of the effective date of this Order applicants will offer service in the 2.5 GHz band to at least 30 million American in at least 20 BTAs, at least two of which are rural communities outside of the nation’s top 200 most populous BTAs. The deployment in each of the twenty BTAs will cover at least one-third of each BTA’s population.” *Id.* at ¶¶ 164-166.

⁶⁷⁷ See, e.g., *Nextel Reply Comments to NPRM* at 15-16 (“[A] substantial service standard will provide licensees greater flexibility to determine how best to implement their business plans based on criteria demonstrating actual service to end users, rather than on a showing of whether a licensee passes a certain portion of the relevant population.”). See also, *Amendment of Parts 2 and 90 of the Commission’s Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, Second Report and Order*, 10 FCC Rcd 6884, 6898-6899 ¶ 41 (1995) (*900 MHz Second Report and Order*) (“We also conclude that a showing of “substantial service” is appropriate for 900 MHz because several current offerings in this band are cutting-edge niche services.”).

reaching consumers, this is not always the case. For this reason we sought input on factors that can be used as indicia to satisfy safe harbors under substantial service.⁶⁷⁸

277. In some instances, fixed construction requirements may not easily permit the Commission to measure the deployment of service by a licensee. As the Commission noted in the *FNPRM*, merely satisfying such benchmarks does not necessarily demonstrate adequate deployment in rural areas, to niche markets, or to discrete populations or regions with special needs.⁶⁷⁹ We believe that a standard based on substantial service is an alternative that may better be able to respond to these various concerns. We agree with commenters and believe that a shift towards a substantial service standard will help encourage licensees to provide the best possible service and avoid “construction...solely to meet regulatory requirements rather than market conditions.”⁶⁸⁰

278. We believe that establishing a substantial service standard with safe harbors will “ensure prompt delivery of service to rural areas, . . . prevent stockpiling or warehousing of spectrum by licensees or permittees, and . . . promote investment in and rapid deployment of new technologies and services.”⁶⁸¹ Additionally, substantial service will promote the availability of broadband to all Americans, including broadband technologies for educators. We also believe that substantial service will encourage the highest valued use of radio licenses and promote the economic viability of services in this band by ensuring that the spectrum is as fungible, tradable, and marketable as possible. Thus, in order to accomplish these goals, we believe a market-oriented approach to spectrum policy that utilizes a substantial service standard to meet build out requirements best ensures actual deployment of wireless facilities and broader provision of wireless services.⁶⁸² Economic forces will guide competing providers to innovate and broaden deployment of services. To this end, we believe that substantial service provides licensees flexibility “to tailor the use of their spectrum to unique business plans and needs.”⁶⁸³ We believe that establishing more flexible rules will result in ubiquitous, high-quality service to the public and at the same time encourage investment by increasing the value of licenses. Further, we believe flexible rules will make licensees more economically viable and will provide incumbents with reasonable opportunities to

⁶⁷⁸ See *FNPRM*, 19 FCC Rcd 14165, 14282-14283 ¶¶ 321- 323.

⁶⁷⁹ See *FNPRM* 19 FCC Rcd 14165, 14284 ¶ 324; see also *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, Report and Order and Further Notice of Proposed Rule Making*, 19 FCC Rcd 19078, 19118-19126 ¶¶ 73-74 (2004) (*Rural Order*); Coalition Proposal at 45.

⁶⁸⁰ SBC asserts that construction requirements “likely would result in the construction of facilities solely to meet regulatory requirements rather than market conditions,” possibly causing facilities to be “constructed inefficiently, and guided more by regulatory necessity than the need to provide least-cost service to consumers.” See SBC Reply Comments to *NPRM* at 11. SBC says the consequence would be unnecessarily high rates. See SBC Reply Comments at 11. Finally, SBC argues that fixed construction benchmarks would be inconsistent with the pro-competitive policies of the Act, handicapping new entrants into the broadband services market. See SBC Reply Comments to *NPRM* at 11. We acknowledge that one of our goals is to encourage competition in wireless broadband by creating new opportunities for new entrants. Thus, SBC supports a substantial service standard for these primary reasons. See SBC Reply Comments to *NPRM* at 12.

⁶⁸¹ 47 USC §309(j)(4)(B).

⁶⁸² See *Rural Order*, 19 FCC Rcd 19078, 19122 ¶¶ 77-78.

⁶⁸³ See *id.* at ¶ 76.

continue their current uses of the spectrum. Additionally, we believe flexible rules will also facilitate speedier transition and deployment in the band.

279. ““Substantial service” is defined in Part 27 of our rules as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.”⁶⁸⁴ The Commission has implemented substantial service requirements for other wireless services.⁶⁸⁵ By adopting a substantial service standard, with safe harbors, for BRS and EBS services we stabilize the regulatory treatment of similar spectrum-based services by creating regulatory parity between these services and other wireless services.⁶⁸⁶ “While the definition of substantial service is generally consistent among wireless services, the factors that the Commission will consider when determining if a license has met the standard vary among services.”⁶⁸⁷ As noted in the *FNPRM*, we believe that within a substantial service framework, refined measures may be adopted to suit any challenges that BRS and EBS licensees face in development and deployment,⁶⁸⁸ e.g., specific safe harbors for EBS licensees, or whether there should be rural-specific safe harbors within the substantial service framework to encourage rural build out.⁶⁸⁹

280. We disagree with Clearwire that the former Section 21.930 of the Commission’s rules provides a basis for BRS and EBS performance requirements. The former Mass Media Bureau recognized that there were difficulties in implementing and applying the standard, and those difficulties played a significant role in the decision to postpone the original 2001 deadline for demonstrating

⁶⁸⁴ 47 C.F.R. § 27.14(a).

⁶⁸⁵ See, e.g., *Rural NPRM*, 18 FCC Rcd 20802, 20819 ¶ 34 (“In more recently adopted rules for wireless services, such as our Part 27 rules for private services, Lower and Upper 700 MHz, 39 GHz, and 24 GHz, the Commission established the substantial service standard as the only construction requirement.”). See also Coalition Proposal at 44. (“There is ample precedent for [a substantial service] approach as the Commission has adopted this very same requirement for operation at 2.3 GHz, the Upper 700 MHz band, the Lower 700 MHz band, the paired 1392-1395 MHz and 1432-1435 MHz bands or the unpaired 1390-1392 MHz, 1670-1675 MHz and 2385-2390 MHz bands.”).

⁶⁸⁶ See *Rural Order*, 19 FCC Rcd 19078, 19122 ¶ 76; see also *24 GHz Report and Order*, 15 FCC Rcd 16934, 16951 ¶ 37.

⁶⁸⁷ See *Rural R&O*, 19 FCC Rcd 19078, 19118 ¶ 73. For example, in some wireless services, the Commission indicated that licensees providing niche, specialized, or technologically sophisticated services may be considered to be providing “substantial service.” See, e.g., Amendment to Parts 2 and 90 of the Commission’s Rules to Provide for the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and the 935-940 MHz Bands Allotted to the Specialized Mobile Radio Pool, PR Docket No. 89-553, *Second Report and Order*, 10 FCC Rcd 6884, 6898-99 ¶ 41 (1995). In other services, the Commission has indicated that licensees providing an offering that does not cover large geographic areas or population (e.g., point-to-point fixed service), but nonetheless provides a benefit to consumers, also may meet the standard. See, e.g., Amendment of Part 90 of the Commission’s Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, PR Docket No. 89-522, *Third Report and Order* and *Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 10943, 11017-18 ¶ 158 (1998). *Id.* at n. 226.

⁶⁸⁸ See *FNPRM*, 19 FCC Rcd 14165, 14283 ¶ 322.

⁶⁸⁹ See *id.* at 14287 ¶¶329-330.

substantial service.⁶⁹⁰ We also agree with the former Mass Media Bureau's observation that "it would be inequitable to require authorization holders to follow build-out criteria applicable to rules governing wireless cable operations since many of them are now providing high-speed broadband services."⁶⁹¹

b. Safe Harbors

281. WCA, C&W, Pace, DBC, WDBS, Sprint, and SpeedNet support the adoption of substantial service performance requirements and safe harbors as used in Part 27 of the rules for other wireless services.⁶⁹² BellSouth notes the Commission has established safe harbors for other fixed and mobile wireless services⁶⁹³ and that subsequent to the adoption of the *BRS/EBS R&O*, extended the application of substantial service to a number of other wireless services.⁶⁹⁴ BellSouth, among others,⁶⁹⁵ urges renewal of a license if one of the following safe harbors is met:

- Construction of four permanent links per one million people for licensees providing fixed point-to-point services;⁶⁹⁶

⁶⁹⁰ Mass Media Bureau Seeks Comment on Extension of the Five-Year Build-Out Period for BTA Authorization Holders in the Multipoint Distribution Service, DA 01-1072, *Public Notice*, 16 FCC Rcd 8884, (rel. April 25, 2001).

⁶⁹¹ *Id.*

⁶⁹² WCA Comments at 2-3; C&W Comments at 2; Pace Comments at 2; DBC Comments at 2; WDBS Comments at 2; Sprint Comments at 7; SpeedNet Comments at 2. *See also* BloostonLaw Reply Comments at 2-3.

⁶⁹³ BellSouth Comments at 5 citing [Amendment of Parts 2 and 25 of the Commission's rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9614 (2002) (*MVDDS Order*); Amendments to Parts 1, 2, 87 and 101 of the Commission's rules to License Fixed Services at 24 GHz, 15 FCC Rcd 16934 (2000) (*24 GHz Order*); 218-219 MHz *Flex Order*; Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0GHz Bands, *Report and Order and Second Notice of Proposed Rule Making*, 12 FCC Rcd 18600 (1997) (*39 GHz Order*); Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *Second Report and Order, Order on Reconsideration, and Fifth Notice of Proposed Rulemaking*, 12 FCC Rcd 12545 (1997) (*LMDS Order*); and Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), *Report and Order*, 12FCC Rcd 10785 (1997) (*WCS Order*)].

⁶⁹⁴ BellSouth Comments at 5 citing [Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services, *Report and Order and Further Notice of Proposed Rule Making*, 19 FCC Rcd 19078 (2004) (*Rural Order*) at ¶ 25 (applying "substantial service" standard, alongside existing service-specific construction benchmarks, to licensees in the 30 MHz broadband PCS, 800 MHz SMR (Blocks A, B and C), 220 MHz (with some exclusions), LMS and 700 MHz public safety services)].

⁶⁹⁵ *See, e.g.* BellSouth Comments at 3; BloostonLaw Reply Comments at 2-3; C&W Comments at 2; CTN/NIA Comments of at 7-8; Clearwire Comments at 12; Nextel Comments at 2; Sprint Comments at 5; WCA Comments at 2; Choice Reply Comments at 4.

⁶⁹⁶ *See, e.g., WCS Order*, 12 FCC Rcd 10785, 10844 ¶ 113; *LMDS Order*, 12 FCC Rcd 12545, 12660-61 ¶¶ 268-272; *MVDDS Order*, 17 FCC Rcd 9614, 9684-85 ¶¶ 176-77. *See also* BellSouth Comments at 6; WCA Comments at 8; Nextel Reply Comments at 4.

- Coverage of at least 20 percent of the population of the licensed area for licensees providing mobile services or fixed point-to-multipoint services;⁶⁹⁷
- Service to “rural areas” and areas with limited access to telecommunications services:
 - Where providing mobile service, coverage of at least 75% of the geographic area of at least 20% of the rural areas within its service area.
 - If providing fixed service, it has constructed at least one end of a permanent link in at least 20% of the rural areas within its licensed area;⁶⁹⁸
- Provision of specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers;⁶⁹⁹
- Service to niche markets or areas outside the areas served by other licensees;⁷⁰⁰ and
- Demonstration of other public interest reasons.⁷⁰¹

282. In contrast, Clearwire proposes that the Commission adopt a modified version of the former BTA build-out standard as a safe harbor where licensees are required to construct signals that can provide reliable broadband service and are capable of reaching at least two-thirds of the population in the applicable service area. Specifically, Clearwire proposes that “[w]ithin five years of the effective date of the *BRS/EBS R&O*, each authorization holder must construct EBS or BRS stations on each channel group subject to the authorization that will provide signals that are capable of providing reliable broadband service to two-thirds of the population in the geographic service area.” According to Clearwire, prior satisfaction of existing benchmarks (i.e., the build-out requirements of Section 21.930), should be counted for substantial service only if service continues into the next measurement period. It asserts that prior deployments that have been discontinued should not be counted as part of the substantial service demonstration at the relevant five-year measurement point as it would condone warehousing of spectrum.

283. Clearwire is opposed to the fixed (four permanent links per one million people)⁷⁰² and mobile (20 percent of the population of the licensed service area)⁷⁰³ standards supported by other commenters because Clearwire argues that they are too lenient, will not facilitate rapid deployment, and

⁶⁹⁷ See, e.g., *WCS Order*, 12 FCC Rcd at 10844 ¶ 113; *LMDS Order*, 12 FCC Rcd 12545, 12660-61 ¶¶ 268-272; Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order*, 15 FCC Rcd 1497, 1538 ¶ 70 (1999) (*218-219 MHz Order*). See also BellSouth Comments at 6; WCA Comments at 8; Nextel Reply Comments at 4.

⁶⁹⁸ WCA Comments at 9; Nextel Reply Comments at 4; BellSouth Reply Comments at 4. This safe harbor incorporates and quotes the definition recently adopted in the *Rural Order*. See *Rural Order*, 19 FCC Rcd 19078, 19123 ¶ 79.

⁶⁹⁹ See *WCS Order*, 12 FCC Rcd 10785, 10844, ¶ 113; *LMDS Order* at 12660 ¶ 270. See also BellSouth Comments at 7. IIT specifically supports this safe harbor. IIT Reply Comments at 12.

⁷⁰⁰ See *WCS Order*, 12 FCC Rcd 10785, 10844, ¶ 113; *LMDS Order* 12545, 12660 ¶ 270. See also BellSouth Comments at 8. IIT specifically supports this safe harbor. IIT Reply Comments at 12.

⁷⁰¹ BellSouth Comments at 10.

⁷⁰² See, e.g., *WCS Order*, 12 FCC Rcd 10785, 10844 ¶ 113; *LMDS Order*, 12 FCC Rcd 12545, 12660-61 ¶¶ 268-272; *MVDDS Order*, 17 FCC Rcd 9614, 9684-85 ¶¶ 176-77.

⁷⁰³ See, e.g., *WCS Order*, 12 FCC Rcd 10785, 10844 ¶ 113; *LMDS Order*, 12 FCC Rcd 12545, 12660-61 ¶ 268-272; *218-219 MHz Order*, 15 FCC Rcd 1497, 1538 ¶ 70.

are unjustifiably different from past standards.⁷⁰⁴ Clearwire also asserts that there is no justification for different standards for fixed and mobile services offered over EBS and BRS spectrum.⁷⁰⁵ Clearwire suggests that the Commission should consider the following factors in its substantial service analysis:

- whether the licensee’s operations serve niche markets, rural areas, discrete populations, remote areas and regions with special needs;
- whether the licensee serves those with limited access to telecommunications services;
- a demonstration that a significant portion of the population or land area of the licensed area is being served; and
- whether the licensee offers specialized or technologically sophisticated premium service that does not require a high level of coverage to benefit customers.⁷⁰⁶

284. WCA asserts that Clearwire is incorrect in asserting that a safe harbor based on fixed service links would be inappropriate because BRS and EBS spectrum will not be used to provide backbone support.⁷⁰⁷ WCA states that while Clearwire may not be contemplating use of BRS and EBS spectrum to interconnect base stations with each other and with a broader network, other system operators have expressed significant interest in the possibility within a variety of WCA forums and elsewhere.⁷⁰⁸ As such, WCA believes that the application to BRS and EBS of the fixed service safe harbor traditionally applied to other Part 27 flexible use services remains appropriate here.

285. IMLC asserts that the standard adopted must reflect that the industry has been in regulatory stasis since 2001, which has made it impossible for licensees to make effective use of the spectrum and that it will remain so until the transition process is complete.⁷⁰⁹ IMLC further asserts that the straightforward use of one link for 250,000 pops is problematic since in many cases spectrum will be used as part of a consolidated spectrum mélange of different licensees and different services.⁷¹⁰ IMLC

⁷⁰⁴ Clearwire Comments at 15.

⁷⁰⁵ *Id.*

⁷⁰⁶ Clearwire Comments at 19 citing [*WCS Order*, 12 FCC Rcd 10785, 10844 ¶ 113 (citations omitted) (“[T]he [FCC] may consider such factors as whether the licensee is offering a specialized or technologically sophisticated service that does not require a high level of coverage to be of benefit to customers, and whether the licensee’s operations serve niche markets or focus on serving populations outside of areas served by other licensees.”); *see also LMDS Order*, 12 FCC Rcd 12545, 12660-61 ¶¶ 21-24; Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS, 15 FCC Rcd 10456, 10470-71 ¶¶ 27-28 (2000) (*Narrowband PCS Order*); *Chasetel Licensee Corp.*, 17 FCC Rcd 9351, 9354-55 ¶¶ 8-11 (2002) (A substantial service showing may include the provision of residential, cutting-edge niche services to “campus” populations (business and educational) that are sparsely populated after normal school or work hours.); 47 C.F.R. § 101.1413(b) (Three factors to be considered in acting upon a substantial service showing are: (1) whether the licensee’s operations serve niche markets, rural areas, or those outside the service areas of other licensees; (2) whether the licensee serves those with limited access to telecommunications services; and (3) a demonstration that a significant portion of the population or land area of the licensed area is being served.)].

⁷⁰⁷ WCA Reply Comments at 7 citing (Clearwire Comments at 16 n.30).

⁷⁰⁸ WCA Reply Comments at 7.

⁷⁰⁹ WCA Comments at 10; IMLC Comments at 7.

⁷¹⁰ IMLC Comments at 7.

therefore suggests four touchstones for renewal expectancy if a licensee has:

- provided service for 20% of its license term;
- entered into a spectrum lease with an unaffiliated entity for 20% of its license term;
- provided service to one link per 250,000 pops;
- at the 10 year mark has constructed facilities providing coverage to 20% of the population of its potential service area.⁷¹¹

IMLC asserts the above standard must also apply proportionally to licensees who have not held their licenses for the full ten year license term.⁷¹²

286. *Discussion.* We agree with WCA, Bell South, and the other commenters that it is appropriate to use the type of safe harbors applied to other fixed and mobile services to BRS and EBS. Our new rules give licensees the flexibility to use these services to provide a wide variety of services. Consequently, we believe it is vital to establish safe harbors that encompass licensees' potentially disparate business and service deployment plans. We also believe, however, that it is appropriate to establish safe harbors that are predicated upon an appropriate showing by the licensee that it has made notable progress in deploying service. We agree with Clearwire that the traditional safe harbors associated with other Part 27 services are too lenient given the particular circumstances of BRS and EBS. The safe harbors we adopt today give licensees offering a variety of services ample opportunity to meet at least one safe harbor while ensuring that these frequencies are used to provide an appropriate level of service.

287. We believe that distinctive characteristics of this band support setting safe harbors for these services that are more stringent than those proposed by WCA, BellSouth and others. First, as noted below, licensees have approximately five years from the release of this item to demonstrate substantial service. Most of the existing licenses in the band were issued at least ten years ago, and proposals to reshape the band have been under discussion within the industry since at least 2002, when the Coalition developed the White Paper. Accordingly, we believe that licensees and/or their predecessors have had a more than adequate opportunity to develop plans for rapidly instituting service pursuant to our new rules.⁷¹³ We, therefore believe, that licensees should only be permitted to rely on a safe harbor to meet the substantial service requirement if they can show significant service deployment. We, therefore, adopt safe harbors that require licensees to make a stronger showing of service deployment than that proposed by WCA, BellSouth and others.

288. In determining the precise level of service to be required in order to meet a safe harbor, we must also ensure that we do not place an undue burden on licensees. These standards will apply to EBS licenses and small rural operators as well as large carriers. Furthermore, the past difficulties licensees have faced in this band do place some limit on the amount of service we can expect licensees to provide. We, therefore, agree with commenters that urge us to establish safe harbors that encompass

⁷¹¹ IMLC Comments at 7. BellSouth notes that at least two of IMLC's safe harbors differ from those proposed by it. However, BellSouth does not object to IMLC's touchstones so long as it also adopts the traditional Part 27 safe harbors put forth by BellSouth. BellSouth Reply at 4 n.10.

⁷¹² IMLC Comments at 8.

⁷¹³ Most of the BRS BTA authorizations were originally granted in 1996. The last window for filing new EBS authorizations was opened in 1995.

both fixed and mobile service deployments and recognize efforts to serve specialized or niche markets.⁷¹⁴ After full consideration of all the relevant factors, we adopt the following safe harbors:

- Constructing six permanent links per one million people for licensees providing fixed point-to-point services;
- Providing coverage of at least 30 percent of the population of the licensed area for licensees providing mobile services or fixed point-to-multipoint services;
- Providing specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers; or
- Providing service to niche markets or areas outside the areas served by other licensees.

289. Additionally, in an effort to provide maximum flexibility for licensees in satisfying the safe harbors, we agree with Sprint and BloostonLaw that a licensee will be deemed to satisfy a safe harbor through lease agreements when such arrangements satisfy the conditions set forth in the *Secondary Markets 2nd R&O*,⁷¹⁵ and the lessee is actually providing the level of service required by a licensee that would be deemed to satisfy one of the safe harbors that we adopt today for BRS/EBS licensees.⁷¹⁶

290. Finally, in response to WCA's and Clearwire's concern that the Commission does not plan to make substantial service determinations on a case by case basis, we explain how we expect the substantial service review process will work. If a licensee meets a safe harbor established by the Commission, we will deem the licensee to have offered substantial service with that license. If the licensee does not meet a safe harbor, we will review the showing on a case-by-case basis. We emphasize that a licensee will not be required to meet a safe harbor if it can otherwise demonstrate substantial service to the public. As recognized in the Commission's own precedent, the primary advantage of the substantial service standard is that it is tied to the individual circumstances of each licensee.⁷¹⁷ In general, there is broad support for the adoption of a substantial service performance standard that provides for case-by-case showings of substantial service coupled with safe harbors.⁷¹⁸

⁷¹⁴ We also note that "demonstration of other public interest reasons" as put forth by BellSouth is not a safe harbor that we adopt for satisfying the substantial service standard. Rather, demonstration of the public interest is a factor that we will consider when evaluating whether substantial service has been satisfied on a case-by-case basis.

⁷¹⁵ Sprint Comments at 8 citing (Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503 (2004) (*Secondary Markets 2nd R&O*); BloostonLaw Reply Comments at 4.

⁷¹⁶ See *infra* ¶¶ 308- 309.

⁷¹⁷ WCA Comments at 6; WCA Reply Comments at 8; See also NIA/CTN Comments at 9-10

⁷¹⁸ See, e.g., Sprint Comments at 5-10; WCA Comments at 2-17; CTN/NIA Comments at 7-10; BellSouth Comments at 5-15; Nextel Comments at 2-5; Grand Wireless at Comments 1; WDBS Comments at 2; DBC Comments at 2; Pace Comments at 2; C&W Comments at 2; SpeedNet Comments at 2.

c. Additional Safe Harbors for EBS Licensees

291. *Background.* CTN/NIA and IMWED propose an EBS licensee should be deemed to be providing substantial service if it satisfies either of the following two tests during the immediately preceding license period:

- Safe Harbor No. 1: An EBS licensee should be deemed to be providing substantial service with respect to all channels held by the licensee if:
 - it is using its spectrum (or spectrum to which the licensee's educational services are shifted) to provide educational services within the licensee's GSA;
 - the services provided by the licensee are actually being used to serve the educational mission of one or more accredited public or private schools, colleges or universities providing formal educational and cultural development to enrolled students; and
 - the level of service provided by the licensee meets or exceeds the minimum usage requirements specified in the Commission's rules;⁷¹⁹ or
- Safe Harbor No. 2: In situations where an EBS licensee leases its spectrum for commercial services and is otherwise in compliance with the Commission's rules (including the EBS programming requirements in Section 27.1203), the licensee should be deemed to be providing substantial service with respect to all channels held by the licensee (even if certain channels are not leased and/or certain channels are not actually used by the commercial system at the time of renewal) if the Commission finds that the wireless system operated by the commercial lessee is providing substantial service pursuant to the criteria applicable to commercial service providers.⁷²⁰

In general, BellSouth supports the additional flexibility above for EBS as does WCA, EBS Parties,⁷²¹ and IIT.⁷²²

292. *Discussion.* We agree with the commenters and believe that EBS licensees should be given additional flexibility to satisfy the substantial service standard. With respect to the first safe harbor proposed by CTN and NIA, we believe that this safe harbor properly takes into account the special circumstances EBS licensees and provides EBS licensees with flexibility while ensuring that they are providing educational services. With respect to the second safe harbor proposed by CTN and NIA, we

⁷¹⁹ CTN/NIA Comments at 9; IMWED Comments at 7-8.

⁷²⁰ CTN/NIA Comments at 9; IMWED Comments at 7-8.

⁷²¹ A group of over forty public and private colleges, universities and university systems, state and county boards or offices of education, school districts, community colleges, consortia of educators engaged in distance learning, public broadcasters, and governmental or non-profit educational telecommunications entities.

⁷²² BellSouth Reply Comments at 5 n.12. BellSouth, notes however, IMWED claims that the "common wireless performance requirements. . . are inapposite for EBS." IMWED Comments at 6. BellSouth opines that to the extent that IMWED's proposal can be construed to mean that the traditional safe harbors should not apply to EBS, it disagrees with this position. *See also* WCA Reply Comments at 13 and ¶ 296 *infra*; EBS Parties Reply Comments at 3; IIT Reply Comments at 11.

have established above that both EBS and BRS licensees have the flexibility to meet the substantial service standard through leasing.⁷²³ In light of this, we agree that EBS licensees can meet the substantial service standard through leasing but we decline to adopt CTN's and NIA's second safe harbor proposal that a lease agreement can be used to meet a safe harbor standard on a system-wide basis regardless of the number of channels leased or in use. As discussed in greater detail below, we apply the safe harbors to both BRS and EBS licensees on a license-by-license basis.⁷²⁴

d. Service to Rural Areas

293. *Background.* With respect to safe harbors for rural areas, Grand Wireless believes it would be reasonable for the Commission to adopt rural definitions already established by the Rural Utilities Service (RUS).⁷²⁵ C&W, Pace, and WCA believe the new safe harbors set forth in the *Rural NPRM* should also be used.⁷²⁶ Choice urges the Commission to extend the rural safe harbors to remote and underserved areas, such as the Virgin Islands.⁷²⁷ Gila River Telecommunications Inc (GRTI) proposes reversing the rural safe harbors and believes substantial service standards should be service of 50%, as compared to 75%, of the geographic area of at least 20% of the rural counties within its licensed area.⁷²⁸ GRTI argues that buildout of the proposed 75% recommendation would create financial hardships, and the 50% threshold is more representative of those entities and tribal inhabitants of such areas who can likely pay for wireless broadband or advanced wireless services.⁷²⁹ BellSouth does not object to adoption of this standard for "rural areas" or for tribal lands such as those GRTI serves. BellSouth, however, further explains that because the Commission now has a definition of "rural area," it does not make sense to use the more restrictive definition used by the RUS, as suggested by Grand Wireless.⁷³⁰ Nextel sees no reason for the Commission to adjust its standard Part 27 safe harbors and thus argues the Commission should not adopt GRTI's proposal.⁷³¹

294. *Discussion.* We agree with BellSouth and adopt the definition of "rural area" used in the

⁷²³ See *supra* ¶ 289.

⁷²⁴ See *infra* ¶¶ 295-298 for a discussion of applying substantial service on a per license, per channel group, or per system basis.

⁷²⁵ Grand Wireless Comments at 2.

⁷²⁶ C&W Comments at 2; Pace Comments at 2; WCA Comments at 9.

⁷²⁷ Choice Reply Comments at 5.

⁷²⁸ GRTI Comments at 4.

⁷²⁹ GRTI Comments at 4. BellSouth does not object to adoption of this standard for "rural areas" or for tribal lands such as those GRTI serves. BellSouth argues that because the Commission now has a definition of "rural area," it does not make sense to use the more restrictive definition used by the Rural Utilities Service, as suggested by Grand Wireless. See Grand Wireless Comments at 2.

⁷³⁰ BellSouth Reply Comments at 4 n.9. WCA takes the position that to the extent that Gila River is proposing that this change apply to rural counties that include tribal lands, WCA has not objection to adoption of Gila's proposal. See also See Grand Wireless Comments at 2.

⁷³¹ Nextel Reply Comments at 5 n.13.

Rural Order for BRS/EBS. The Commission in the *Rural Order* established a baseline definition of “rural area” as those counties (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data.⁷³² We conclude that this standard is appropriate for these services. For the reasons mentioned above with respect to general safe harbors, we believe it is appropriate to impose more stringent requirements than those proposed by WCA, BellSouth and others on BRS and EBS licensees that seek to take advantage of a safe harbor. We therefore adopt modified versions of the safe harbors adopted by the Commission in the *Rural Order*.⁷³³ Specifically, we adopt the following safe harbors:

- Providing service to “rural areas” (a county (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data) and areas with limited access to telecommunications services:
 - For mobile service, where coverage is provided to at least 75% of the geographic area of at least 30% of the rural areas within its service area; or
 - For fixed service, where the BRS or EBS licensee has constructed at least one end of a permanent link in at least 30% of the rural areas within its licensed area.

e. Demonstration of Substantial Service – Per License vs. Per Channel Group v. System wide

295. *Background.* BellSouth, Sprint, Nextel, WCA, DBC, among others, all are in favor of a finding of substantial service where any licensee on the system provided substantial service.⁷³⁴ According to BellSouth, this would acknowledge that:

- "operators are likely to utilize BRS and EBS channels from various sources within a given market;"⁷³⁵
- “[m]easuring substantial service on a per call sign or per channel basis may also result in a finding that a licensee has not diligently deployed service when, in fact, a large number of consumers in a given geographic area have access to the service the licensee offers.”⁷³⁶
- Some licensed spectrum may be used as "guardband to shield other BRS and EBS licensees on the system from interference."⁷³⁷
- An operator may not have a "current use" for all channels and may desire to set aside spectrum

⁷³² See *Rural Order*, 19 FCC Rcd 19078, 19085-19088 ¶¶ 9-12.

⁷³³ See *Rural R&O*, 19 FCC Rcd 19078, 19123 ¶ 79.

⁷³⁴ BellSouth Comments at 14-15; Nextel Comments at 4; Sprint Comments at 8-9; DBC Reply Comments at 2. BellSouth points out that both the Nextel and Sprint refer to a multi-channel system, when in fact BellSouth believes that Nextel and Sprint mean multi-license system because most licenses cover multiple channels and some H authorizations may cover only one channel. BellSouth Reply Comments at 7 n. 26.

⁷³⁵ Sprint Comments at 8-9.

⁷³⁶ Nextel Comments at 5.

⁷³⁷ BellSouth Comments at 14; See also WCA Comments at 11-12.

for future growth.⁷³⁸

BellSouth asserts that these examples are illustrative of why the Commission should review substantial service on a market-wide basis rather than simply looking at the services provided by a single licensee.⁷³⁹ Clearwire, on the other hand, argues that the substantial service standard should be applied on a per channel group basis, as opposed to system wide.⁷⁴⁰

296. WCA, among others, asserts that Clearwire's proposal that the Commission require substantial service to be evaluated on a channel group-by-channel group basis is flawed.⁷⁴¹ WCA, Sprint, Nextel, among others, proposed in response to the *FNPRM* that the Commission establish a safe harbor that would deem any call sign to have provided substantial service if the licensee demonstrates that its spectrum is licensed to or leased by the operator of a multichannel system comprising spectrum licensed under multiple call signs and the multichannel system, taken as a whole, satisfies the substantial service test or any safe harbor related thereto.⁷⁴² Sprint states that "in putting their systems together, operators are likely to utilize BRS and EBS channels from various sources within a given market, and may be required in some circumstances to utilize some of this licensed spectrum as guard bands or as reserve to meet future expansion. Assessing performance compliance upon the individual channels that make up the system, thus, may not tell the story of whether the channel is being utilized to provide service."⁷⁴³ WCA further points out that the Commission has recognized that where spectrum lays unused, there is a significant opportunity cost imposed on the licensee.⁷⁴⁴ WCA argues the Commission should focus on the overall service that a system is providing, continue its long-standing view that "market forces, not government regulation, will ensure the provision of services to the public" and retain licensee flexibility rather than force licensees to respond to an artificial channel usage requirement.⁷⁴⁵

⁷³⁸ BellSouth Comments at 14; *See also* WCA Comments at 12-13.

⁷³⁹ BellSouth Reply Comments at 8.

⁷⁴⁰ Clearwire Comments at 18.

⁷⁴¹ Clearwire Comments at 12. Additionally, WCA, Nextel, and Sprint also argue that that similarly flawed is the proposal by DBC for the Commission to require a separate substantial service evaluation for each MBS. *See* ¶ 302 *infra*. WCA states DBC's proposal is particularly harsh because of the substantial challenges that many licensees will face in putting their MBS channels to productive use for cellular technology given that high-power, high-site applications can continue in the MBS. WCA further notes the Commission has recognized in refusing to impose channel-by-channel performance requirements in other contexts, licensees will have every economic incentive to make the best use of their MBS channels, whether by using them directly or by leasing them in the secondary market to DBC or others. *See* Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, *Memorandum Opinion and Order and Order on Reconsideration*, 14 FCC Rcd 17556, 17568 (1999) (*800 MHz MO&O*). *See* WCA Comments at 12 n.28; Nextel Reply Comments at 7 n.17; Sprint Reply Comments at 7 n.20.

⁷⁴² WCA Comments at 11-13. *See also* Sprint Comments at 8-9; Nextel Comments at 5; Nextel Reply Comments at 3; BellSouth Comments at 14-15; IMLC Reply Comments at 4.

⁷⁴³ Sprint Comments at 8-9.

⁷⁴⁴ WCA Reply Comments at 12 n.30 citing (*800 MHz MO&O*, 14 FCC Rcd 17556, 17568).

⁷⁴⁵ WCA Reply Comments at 13 n.32 citing (*800 MHz MO&O*, 14 FCC Rcd 17556, 17568).

297. *Discussion.* We conclude that substantial service should be individually demonstrated for each license. We believe that requiring demonstration of substantial service on a per license basis best prevents spectrum warehousing and will help to ensure actual deployment of wireless facilities and broader provision of wireless services.⁷⁴⁶ A licensee that holds several licenses will have to demonstrate substantial service for each license. To the extent that each license is an essential part of a system that is providing service, each licensee should be able to make a substantial service showing. In particular, we disagree with those commenters who believe that licensees should indefinitely be able to hold spectrum in reserve for possible future use. The public interest in ensuring that this spectrum is placed in use outweighs a licensee's private interest in reserving spectrum for possible future use.

298. While Clearwire proposes that licensees demonstrate substantial service on a per channel group basis, we believe it is more appropriate to require demonstration of substantial service on a per license basis. BRS BTA authorization holders will often be unable to operate on some of their channel groups because of the requirement that they protect incumbent licensees. Moreover, separating out specific channel groups from a BTA authorization and awarding those channel groups to another licensee could hinder development of the band and make it more difficult for the various licensees to use the spectrum. Accordingly, in determining whether a licensee has demonstrated substantial service, we believe it is appropriate to consider the licensee's overall efforts with respect to the license as a whole.

f. Deadline for Demonstrating Substantial Service

299. *Background.* BellSouth, WCA, Nextel, Sprint, CTN/NIA, DBC, IIT, among others, propose that where a licensee's term would expire in 5 years following completion of transition, the Commission should allow a permittee or licensee to obtain a renewal of its license conditioned upon demonstrating substantial service within five years following the post-transition notification date.⁷⁴⁷ BellSouth argues this will prevent a licensee from needlessly building stations to meet construction deadlines that are irrelevant to post-transition service.⁷⁴⁸ With respect to EBS licensees, CTN/NIA and IMWED request that the Commission not penalize EBS licensees at renewal for failing to meet substantial service performance requirements during the transition process.⁷⁴⁹ Specifically, they state in situations where an EBS license expires before a market has been transitioned for at least five years, and the licensee is unable to demonstrate substantial service at renewal, the licensee should be granted automatic renewal conditioned upon a demonstration of substantial service no later than five years after the filing of a post-transition notification in the licensee's market pursuant to the Commission's rules.⁷⁵⁰

300. Clearwire proposes that licensees should be required to demonstrate substantial service for the first time on the five-year anniversary of the effective date of the new rules, January 10, 2010 (as

⁷⁴⁶ See *Rural NPRM*, 18 FCC Rcd 20802, 20819 ¶ 34.

⁷⁴⁷ BellSouth Comments at 12; Nextel Comments at 3-4; Nextel Reply Comments at 6; WCA Comments at 14-16; Sprint Comments at 8-10; CTN/NIA Comments at 8; DBC Reply Comments at 2; IIT Reply Comments at 10; IMWED Comments at 8.

⁷⁴⁸ BellSouth Comments at 12.

⁷⁴⁹ CTN/NIA Comments at 8-9; IMWED Comments at 8. Commenters cite to ¶ 233 of the *EBS/BRS R&O*.

⁷⁵⁰ CTN/NIA Comments at 8-9; IMWED Comments at 8. Commenters explain that the five year period should begin running from the date of filing of a post-transition notification applicable to the EBS licensee pursuant to 47 C.F.R. § 27.1235.

compared to 5 years after transition) regardless of when they are transitioned to the new band plan or when their licenses are up for renewal.⁷⁵¹ Clearwire also asks that the Commission not give credit for prior, discontinued service.⁷⁵² WCA, accompanied by the majority of commenters, notes that Clearwire is the only party suggesting that licensees have less time to establish substantial service, advocating that all licensees be required to demonstrate substantial service by January 10, 2010.⁷⁵³ Nextel further points to the fact that Clearwire's hard date of January 10, 2010,⁷⁵⁴ would offer BRS/EBS licensees whose transition period ends at the last possible date –October 2009- only three months after that period to establish the requisite level of broadband service.⁷⁵⁵ WDBS and other commenters who oppose Clearwire's proposal noted that "different markets will require different build-out strategies and timeframes and such [stringent] requirements [as proposed by Clearwire] would merely hinder business planning."⁷⁵⁶ CTN/NIA argue that Clearwire's proposal offers the false prospect that canceling licenses after five years and auctioning them to other potential licensees will somehow result in earlier service to the public, when in reality this would cause substantial build-out delays.⁷⁵⁷

301. HITN believes a special safe harbor should be created for licensees whose renewal comes due following the effective date of the new rules but prior to January 2015.⁷⁵⁸ This concern stems from the various difficulties HITN believes EBS licensees could experience due to the transition process.⁷⁵⁹ Pursuant to HITN's proposal, such EBS licensees would automatically be granted a short renewal for those facilities until January 2015, which would provide a five year service period from 2010 that would be sufficient to amass the needed service history for renewal evaluation in 2015.⁷⁶⁰ Nextel and BellSouth note that in instances where transition occurs sooner, a licensee may have seven years or more to provide substantial service, which is unnecessarily long.⁷⁶¹ BellSouth, therefore asserts that its proposal to grant licensees five years from the end of the transition to provide substantial service is more responsive to the timing of the actual transition in a market, thereby giving each licensee the same post-transition

⁷⁵¹ Clearwire Comments at 9.

⁷⁵² Clearwire Comments at 12, 18. Similarly, C&W Enterprises does not support allowing the Commission to consider past operation of a station in meeting its substantial service requirements if such operation has been permanently discontinued. C&W Comments at 2.

⁷⁵³ WCA Reply Comments at 15; Clearwire Comments at 20-21; Sprint Reply Comments at 6-7.

⁷⁵⁴ Clearwire Comments at 20-21.

⁷⁵⁵ Nextel Reply Comments at 7.

⁷⁵⁶ Sprint Reply Comments at 4 (citing WDBS Comments at 2.) *See also* DBC Comments at 2; C&W Comments at 2; Pace Comments at 2; SpeedNet Comments at 2.

⁷⁵⁷ CTN/NIA Reply Comments at 10.

⁷⁵⁸ HITN Comments at 3.

⁷⁵⁹ *Id.*

⁷⁶⁰ *Id.* at 3-4.

⁷⁶¹ Nextel Reply Comments at 8; BellSouth Reply Comments at 6.

compliance period.⁷⁶²

302. DBC asks the Commission to require a licensee to forfeit its MBS channel if that channel is not place[d] in operation" by January 10, 2010, five years after the effective date of the rules adopted in the *BRS/EBS R&O*.⁷⁶³ BellSouth argues that because the BRS authorization will include both LBS/UBS channels and an MBS channel, it does not make sense to have a different substantial service deadline for each.⁷⁶⁴ Additionally, according to Bellsouth, some transitions may require installation of digital equipment for MBS channels, which can take a significant time to install and make ready for service.⁷⁶⁵

303. *Discussion.* After reviewing the various proposals above for the deadline to meet substantial service requirements, we conclude that licensees must satisfy the substantial service standard by May 1, 2011, which is the date that BRS site-based incumbent renewal applications are due. We believe that providing licensees with a period of five years from completion of transition (which could be as late as 2015) to comply with the substantial service standard is inconsistent with our goal of facilitating the rapid deployment of service in this band. No party has offered any convincing rationale as to why a licensee would need five years after the transition takes place in a market to provide substantial service. WCA's argument that deployment of new services will be postponed if BRS and EBS licensees have to focus their resources on preserving legacy services because of the January 10, 2010 deadline is unsupported speculation.⁷⁶⁶ We note that once the transition takes place, many licensees will have already abandoned the legacy services they had previously provided.

304. On the other hand, as Nextel points out, the January 2010 deadline advocated by Clearwire could give licensees as little as three months after the transition to demonstrate substantial service. In certain situations, that could leave licensees with insufficient time to effectuate the transition and commence providing service. We believe that a May 1, 2011 deadline for demonstrating substantial service strikes the appropriate balance between ensuring that the band is promptly placed in use and giving licensees a fair opportunity to transition their facilities. This deadline will give licensees over five years after the establishment of final transition rules and almost nine years since the Coalition Proposal first proposed reorganization of the band. To the extent that licensees are concerned about their ability to meet that deadline, we strongly encourage licensees to begin their transition and business planning now in order to meet that deadline. The May 1, 2011 date will also allow site-based BRS licensees to file their substantial service showing with their renewal applications. Finally, we agree with Nextel that it would be inappropriate to establish different deadlines for the MBS channels and reject DBC's proposal to establish a different deadline for the MBS channels.

g. Credit for Discontinued Service

305. *Background.* BellSouth notes that Clearwire is the only party to take the position that a licensee should not receive any benefit from prior service unless it complied with former Section 21.930,

⁷⁶² BellSouth Reply Comments at 6; Nextel Reply Comments at 8.

⁷⁶³ DBC Comments at 2.

⁷⁶⁴ BellSouth Reply Comments at 7.

⁷⁶⁵ *Id.*

⁷⁶⁶ WCA Reply Comments at 16.

continued providing "valuable" service, and met the "substantial service" requirement five years after the effective date of the new rules. Under this proposal, any licensee that took advantage of the Commission's decision to discontinue service as part of the transition would face that precise consequence the Commission said it would not impose - loss of its license. BellSouth argues that in effect Clearwire is asking the Commission to reconsider its decision to permit licensees to discontinue their obsolete service.⁷⁶⁷ WCA, along with virtually every other commenter, takes the position that the record developed in response to the *NPRM* and the *FNPRM* supports adoption of the proposal by WCA that with respect to the first application for renewal submitted after the effective date of the rules adopted in response to the *BRS/EBS R&O*, the Commission should make a finding of substantial service where the licensee demonstrates that it met a safe harbor at any time during the license term, as opposed to just at renewal time.⁷⁶⁸ With respect to EBS licensees, IMWED argues that EBS licensees that delivered educational video service were doing what the Commission's rules specified they do and the fact that the 2.5 GHz band has evolved toward wireless broadband does not devalue the years of prior educational service performed by these licensees. As such, according to IMWED, neither should EBS licensees be dissuaded from swapping MBS channels for UBS or LBS channels because that would mean that their video service would be considered discontinued and thus meaningless in qualifying for a safe harbor.⁷⁶⁹

306. WCA argues that the Commission's goals in this proceeding will be compromised if the next BRS/EBS renewals are based only on a substantial service "snapshot" taken when those renewal applications are filed – licensees will be reluctant to discontinue legacy services and start the process of inaugurating advanced wireless services for concern that they will be unable to demonstrate substantial service at renewal.⁷⁷⁰ WCA asserts that Clearwire fails to acknowledge the record developed in response to the *NPRM* in support of affording such credit.⁷⁷¹ WCA points to the comments of EarthLink as an example, in which EarthLink takes the position that "a substantial service test that encourages licensees to continue their obsolete video services until after current licenses are renewed ultimately serves neither EarthLink's interest nor the public interest. [EarthLink asserted] [t]he better approach is that suggested by the Coalition – afford a renewal expectancy to any licensee that has provided substantial service during its license term, and thereby encourage licensees to immediately commence the transition to broadband

⁷⁶⁷ BellSouth Reply Comments at 12. We note that SpeedNet in its reply comments does not support allowing the Commission to consider past operation of a station in meeting its substantial service requirements if such service has been permanently discontinued. SpeedNet Reply Comments at 2.

⁷⁶⁸ WCA Comment at 10 n.23 citing (Comments of EarthLink, WT Docket No. 03-66, at 9 (filed Sept. 8, 2003)[EarthLink NPRM Comments]. See also Reply Comments of BellSouth *et al.*, WT Docket No. 03-66, at 22 (filed Oct. 23, 2003)[BellSouth NPRM Reply Comments]; Comments of BellSouth *et al.*, WT Docket No. 03-66, at 31-33 (filed Sept. 8, 2003)[BellSouth NPRM Comments]; Comments of Independent MMDS License Coalition, WT Docket No. 03-66, at iii (filed Sept. 8, 2003)[IMLC NPRM Comments]; Comments and Reply Comments of Network for Instructional TV, Inc., WT Docket No. 03-66, at 8 (filed Oct. 16, 2003)[Network for Instructional TV NPRM Comments]; Comments of Sprint, WT Docket No. 03-66, at 18 (filed Sept. 8, 2003)[“Sprint NPRM Comments”]); IMLC Reply Comments at 4-5; Polar Reply Comments at 4.

⁷⁶⁹ IMWED Reply Comments at 5. IMWED further notes that Clearwire, a BRS licensee and BTA holder, takes a position with respect to BTA buildouts that would qualify it for safe harbor credit for having met legacy BTA construction requirements. IMWED Reply Comments at 6 citing (Clearwire Comments at 18).

⁷⁷⁰ WCA Comments at 9.

⁷⁷¹ WCA Reply at 9-10 n.23 citing (EarthLink NPRM Comments). See also BellSouth NPRM Reply Comments; IMLC NPRM Comments; Network for Instructional TV NPRM Comments; Sprint NPRM Comments.

regardless of whether they will be sufficiently along in the transition process to qualify for license renewal under the traditional substantial service test.⁷⁷² WCA takes the position that if the Commission adopts a restrictive substantial service requirement to promote rapid deployment, the unintended consequence may well delay the deployment of new low power, highly-cellularized services until after the substantial service evaluation has been made.⁷⁷³

307. *Discussion.* We agree with the majority of the commenters that prior service, even if discontinued, should be a factor that we take into account when making a determination as to whether substantial service has been met. We have considered prior, discontinued use in other services.⁷⁷⁴ We, however, decline to adopt a rule stating that a licensee will have deemed to have provided substantial service if it met a safe harbor at any point during the license term. The most significant consideration in a substantial service evaluation is the licensee's current service. If the current operations are sufficient to support a finding of substantial service, no further evaluation is needed. If the current service does not support a finding of substantial service, we will look at the licensee's overall record during the prior license term.

h. Provisioning of Service to Customers and Students

308. Importantly, we note that in order for a BRS/EBS licensee or lessee to provide substantial service, it must be providing service to customers or students. We therefore conclude that the transmission of test signals and/or color bars by a BRS/EBS licensee or lessee that has no customers or students does not constitute substantial service.⁷⁷⁵

309. As far back as 1987, the Commission released the *Part 21 Report and Order* revising then Part 21 of the Commission's rules, which governed the construction, licensing, and operation of common carrier domestic fixed radio facilities, including the former MDS, which through this proceeding has become the present day BRS.⁷⁷⁶ In the *Part 21 Report and Order*, the Commission expressly changed Commission policy regarding unused licenses in the domestic public fixed radio services. Before the *Part 21 Report and Order* was released, the Commission did not require licensees to submit an unused license for cancellation.⁷⁷⁷ In changing this policy, the Commission stated that "[t]he comments have failed to convince us that requiring a licensee to submit an unused license for cancellation is, in and of itself, unreasonable."⁷⁷⁸ The Commission further explained that while it did not desire to discourage risk taking in the development of new technologies, it had, at the same time an obligation to ensure that spectrum is

⁷⁷² WCA Reply Comments at 10 citing (EarthLink NPRM Comments).

⁷⁷³ WCA Reply Comments at 11.

⁷⁷⁴ See, e.g., 47 C.F.R. § 101.17(a)(2) (39 GHz).

⁷⁷⁵ See San Diego MDS Company, *Memorandum Opinion and Order*, 19 FCC Rcd. 23120, 23123-23127 ¶¶ 7-14 (2004) (*San Diego MDS*).

⁷⁷⁶ See Revision of Part 21 of the Commission's Rules, *Report and Order*, CC docket No. 86-128, 2 FCC Rcd 5713 (1987) (*Part 21 Report and Order*).

⁷⁷⁷ *Id.* at 5724 ¶ 82.

⁷⁷⁸ *Id.* at 5724 ¶ 83.

used efficiently.⁷⁷⁹ Consequently, the Commission added Section 21.303(d) to Part 21.⁷⁸⁰

310. The plain language of the rule prohibited an MDS station from being non-operational for more than twelve consecutive months.⁷⁸¹ The Commission in *San Diego MDS* stated “it was clearly unreasonable . . . to believe that the periodic broadcasting of signals that nobody received constituted ‘service’ within the meaning of the rule. Such an interpretation is unreasonable; in order to provide a service a provider would, at a minimum, need a customer or other person to serve.”⁷⁸² Furthermore, the Commission noted that the underlying purpose of ensuring that spectrum is used efficiently and effectively, to prevent spectrum warehousing, would be frustrated if a MDS licensee’s transmission of test signals or color bars constituted authorized service.⁷⁸³ This same rationale applies today to BRS and EBS spectrum. Consequently, we affirm that the transmission of test signals and/or color bars by a BRS/EBS licensee or lessee does not constitute substantial service.

2. Licensing Unassigned and Untransitioned Spectrum in the Band

a. How to Assign Available Spectrum –

311. *Background.* In the *FNPRM*, the Commission sought comment on how best to license

⁷⁷⁹ *Id.* at 5724 ¶ 82.

⁷⁸⁰ 47 C.F.R. § 21.303(d) (1988) stated:

(d) If any radio frequency should not be used to render any service as authorized during a consecutive period of twelve months at any time after construction is completed and a certification of completion of construction has been filed, under circumstances that do not fall within the provisions of paragraph (a), (b) or (c) of this section, or, if removal of equipment or facilities has rendered the station not operational, the licensee shall, within thirty days of the end of such period of nonuse:

(1) Submit for cancellation the station license (or licenses) to the Commission at Washington, DC 20554;

(2) File an application for modification of the license (or licenses) to delete the unused frequency (or frequencies); or

(3) Request waiver of this rule and demonstrate either that the frequency will be used (as evidenced by appropriate requests for service, etc.) within six months of the end of the initial period of nonuse, or that the frequency will be converted to allow rendition of other authorized public services within one year of the end of the initial period of nonuse by the filing of appropriate applications within six months of the end of the period of nonuse.

If any frequency authorization is cancelled under this paragraph, the Commission will declare by public notice the frequency (or frequencies) vacated.

⁷⁸¹ *Id.*

⁷⁸² *San Diego MDS*, 23120, 23124 ¶ 10.

⁷⁸³ See *San Diego MDS*, 23120, 23124 ¶ 10 (citing *Part 21 R&O*), and 23126-27 ¶ 14.

unassigned EBS and BRS spectrum, as well as how to manage spectrum not transitioned to the new band plan by timely-filed Initiation Plans. With respect to such untransitioned spectrum, the Commission set forth an alternative transition proposal that included issuing new licenses for such spectrum and sought comment on all aspects of the proposal, as well as on any alternatives that commenters might suggest.

312. Unassigned EBS and BRS spectrum is comprised of spectrum never previously assigned, as well as previously assigned spectrum returned to the Commission for any reason. EBS spectrum, formerly ITFS spectrum, has been extensively, but not exhaustively, subject to site-based licensing. Given the nature of site-based licensing, there are geographic areas where no license currently authorizes use of the spectrum. In addition, in some areas, less than all of the frequencies formerly allocated to ITFS may have been licensed. The Commission exhaustively licensed spectrum formerly allocated to MDS, now BRS, by assigning geographic area licenses based on the results of Auction No. 6. Those geographic area licenses overlay extensive pre-existing site-based licenses. In some instances, cancellation of prior licenses may have returned to the Commission spectrum subject to previously assigned licenses. However, there is limited unassigned EBS and BRS spectrum, given the pre-existing site-based licenses and the exhaustive licensing of spectrum allocated to MDS, even taking into account subsequently cancelled licenses. Given that Initiation Plans address specified geographic areas, the alternative transition proposal addressed analogous geographic areas. The proposal contemplated that, in the absence of a transition to the new band plan in the given area, the Commission would issue new licenses that in the aggregate would cover the full band in such areas. The Commission proposed granting incumbent licensees rights that would protect the value of their spectrum access while clearing the band for new licensees. However, any given incumbent could become a new licensee, in part by using the value of their existing spectrum access. Cleared spectrum provides the Commission with a wider array of licensing options with respect to geographic areas and frequency blocks. Moreover, new licensees with rights to cleared spectrum may have substantially greater flexibility and possibilities to put the spectrum to use.

313. *Discussion.* We conclude that we should not make any decisions regarding how to assign unassigned spectrum at this time. The Commission's alternative transition proposal contemplated issuing new licenses that, collectively, would offer access to the complete EBS/BRS band in geographic areas that did not transition to the new band plan pursuant to a proponent-filed Initiation Plan. However, our decision in this order to adopt a "self-transition" option in areas not subject to a proponent's Initiation Plan makes it less certain how much unassigned spectrum will be available for alternative licensing mechanisms. Depending on the number and extent of licenses that are "self-transitioned," self-transition could transform a potentially "clear" area into a heavily encumbered area, with available spectrum predominantly comprised of previously unassigned or returned spectrum. Moreover, because the self-transition period will occur after the initial transition period, there will be a longer time before the availability of unassigned spectrum can be determined. Accordingly, we conclude that it would be premature to make specific decisions regarding unassigned spectrum until we see the extent to which markets are transitioned, either through the proponent-based process or self-transitioning.

b. Eligibility to Apply for New Licenses.

314. *Background.* The Commission proposed to assign by auction any new licenses for spectrum in the band, with any auction being open to all parties, both incumbents and new entrants, potentially eligible to hold the licenses offered. The Communications Act determines whether we must

resolve mutually exclusive applications for licenses by competitive bidding.⁷⁸⁴ We proposed to open any auction of new licenses to all parties potentially eligible to hold the licenses.

315. *Discussion.* The few commenters addressing the question of who should be eligible to participate in any such auction agreed that it should be open to all potential licensees.⁷⁸⁵ An auction is most likely to assign the license to the qualified licensee that most highly values it if the auction is open to all potentially qualified licensees. It follows that licenses with restricted eligibility, such as EBS licenses, may be bid on only by parties potentially meeting all the restrictions on licensees. Accordingly, we conclude that any future auction of unassigned spectrum will be open to all eligible bidders.

c. When to Assign New Licenses

316. *Background.* The Commission sought comment regarding when to issue any new licenses. The Commission observed that a single auction of licenses for all available spectrum in the band would enable all potentially interested parties to participate in a single, simultaneous auction offering transparent price information regarding substitutable or complementary licenses in the band. The Commission noted that, in areas subject to Initiation Plans, previously unassigned spectrum might be primarily, or even exclusively, of interest to incumbent licensees in the area. Accordingly, the Commission also sought comment on whether to conduct auctions in areas subject to transition plans prior to the completion of the time for filing Initiation Plans.

317. Commenters presented a range of opinions on when to assign new licenses in the band, ranging from as soon as possible to after the end of the period for filing Initiation Plans. Many commenters support making licenses available at auction as soon as possible.⁷⁸⁶

318. As the comments reflect, however, there is some question as to precisely how soon it would be possible for applicants to participate effectively in an auction of unassigned spectrum, particularly EBS spectrum.⁷⁸⁷ Several commenters, including EBS licensees and some commercial licensees, assert that new licenses for EBS spectrum should not be made available until after the period for voluntary transitions to the new band plan is complete. These commenters argue that “EBS licensees will be occupied with other matters over the next three years, including transitions to the new band plan, spectrum lease negotiations, and critically, the development of educational service plans that focus on

⁷⁸⁴ See 47 U.S.C. §309(j). A few commenters expressed the view that there may be only one applicant for any given license for previously unassigned spectrum, given the substantial amount of the spectrum already assigned to incumbent licensees. CTN/NIA Comments at 15; HITN Reply Comments at 6; IMWED Comments at 10. In such circumstances, the Commission would not conduct competitive bidding.

⁷⁸⁵ CTN/NIA Comments at 10; HITN Comments at 4.

⁷⁸⁶ Clearwire Comments at 5 (“Clearwire urges the Commission to expeditiously identify all fallow EBS and BRS spectrum and, as soon as is reasonably practicable, auction all such spectrum[.]”); WCA Comments at 20 (“[A]uctions of available BRS/EBS spectrum should be conducted as quickly as possible in order to promote the most rapid introduction of service to the public[.]”)

⁷⁸⁷ E.g., compare WCA Comments at 20-21 (proposing including EBS “white space” in an auction held as soon as possible after the adoption of new rules resolve issues raised in the *Further Notice*) and WCA Reply Comments at 21 (suggesting the Commission “conduct the EBS white space auction approximately one year after” resolution of the issues raised in the *Further Notice*); see also Sprint Reply Comments at 10 (“Upon further consideration of . . . this issue, Sprint believes that it is unnecessary to put off auctioning the EBS white space[.]”)

new technologies tailored to the revised band plan and rules.”⁷⁸⁸ Other commenters argue that while “EBS eligibles[] may require some lead time to prepare for an EBS white space auction, a delay of three or more years is not justified or necessary[.]”⁷⁸⁹ Some EBS licensees note that the formerly ITFS white space has lain dormant for an extended period, as the Commission has addressed rules for the service, and indicate an interest in expediting access to this spectrum.⁷⁹⁰

319. In addition, commenters disagree about whether licensing previously unassigned EBS spectrum will help or hinder transitions to the new band plan. Some commenters contend that an early auction of EBS white space need not complicate transitions, so long as new licensees were not entitled to any rights under the old band plan and therefore not entitled to any rights pursuant to any transition plan.⁷⁹¹ Other commenters express concern about the existence of new licensees complicating the efforts of existing licensees to manage their own interests during transitions, irrespective of rights the new licensees may or may not have.⁷⁹²

320. *Discussion.* We conclude that it is premature to make available unassigned spectrum until the transition period is completed. When to make new licenses available in these bands turns on several factors. First, as noted at the outset, the amount of previously unassigned spectrum in these bands is limited. It appears that the unassigned spectrum available for new licenses consists predominantly of previously unassigned EBS spectrum.⁷⁹³ As noted above, many, though not all, parties with an interest in EBS spectrum support waiting until after the transition to the new band plan to make new licenses available.⁷⁹⁴

⁷⁸⁸ CTN/NIA Comments at 10. See Joint Reply Comments of EBS Parties in Support of Joint Comments and Petition for Reconsideration of Catholic Television Network and National ITFS Association (EBS Parties Reply Comments) at 7 (supporting CTN/NIA position). See IMWED Reply Comments at 8 (supporting CTN/NIA position); see also Nextel Reply Comments at 9 (early auctions of EBS white space “would often leave EBS licensees unable to consolidated holdings across channels and geographic areas, precluding their near-term development of a more robust service.”)

⁷⁸⁹ Clearwire Reply Comments at 15.

⁷⁹⁰ See C&W Reply Comments at 3. DBC Reply Comments at 3; WDBS Reply Comments at 3; SpeedNet Reply Comments at 3.

⁷⁹¹ See WCA Comments at 21; Clearwire Reply Comments at 15.

⁷⁹² See Nextel Reply Comments at 9.

⁷⁹³ Considering spectrum returned to the Commission due to cancellation of prior MDS or ITFS licenses together with previously unassigned spectrum does not alter this conclusion. Defaults on installment payments of winning bids for MDS licenses offered in Auction No. 6 are the primary reason that previously assigned spectrum in these bands has returned to the Commission. The number of defaults is limited. In addition, pending requests for relief with respect to some defaults may make it premature for the Commission to issue new licenses for the subject spectrum. Finally, the licenses assigned based on Auction No. 6 were for available “white space.” Thus, even where a license issued following Auction No. 6 cancelled, there still may be significant numbers of incumbent site-based licensees in the area. The cancellation of a geographic license does not mean that there are no BRS licensees in the area capable of proposing an Initiation Plan.

⁷⁹⁴ See CTN/NIA Comments at 10; EBS Parties Reply Comments at 7 (supporting CTN/NIA position); IMWED Reply Comments at 8 (supporting CTN/NIA position); see also Nextel Reply Comments at 9.

321. Second, while it may be possible to make new licenses available in a way that does not interfere with potential transitions to the new band plan, the limitations that might need to be imposed on such new licenses may make them of little immediate use. For example, several commenters suggest that we preclude operations pursuant to the old band plan while incumbents continue such operations. Such limitations are intended to prevent new licensees from imposing new costs on Initiation Plan proponents. However, there appears to be little benefit from issuing such licenses before the transition is complete. In any event, it appears highly unlikely that any new licensee will construct and offer service pending the completion of a transition.

322. Moreover, we believe that all potential licensees, including incumbents and potential new entrants, will be better able to assess their need for, and the value of, new licenses, after existing incumbents complete their transition to the new band plan. The completion of the transition will clarify the landscape of existing and potential uses of new licenses and therefore permit a more effective assignment of those licenses in the first instance.

323. Third, an open market making available all new licenses benefits both licensees, who will have much better information regarding the market value of spectrum access and the availability of alternative spectrum access, and the public, which is more likely to recover a portion of the market value of the underlying public spectrum resource. The relationship between BRS and EBS spectrum makes the availability of spectrum allocated to either service relevant to the other. While only certain parties will be eligible to hold EBS licenses, BRS licensees – and other commercial entities -- may access spectrum subject to EBS licensees through leases with EBS licensees. Thus, parties interested in access to this spectrum likely will be interested in both available BRS and EBS spectrum, notwithstanding the restrictions placed on parties eligible to hold EBS licenses.

324. Finally, the significance of having all available licenses in a single auction only will be increased in the event that additional spectrum is returned to the Commission, whether pursuant to a transition process such as that proposed by the Commission or by other means. While we defer taking any action today with respect to spectrum in areas not fully transitioned by incumbent licensees, the possibility that additional spectrum will be returned to the Commission in the event that incumbent licensees do not complete the transition voluntarily only makes it even more prudent to wait to make new licenses available in these bands.

d. Additional New License Issues.

325. *Background.* Commenters addressed a variety of other issues regarding potential new licenses to be made available in these bands, including the geography and frequencies to be covered by such licenses; the application of the Commission's standard competitive bidding rules; and the availability of bidding credits for applicants seeking new licenses in competitive bidding. Commenters presented a variety of views with respect to such issues. For example, while most commenters argued in favor of issuing licenses that cover BTAs, some commenters supported the Commission's proposal for large area licenses in the low power Lower Band and Upper Band segments of the band plan and others argued, in some contexts, for areas as small as counties.⁷⁹⁵ Further, some commenters support splitting previously linked LBS/UBS channels and MBS channels while others contend that the legacy linkage

⁷⁹⁵ See, e.g., WCA Comments at 24 (advocating BTAs); HITN Comments at 5 (supporting MEAs); School Board of Miami Dade County Florida Further Comments at 3 (advocating licenses limited to counties in areas not transitioned pursuant to an Initiation Plan).

should be preserved in any new licenses.⁷⁹⁶ While there is little dispute about the application of the Commission's general auction procedures, commenters vigorously dispute whether bidding credits should be provided for EBS licensees, and, if so, on what basis.⁷⁹⁷ One commenter asserts that "the Commission should require that EBS bidders pay for spectrum from their own funds, without using money obtained from third parties" at all.⁷⁹⁸ Numerous commenters strongly object to any such proposal.⁷⁹⁹

326. *Discussion.* Resolution of any of these issues is premature prior to the completion of voluntary incumbent transitions. Until that time, the precise scope of the spectrum subject to new licenses will be unclear, either with respect to geography or frequencies. In addition, it will be unclear whether existing licensees are developing systems that make it practicable to continue licensing low power Upper and Lower Band segment frequencies together with high power Middle Band segment frequencies, or whether the two should be offered separately (subject, of course, to consolidation by licensees in the Commission's auction or in the secondary market). Finally, until the relationship between EBS eligible licensees and their lessees becomes clearer in the context of the new band plan and new service rules, it is premature to attempt to resolve the disputes regarding what resources to consider when determining whether to grant bidding credits to EBS applicants bidding for new licenses.

e. Alternative Transitions to the New Band Plan and New Licenses.

327. *Background.* In the *Further Notice of Proposed Rulemaking*, the Commission detailed a specific proposal for transitioning spectrum in areas that were not transitioned by proponents' Initiation Plans.⁸⁰⁰ The proposal was intended to clear current spectrum assignments from the band while preserving the incumbents' ability to access spectrum comparable in value to their prior assignments. Pursuant to the proposal, incumbents would receive modified licenses to enable them to continue current operations, for the duration of the license, so long as those operations did not conflict with new licensees' plans to utilize the spectrum pursuant to the new band plan.⁸⁰¹ Moreover, incumbents would be issued bidding offset credits to enable them to obtain spectrum licenses comparable in value to their original

⁷⁹⁶ See, e.g., Clearwire Comments at 11 (supporting separate licenses for LBS/UBS and MBS); CTN/NIA Comments at 13 (same); Pace Comments at 3 (the Commission should auction the spectrum "as currently licensed in channel groups as opposed to dividing them into LBS, MBS or UBS licenses"); HITN Reply Comments at 5 (same).

⁷⁹⁷ See C&W Comments at 2 (proposing "unprecedented discounts" for EBS licensees that forego agreements with third-parties to use the spectrum); Pace Comments at 2 (identical language); DBC Comments at 3 (nearly identical, proposed "extremely competitive discounts of 50% or more"); SpeedNet Comments at 2 (nearly identical, proposed "50% or more discounts"); WDBS Comments at 2 (identical language). See CTN/NIA Comments at 15-16 (urging the Commission not to adopt bidding credits in auctions for licenses covering EBS white space). See also WCA Reply Comments at 31 (arguing that, while the Commission should not adopt bidding credits, if it does so, it should base credits on factors other than the revenues available to bidders).

⁷⁹⁸ IMWED Comments at 11.

⁷⁹⁹ See, e.g., CTN/NIA Reply Comments at 12; BellSouth Reply Comments at 16; Sprint Reply Comments at 14.

⁸⁰⁰ See, generally, *FNPRM*, 19 FCC Rcd 14165, 14272 ¶¶ 289-319.

⁸⁰¹ This portion of the proposal would not apply to licenses for operations on BRS Channels No. 1 and 2/2A, which would be subject to the separate clearing procedures for that spectrum. However, the remaining element of the proposal, issuing bidding offset credits, would apply to licensees for BRS Channels No. 1 and 2/2A.

licenses. The proposal called for new licenses consistent with the new band plan to be assigned by an auction open to all potentially qualified licensees. Those new licenses would include spectrum not previously assigned, as well as spectrum not transitioned by an incumbent's Initiation Plan. In addition, the Commission sought comment on whether to permit licensees subject to Initiation Plans the option of exchanging their licenses for modified licenses and bidding credits. If such an option were provided, the spectrum subject to exchanged licenses also would be included in the auction of new licenses consistent with the new band plan. Licenses with restricted eligibility, such as EBS licenses, could be bid on only by parties potentially meeting all the restrictions on licensees. Incumbents could use their bidding offset credits to obtain licenses comparable in value to their original licenses in any auction of new BRS or EBS licenses or any other Commission auction. Finally, this alternative transition process proposal included a limited "opt-out" option for incumbents who prefer to preserve current high-power operations to the extent possible on a frequency block in the MBS, rather than to pursue the wider options available under the new band plan. New licensees whose licenses cover spectrum made available by the relocation of such opt-outs would be required to pay the incumbent's costs of relocating its operations, including any upgrade to digital transmission.

328. Commenters presented various views on the Commission's proposal and specific aspects of it. Some noted that they have no objection to the Commission's proposed alternative transition mechanism, provided a "self-transition" option is provided first.⁸⁰² Others strongly oppose the Commission's proposal.⁸⁰³ A common objection to the proposal was that current incumbents may not be able to "regain their operating rights" pursuant to new licenses, which may cover a much larger geographic area than current licenses.⁸⁰⁴

329. The Commission proposal provided an opportunity for incumbent licensees to maintain existing services in geographic service areas based on the protected service area provided by existing licenses. The Commission proposal for an alternative transition provided an opportunity for incumbents to "opt-out" of the transition to preserve current high-power operations to the extent possible on a frequency block in the MBS, rather than to pursue the wider options available under the new band plan.⁸⁰⁵ However, the Commission's "opt-out" proposal called for a reduction of bandwidth because the new band plan provides only one six megahertz block for high-power operations in the MBS for each original license in the band.

330. Only a few commenters directly addressed the opt-out feature of the Commission proposal. BloostonLaw, reflecting the interest any incumbent would have in retaining as much of its original bandwidth as possible, proposed that licensees opting-out receive new licenses for 12 to 18 megahertz.⁸⁰⁶ In reply, however, Nextel noted the lack of additional high-power licenses under the new band plan to provide more than six megahertz of bandwidth to such licensees. Moreover, "a conversion

⁸⁰² See Nextel Comments at ii ("Nextel would consider not opposing the proposed alternative transition mechanism if the Commission permits licensees to transition their own facilities"); WCA Comments at 22.

⁸⁰³ See CTN/NIA Reply Comments at 11 ("vigorously oppos[ing] the whole alternative/auction process for transitioning to the new band plan").

⁸⁰⁴ See, e.g., Stanford University Reply Comments at 6.

⁸⁰⁵ *FNPRM*, 19 FCC Rcd 14165, 14280 ¶ 313.

⁸⁰⁶ BloostonLaw Comments at 6.

[to digital transmissions] will leave these licensees at least as well off with a 6 MHz MBS channel as they were with four analog channels in the LBS/UBS.⁸⁰⁷

331. *Discussion.* Given the significant differences between the possibility of licensing access to clear spectrum and the possibility of licensing heavily encumbered white space, consideration of potential self-transitions makes it premature to adopt rules governing the licensing of areas not subject to Initiation Plans. In the event that there are large areas that remain untransitioned by either Initiation Plans or self-transitions, the Commission's proposal for an alternative transition still may provide a significant opportunity to achieve the benefits of the new band plan. Alternatively, if most areas are subject to Initiation Plans or extensive "self-transitions" by incumbent licensees, there may be no need to adopt procedures for "clearing" incumbents prior to making available licenses for access to white space.

332. Accordingly, we will monitor the transition process, both pursuant to Initiation Plans and self-transitions, before making further determinations regarding how to license spectrum currently unassigned or that is not transitioned to the new band plan.

3. Grandfathered E and F Channel EBS Stations

333. *Background.* In 1983, the Commission redesignated the E and F Group ITFS channels from the ITFS service to MDS usage.⁸⁰⁸ The Commission took this action in an effort to spur the development of MDS to promote effective and intense utilization of the spectrum leading to its highest valued use.⁸⁰⁹ As part of its decision, the Commission grandfathered ITFS licensees operating on the E Group and F Group channels subject to the following limitations:

Grandfathered ITFS stations operating on the E and F channels will only be protected to the extent of their service that is either in the operation or the application stage as of May 26, 1983. These licensees or applicants will not generally be permitted to change transmitter location or antenna height, or to change transmission power. In addition, any new receive stations added after May 26, 1983 will not be protected against interference from MDS transmissions. In this fashion, all facets of grandfathered ITFS operations were frozen as of May 26, 1983.⁸¹⁰

The Commission stated that "there may be instances where the natural evolution of an ITFS station may reasonably require the addition of receive stations without changing the nature or the scope of the ITFS

⁸⁰⁷ Nextel Reply Comments at 11.

⁸⁰⁸ See In the Matter of Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules and Regulations in regard to frequency allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service, GN Docket No. 80-112, CC Docket No. 80-116, *Report and Order*, 94 FCC 2d 1203 (1983) (*E and F Group Reallocation Order*).

⁸⁰⁹ *Id.* at 1228-29 ¶¶ 61-63.

⁸¹⁰ See Amendment of Parts 2, 21, 74 and 94 of the Commission's Rules and Regulations in regard to frequency allocation to the Instructional Television Fixed Service, the Multipoint Distribution Service, and the Private Operational Fixed Microwave Service, GN Docket No. 80-112, CC Docket No. 80-116, *Memorandum Opinion and Order on Reconsideration*, 98 FCC 2d 129, 132-33 ¶ 12 (1983) (*E and F Group Reallocation Reconsideration Order*). See also 47 C.F.R. § 74.902(c).

operation” that would justify the addition of additional receive sites.⁸¹¹ In those instances, the Commission stated that the grandfathered ITFS licensee could request a waiver of Section 74.902(c).⁸¹² The Commission’s rules provided that “in those areas where Multipoint Distribution Service use of these channels is allowed, Instructional Television Fixed Service users of these channels will continue to be afforded protection from harmful co-channel and adjacent channel interference from Multipoint Distribution Service stations.”⁸¹³

334. Commenters in the present proceeding raised the issue of the proper future treatment of grandfathered E and F Group EBS licensees.⁸¹⁴ The Commission noted that if grandfathered E and F Group EBS licensees are not permitted to modify their equipment and BRS licensees must continue operating on a secondary basis, grandfathered E and F Group EBS licensees will cause interference to low-power BRS co-channel licensees in some markets. Put another way, if BRS licensees that are on co-channel frequencies with grandfathered E and F Group EBS licensees must avoid interfering with these frozen licensees, then the deployment of BRS broadband services may be hindered. Additionally, the grandfathered E and F Group EBS licensees will never be able to transition to a low-power cellularized broadband system due to the restriction on modifying their equipment, which is presently contained in our rules.⁸¹⁵

335. Thus, the Commission sought comment on how to modify its rules concerning grandfathered E and F channel EBS stations in order to equitably allow both BRS and EBS stations to provide advanced broadband wireless services. The Commission inquired whether it makes sense to adopt different approaches to different scenarios, rather than a one-size-fits-all approach.⁸¹⁶

336. The first scenario that the Commission envisioned is where the PSA of the grandfathered E and F Group EBS licensee almost entirely overlaps the PSA of the co-channel BRS licensee. In this scenario, the Commission sought comment on whether in keeping with the intent and spirit of the Commission’s 1983 *E and F Group Reallocation Order* to free up spectrum for BRS,⁸¹⁷ it should require grandfathered E and F Group EBS licensees to operate on a secondary non-interference basis to the co-channel BRS licensee. Alternatively, the Commission sought comment on allowing grandfathered E and F Group EBS licensees to modify their equipment and be given a GSA, while the co-channel BRS operators would have to operate on a secondary non-interference basis.⁸¹⁸ A third approach would be to

⁸¹¹ See *E and F Group Reallocation Reconsideration Order*, 98 FCC 2d 129, 132-33 ¶ 12 n.8.

⁸¹² *Id.*

⁸¹³ 47 C.F.R. § 74.902(c).

⁸¹⁴ See Grand Alliance Comments to *NPRM*; Department of Education Archdiocese of New York Reply Comments (DOEANY Reply Comments) to *NPRM*; Stanford & Northeastern Reply Comments to *NPRM*; Brooklyn Reply Comments to *NPRM*; Coalition Reply Comments to *NPRM*.

⁸¹⁵ See *FNPRM* 19 FCC Rcd 14165, 14290 ¶ 336.

⁸¹⁶ See *id.* at 14290 ¶ 337.

⁸¹⁷ See *E and F Group Reallocation Order*, 94 FCC 2d 1203, 1228-29 ¶¶ 61 - 63.

⁸¹⁸ See *FNPRM* 19 FCC Rcd 14165, 14290 ¶ 339.

rely on voluntary negotiations between the parties.⁸¹⁹

337. The second scenario the Commission envisioned is where the PSAs of the grandfathered E and F Group EBS licensees overlap to some extent, but not as much as in scenario one. The Commission sought comment on whether, in that situation, it should adopt the same “splitting the football” mechanism it used to separate other overlapping PSAs.⁸²⁰ The Commission noted that if it adopted that approach, co-channel BRS licensees and grandfathered E and F Group EBS licensees would draw a boundary line through a “football” shaped area where the PSAs intersect, with each licensee agreeing to limit the interference it generates across the boundary and getting a GSA based on its prior PSA. The Commission also sought comment on whether, as suggested by Department of Education Archdiocese of New York (DOEANY) and Region 10, it should continue to afford protection to grandfathered EBS E and F group receive sites that fall outside the new GSAs.

338. Finally, the third scenario the Commission envisioned occurs when the grandfathered E and F Group EBS licensee remains frozen, unable to modify its system, and there is no co-channel BRS licensee. The Commission sought comment on allowing the grandfathered E and F Group EBS licensee to modify and to assign their facilities where there is no co-channel BRS licensee.⁸²¹

339. NY3G, the F Group co-channel BRS licensee in New York City, argues that the problem of conflicting spectrum rights of co-channel licensees appears to be unique to the F group channels in New York City.⁸²² Thus, it asserts that the situation should be resolved without resort to implementation of new rules of general applicability.⁸²³ NY3G asserts that the problem can be resolved in one of two ways. First, NY3G asserts, the Commission can resolve the New York City situation by enforcing its rules against EBS licensees holding more than four channels.⁸²⁴ Alternatively, NY3G asserts, the Commission could adopt its proposal to require grandfathered EBS licensees to operate on a secondary, non-interference basis to co-channel BRS licensees where the co-channel licensees continue to have substantial overlapping service areas and where the grandfathered EBS licensee has other EBS channels capable of serving the registered receive sites of its grandfathered facilities.⁸²⁵ NY3G proposes that BRS licensees would be required to bear the costs associated with relocating EBS licensees to alternative

⁸¹⁹ *See id.*

⁸²⁰ *See BRS/EBS R&O*, 19 FCC Rcd 14165, 14189-14194 ¶¶ 52-68 for a discussion of splitting of the football and geographic area licensing in general.

⁸²¹ *See FNPRM* 19 FCC Rcd 14165, 14291 ¶ 343.

⁸²² NY3G Comments at 5.

⁸²³ *Id.* at 5-6.

⁸²⁴ *Id.* at ii. The “Four-Channel Rule” limited a licensee “to the assignment of no more than four channels for use in a single area of operation, all of which should be selected from the same [channel] Group” 47 C.F.R. § 74.902(d)(1) (1993). The Commission eliminated the four channel rule post-transition and sought comment on eliminating the four-channel rule in markets that have not yet transitioned. *See BRS/EBS R&O and FNPRM*, 19 FCC Rcd 14165, 14291-92 ¶¶ 344-346. *See also* ¶¶ 355-359 for a discussion of the “Four-Channel Rule.”

⁸²⁵ *Id.* at ii, 7-8.

facilities, frequencies, or technologies.⁸²⁶

340. NY3G opposes resolution of this problem by requiring BRS licensees to operate on a secondary, non-interference basis because it believes that this is inconsistent with the Commission's 1983 *E and F Group Reallocation Order* and because this would delay the expeditious deployment of broadband services.⁸²⁷ NY3G argues that the 1983 *E and F Group Reallocation Order* intended to preserve the ability of EBS licensees to provide programming, not to convey special rights to EBS licensees.⁸²⁸ NY3G opines that the 1983 *E and F Group Reallocation Order* further makes clear that its underlying purpose was to make room for MMDS.⁸²⁹

341. NY3G asserts that the co-channel F group licensees in New York City have been unable to resolve their differences voluntarily for nearly two decades.⁸³⁰ Thus, NY3G believes reliance on voluntary negotiations can only lead to continued delay in deployment of services.⁸³¹ In addition, NY3G opposes using the splitting the football approach to resolve the problem because grandfathered EBS licensees do not have PSAs, and the Commission has never expressed any intention to grant such licensees PSAs.⁸³² Numerous commenters disagree with NY3G and assert that EBS licensees do indeed have PSAs.⁸³³ NY3G further asserts that applying the split the football methodology would inefficiently require co-channel licensees to serve only half a market.⁸³⁴ Specifically, NY3G argues, splitting the football in New York City would cause a large exclusion zone to be created where neither co-channel licensee would be able to provide service.⁸³⁵ NY3G provided maps to show that the exclusion zone created by splitting the football would cover more than seven million people in the following areas: all of Manhattan, the Bronx, and Staten Island, and much of Brooklyn, Queens, Westchester County, and Jersey City.⁸³⁶ To avoid this situation, NY3G recommends that when the PSAs of the EBS licensee substantially overlaps the PSA of the BRS licensee that would result in an exclusion zone affecting three million people and more than 33 percent of the total population of the combined GSAs of the co-channel licensees, then either of the two co-channel licensees may, during the transition process, elect to divide the channels assignments so that the BRS licensee is assigned the three low-power channels and the EBS

⁸²⁶ *Id.* at iii, 7-8.

⁸²⁷ *Id.* at iii.

⁸²⁸ *Id.* at 16.

⁸²⁹ *Id.*

⁸³⁰ *Ex Parte* Letter from Bruce D. Jacobs, Pillsbury Winthrop Shaw Pittman LLP to Marlene H. Dortch, Federal Communications Commission (filed Oct. 17, 2005) at 2 (NY3G *Ex Parte* Letter).

⁸³¹ NY3G Comments at iv, 20.

⁸³² *Id.* at 17-18.

⁸³³ WCA Comments at 26-28; Red New York E Comments at 3; CTN/NIA Comments at 18; TVC Comments at 5; School Board of Miami Dade County, FL (Miami-Dade) Comments at 2; IMWED Reply Comments at 12.

⁸³⁴ NY3G Comments at 19.

⁸³⁵ NY3G *Ex Parte* Letter at 2.

⁸³⁶ NY3G *Ex Parte* Letter at 3 and Attachment A.

licensee is assigned the high-power channel.⁸³⁷

342. TVC, the F Group EBS co-channel licensee in New York City, believes that in the case of substantial overlap, that the Commission should provide a defined period of time for co-channel EBS and BRS stations with GSA overlaps to resolve the transition to the new band plan through settlement.⁸³⁸ In the event that voluntary settlements do not occur, TVC advocates splitting the football.⁸³⁹ IIT supports TVC's position.⁸⁴⁰ Moreover, if the Commission splits the football to resolve the overlapping PSA of the F Group co-channel New York City licensees, TVC maintains that NY3G would receive a GSA that would cover over 8 million persons, giving it a GSA that is larger than many other BRS licensees in the band.⁸⁴¹ Sprint Nextel's analysis indicates that the worst-case result from applying the "split-the-football" rule would be to affect an area of no more than 0.98 kilometers on either side of the cellular boundary, not the 7.8 kilometers as NY3G claims.⁸⁴² Moreover, Sprint Nextel continues, "[t]his worst-case scenario completely ignores the real-world interference mitigation techniques that operators use on a daily basis in the commercial mobile radio service" operating in close proximity to geographic area boundaries.⁸⁴³ Sprint Nextel maintains that "commonly used low-cost techniques such as carefully selecting tower locations, pointing antenna sectors away from the border, and placing attenuating material on the back of the transmit antenna, will greatly mitigate any interference problems."⁸⁴⁴

343. Red New York E (RNYE), the E Group BRS co-channel licensee in New York City, asserts that even in situations like its own, where the presence of other licensees constricts RNYE's GSA, it is still entirely feasible to provide mobile data/phone service in the GSA without cooperation from adjoining GSAs.⁸⁴⁵ While RNYE agrees with NY3G that there is no justification for converting BRS E

⁸³⁷ *Id.* at Attachment B.

⁸³⁸ TVC Comments at 16.

⁸³⁹ *Id.* at 17.

⁸⁴⁰ IIT Reply Comments at 14.

⁸⁴¹ *Ex Parte* Letter from Edwin N. Lavergne, Counsel, Trans Video Communications, Inc. to Marlene H. Dortch, Federal Communications Commission (filed Oct. 26, 2005), Attachment at 2.

⁸⁴² *Ex Parte* Letter from Lawrence R. Krevor, Sprint Nextel to Marlene H. Dortch, Federal Communications Commission (filed Oct. 27, 2005) at 1 (*citing* engineering statement of Robert Gehman, Jr., P.E.).

⁸⁴³ *Id.*

⁸⁴⁴ *Id.* at 1-2.

⁸⁴⁵ RNYE Comments at 4. RNYE describes its situation as follows:

Red New York E's Station WLR500 is located 12.4 miles from co-channel [EBS] Station KRS82 in New York City, and 14.2 miles from co-channel [EBS] Station KRS83 in Yonkers, New York. The next-closest co-channel stations are [EBS] Stations KRS85 in Beacon, New York and KNZ65 in Uniondale, New York. The last-named station is licensed to the Diocese of Rockville Center; the others are licensed to the Archdiocese of New York. KRS85 is 51.8 miles and KRS65 is 70.1 miles from WLR500. The presence of these stations significantly constricts the GSA of Station WLR500, from a circle with a 35-mile radius to a long relatively narrow area that is almost rectangular in shape. Despite these constrictions, it would be entirely feasible, as shown

(continued....)

and F Group licensees into second class status when those licensees have historically been entitled to dominant status, it sides with TVC in supporting the “split-the-football” rule even in cases of significant EBS/BRS MSA overlap.⁸⁴⁶ Furthermore, it asserts that periodic disputes on this matter will be resolved.⁸⁴⁷ Thus it recommends that the Commission adopt no special technical, interference, or service rules affecting grandfathered E and F channel stations.⁸⁴⁸

344. CTN, NIA, and WCA believe that the Commission should encourage voluntary settlements.⁸⁴⁹ In the event that a voluntary settlement cannot be reached, CTN, NIA, Nextel, and WCA recommend that the Commission split the football.⁸⁵⁰ CTN and NIA disagree with NY3G that special requirements should be adopted to deal with NY3G’s situation in New York City.⁸⁵¹ As a threshold matter, they disagree that NY3G’s situation is indeed unique, and further assert that uniqueness is in any case irrelevant inasmuch as the split the football approach offers an equitable solution in all scenarios.⁸⁵² IIT agrees.⁸⁵³ Furthermore, in response to NY3G’s assertion that the splitting the football approach would lead to bifurcated service areas that are not conducive to deployment of broadband services,⁸⁵⁴ CTN and NIA assert that even when a newly formed GSA is relatively small due to the existence of overlapping PSAs, it is entirely feasible to launch a viable commercial broadband service.⁸⁵⁵ The EBS Parties support CTN and NIA’s position on this issue.⁸⁵⁶

345. Stanford University and the School Board of Miami Dade County Florida (MDCPS) argue that EBS licensees are to be protected in perpetuity as per the 1983 *E and F Group Reallocation Order*.⁸⁵⁷ They assert there is no public interest reason that these stations should not be allowed to transition to the new EBS band.⁸⁵⁸ TVC asserts that the Commission should treat grandfathered EBS

(Continued from previous page) _____

by Attachment A hereto, the Design Study Report of C.J. Hall, to provide a mobile data/phone service in the GSA, even without cooperation from adjoining GSAs *Id.* (citations omitted).

⁸⁴⁶ *Id.* at 5.

⁸⁴⁷ *Id.*

⁸⁴⁸ *Id.* at 5-6.

⁸⁴⁹ CTN/ NIA Comments at 5; WCA Comments at 27.

⁸⁵⁰ CTN/NIA Comments at 5; WCA Comments at 26; Nextel Reply at 13.

⁸⁵¹ CTN/NIA Reply Comments at 3.

⁸⁵² *Id.*

⁸⁵³ IIT Reply Comments at 16.

⁸⁵⁴ NY3G Comments at 19.

⁸⁵⁵ CTN/NIA Reply Comments at 4.

⁸⁵⁶ EBS Parties Reply Comments at 6.

⁸⁵⁷ Miami Dade Comments at 3-4; Stanford Reply Comments at 2-3.

⁸⁵⁸ Stanford Reply Comments at 4.

stations like all other EBS stations for the transition to the new band plan.⁸⁵⁹ TVC reasons that such equal treatment will promote efficient spectrum use as many grandfathered licensees have leased excess capacity to commercial partners who expect that such leases will be honored.⁸⁶⁰ NY3G replies that the Hazlett study, commissioned by it, demonstrates that making grandfathered stations secondary is supported by sound economic principles as it would save consumers several hundred millions of dollars annually, and that such savings would continue to increase as the number of competitors grows.⁸⁶¹ TVC retorts that this analysis fails to consider the public interest value of providing educational as opposed to commercial services.⁸⁶² TVC further asserts that the analysis fails to account for new services that will be provided to TVC and other EBS licensees and commercial lessees.⁸⁶³

346. TVC also claims that the purpose of the 1983 *E and F Group Reallocation Order* was to spur the development of competition to cable, which has not materialized, and that grant of primary spectrum rights to MMDS licensees would not be related to this purpose.⁸⁶⁴ NY3G replies that contrary to TVC's claim, the 1983 *E and F Group Reallocation Order* did not purport to simply develop competitors to cable; rather, a major goal was to make more efficient use of fallow spectrum.⁸⁶⁵ It further asserts that the Commission acknowledged that many other uses were possible including high speed data transmission, and further stated it would permit any kind of communications consistent with the Commission's rules.⁸⁶⁶

347. *Discussion.* We have carefully weighed the comments on grandfathered E and F group EBS licensees and considered the three scenarios the Commission put forth in the *NPRM*: (1) the PSA of the grandfathered E and F Group EBS licensee almost entirely overlaps the PSA of the co-channel BRS licensee; (2) the PSAs of the grandfathered E and F Group EBS licensees overlap to some extent, but not as much as in scenario one, and (3) the grandfathered E and F Group EBS licensee remains frozen, unable to modify its system, and there is no co-channel BRS licensee.⁸⁶⁷ We adopt a solution that provides resolution to the three scenarios the Commission envisioned.

348. We first conclude that where there is no overlap between the EBS and BRS licensees, we will free up the grandfathered E and F channel EBS licensees, grant these licensees a GSA, and allow them to modify or assign their license. This change will allow EBS licensees to take full advantage of their EBS spectrum without any corresponding harm to BRS licensees.

349. Next we conclude, in the case where the GSAs of a grandfathered EBS and BRS

⁸⁵⁹ TVC Comments at 5.

⁸⁶⁰ *Id.* at 5-6.

⁸⁶¹ NY3G Reply Comments at 9, citing Hazlett Study at 14-15.

⁸⁶² TVC Reply Comments at 7.

⁸⁶³ *Id.* at 9.

⁸⁶⁴ TVC Comments at 11, 14.

⁸⁶⁵ NY3G Reply at 8 (citing 1983 *E and F Group Reallocation Order* ¶ 54).

⁸⁶⁶ NY3G Reply at 8 (citing 1983 *E and F Group Reallocation Order* ¶¶ 62, 101).

⁸⁶⁷ *See supra* ¶¶ 336 - 338.

licensees overlap, but that overlap is 50% or less, we will divide the GSAs by “splitting the football,” as we do with other overlapping GSAs.⁸⁶⁸ Both the BRS and EBS licensees will be free to add, modify, and remove facilities within their GSAs, consistent with our new technical rules. In addition, the grandfathered EBS facility will be free to assign its license.

350. In the case of an overlap that is greater than 50% in service areas, we conclude that different treatment is warranted. Where there is a major overlap of service areas, splitting the football may no longer be the best solution for accommodating the needs of both licensees. To encourage a voluntary settlement of this issue between the affected parties, we will establish a ninety-day mandatory negotiation period where both the BRS and EBS licenses have an explicit duty to work to accommodate each other's communications requirements. If, at the end of ninety days the parties cannot reach a mutual agreement, the Commission then will split the football on its own accord. As NY3G indicated, the affected co-channel licensees have had two decades to negotiate a solution to this problem. Because the issues are not new to the affected parties, we believe that a ninety-day period is appropriate. In addition, we also decline to afford protection to grandfathered EBS E and F group receive sites that fall outside the new GSAs. We believe that providing interference protection to receive sites outside the new GSAs could be unduly disruptive to those licensees who have a GSA that encompasses an out-of-area receive site and could hinder the deployment of new services. However, as with receive sites located inside the former PSA but outside the new GSA, we will allow continued service of such receive sites on a secondary, non-interference basis.⁸⁶⁹

351. The solution adopted above is consistent with the comments we received in the proceeding, with the exception of NY3G. For instance CTN, NIA, Nextel, and WCA recommend that the Commission split the football.⁸⁷⁰ CTN and NIA disagree with NY3G that special requirements should be adopted to deal with NY3G's situation.⁸⁷¹ Additionally, TVC believes in the case of substantial overlap, that the Commission should provide a defined period of time for co-channel EBS and BRS stations with GSA overlaps to resolve the transition to the new band plan through settlement.⁸⁷² In the event that voluntary settlements do not occur, TVC advocates splitting the football.⁸⁷³ IIT supports TVC's position.⁸⁷⁴ The solution we adopt today is also consistent with the 1983 *E and F Group Reallocation Order*, which called for protection of EBS operations in perpetuity because EBS licensees will be able to operate under any of the three scenarios set out above.⁸⁷⁵ Importantly, the solution we adopt is consistent with the Commission's statement in 1983 that it expected that the BRS permittees and the EBS users of the reallocated channels would negotiate in good faith to mutually accommodate each others'

⁸⁶⁸ 47 C.F.R. § 27.1206.

⁸⁶⁹ See *BRS/EBS R&O* 19 FCC Rcd 14165, 14194 ¶¶ 66-67.

⁸⁷⁰ CTN/NIA Comments at 5; WCA Comments at 26; Nextel Reply Comments at 13; see also ¶ 344 *supra*.

⁸⁷¹ CTN/NIA Reply Comments at 3; see also ¶ 344 *supra*.

⁸⁷² TVC Comments at 16; see also ¶ 346 *supra*.

⁸⁷³ TVC Comments at 17; see also ¶ 346 *supra*.

⁸⁷⁴ IIT Reply Comments at 14; see also ¶ 346 *supra*.

⁸⁷⁵ See *E and F Group Reallocation Order*, 94 FCC 2d 1203, 1247-8 ¶ 110; see also ¶ 336 *supra*.

communications requirements.⁸⁷⁶

352. We reject NY3G's proposal to split the channels and give the LBS and UBS channels to the BRS licensee while limiting the EBS licensee to the MBS channel.⁸⁷⁷ We do not believe that limiting the EBS licensee to one MBS channel is an equitable solution. NY3G's proposal is based on the unwarranted assumption that EBS licensees are unable or unwilling to utilize the LBS and UBS channels. The record in this proceeding convincingly demonstrates that EBS licensees are committed to using the LBS and UBS to provide a variety of educational and other services. Furthermore, we do not believe that restricting grandfathered EBS licensees to one six megahertz channel is consistent with the Commission's prior commitments to protect EBS operations in perpetuity.

353. We also reject NY3G's argument that splitting the football would not work in the New York market because it would create a large "exclusion zone" where neither the BRS nor the EBS licensee could provide service.⁸⁷⁸ NY3G defines its exclusion zone based upon its assumption that a base station could not be located any closer than 7.8 kilometers from a GSA border.⁸⁷⁹ In fact, the record demonstrates that even without cooperation between the parties, a base station could be located as close as 0.61 miles from the border of a GSA and 0.9 miles from another base station in compliance with our new technical rules.⁸⁸⁰ Indeed, if the parties cooperate with each other and use engineering techniques such as beam tilt and antenna shielding, base stations could be located even more closely together.⁸⁸¹ The problems NY3G points out with respect to splitting the football are not unique to grandfathered E and F EBS stations that overlap with co-channel BRS stations. No other party, however, has suggested that the splitting the football methodology adopted by the Commission cannot work. Indeed, RNYE believes splitting the football is a viable approach in New York City although its GSA is more constrained than NY3G's GSA.⁸⁸² By NY3G's own calculations, splitting the football would provide NY3G with an exclusive GSA covering over 8 million people.⁸⁸³ We believe this exclusive GSA is a major benefit to NY3G.

354. The solution we adopt today permits grandfathered E and F channel EBS licenses, which have been providing service for many years, to modernize their systems to better serve the public. For instance, EBS licensees will be able to transition to low-power cellularized operations. Granting this type of flexibility is consistent with the *BRS/EBS R&O's* geographic area licensing and greater flexibility approaches. The solution we adopt today further promotes secondary markets transactions as well as

⁸⁷⁶ See *E and F Group Reallocation Order*, 94 FCC 2d 1203, 1247-8 ¶ 110; see also ¶ 336 *supra*.

⁸⁷⁷ See *Ex Parte* Letter from Bruce D. Jacobs, Counsel, NY3G to Marlene H. Dortch, Federal Communications Commission (dated Oct. 17, 2005) at Appendix B.

⁸⁷⁸ See NY3G Reply Comments.

⁸⁷⁹ NY3G Reply Comments, Exhibit A at 2-3.

⁸⁸⁰ See, e.g., *Ex Parte* Letter from Lawrence R. Krevor, Vice President Government Affairs to Sprint Nextel Corporation to Marlene H. Dortch, Federal Communications Commission (dated Oct. 27, 2005).

⁸⁸¹ *Id.*

⁸⁸² RNYE Comments at 4.

⁸⁸³ NY3G Reply Comments, Exhibit A at 2.

opportunities to obtain funds for education. Additionally, it gives commercial operators more spectrum, thereby moving closer to the goal of achieving the availability of new broadband technologies to all Americans as quickly as possible, while providing licensees with the flexibility to form unique solutions to problems of interference on a case-by-case basis, taking into account the special technological needs of each party. Finally the solution adopted today is an equitable solution that does not favor one class of licensees over another.

4. Four channel rule

355. *Background.* The Commission's Four-Channel Rule limits an EBS licensee "to the assignment of no more than four . . . channels for use in a single area of operation, all of which . . . should be selected from the same [channel] Group."⁸⁸⁴ This rule was enacted to prohibit applicants from reserving additional channels by applying for more channels than they intended to construct within a reasonable time, simply for the purpose of reserving additional channels.⁸⁸⁵ In the *FNPRM*, the Commission noted that the continued application of the Four-Channel Rule is inconsistent with the transition rules because licensees wishing to continue high-powered operation may need channels from more than one channel group. Thus, to promote the transition of the 2.5 GHz band and the ability of licensees to "swap" channels in the same geographic region, the Commission eliminated the four-channel restriction post-transition. In addition, the Commission sought comment on whether the four channel restriction should be eliminated pre-transition as well.

356. Most commenters who commented on this issue recommend that the Commission remove the four-channel restriction pre-transition.⁸⁸⁶ Generally, they indicate that the continued application of the four-channel rule does not benefit the public.⁸⁸⁷ They argue that removing the four-channel restriction would further the transition by enabling EBS licensees to "swap" channels in a particular geographic area and permit an EBS licensee to obtain more than one MBS channel.⁸⁸⁸ Commenters further argue that lifting the restrictions would further the transition by permitting EBS licensees to assign their licenses to other EBS licensees. They indicate that this furthers the transition in those instances in which an EBS licensee does not wish to go through the transition process assigns its license to another EBS licensee in the same geographic area that is willing to go through the transition process.⁸⁸⁹ They also indicate that removing the four-channel restriction will enable EBS licensees to obtain as much spectrum as they need

⁸⁸⁴ 47 C.F.R. § 74.902(d)(1) (2004).

⁸⁸⁵ *Id.*

⁸⁸⁶ See CTN/NIA PFR at 21-22; HITN PFR at 9; HITN Comments at 9-10; C&W Comments at 5; Pace Comments at 5; DBC Comments at 5; SpeedNet Comments at 5; WDBS Comments at 5; Clearwire Comments at 7; IMWED Comments at 13.

⁸⁸⁷ IMWED Comments at 13.

⁸⁸⁸ See CTN/NIA PFR at 22.

⁸⁸⁹ See C&W Comments at 5; Pace Comments at 5; DBC Comments at 5; SpeedNet Comments at 5; WDBS Comments at 5.

to provide broadband and high-powered video service to their students.⁸⁹⁰

357. NY3G and BellSouth oppose lifting the four-channel restriction.⁸⁹¹ Specifically, NY3G maintains that the Commission should retain the rule because it promotes diversity of programming and ownership.⁸⁹² Moreover, NY3G argues that the Commission may waive the rule for those licensees that need more than one channel group in a particular geographic location and modify the current rule to permit an EBS licensee to have more than one MBS channel.⁸⁹³ BellSouth notes that the Commission has described the limitation as a useful way “to provide as many educators as possible with the opportunity to operate EBS systems that meet their educational needs,”⁸⁹⁴ and suggests that this objective will be more important as the range of services available on EBS spectrum expands.⁸⁹⁵ BellSouth contends, however, that the limit should not apply where an EBS licensee with a GSA desires to acquire co-channel spectrum in the surrounding “white area,” and also that an existing EBS licensee should not be prohibited from acquiring a co-channel license where a “main station transmitter” or base station is located within the same “area of operation” as the surrounding “white area.”⁸⁹⁶

358. *Discussion.* In light of the record on this issue, we agree with IMWED that retaining the rule pre-transition is not in the public interest. The purpose of the rule has been “to provide as many educators as possible with the opportunity to operate [EBS] systems that meet their educational needs.”⁸⁹⁷ While EBS was limited to video broadcast uses at the time the rule was established, given the wider range of services for which EBS can now be used and the changes to our leasing rules, we believe, along with the overwhelming majority of commentators, that the four-channel rule may unduly limit the ability of educational institutions and organizations to take full advantage of the potential of EBS. We agree with C&W, Pace, DBC, SpeedNet, and WDBS that educational entities that are interested in acquiring such spectrum are likely to seek to develop services using such spectrum, which will keep such spectrum from lying fallow. We also agree with commenters such as CTN, NIA, and HITN that retention of the rule could undermine transition planning, which in certain instances may require licensees to swap MBS for UBS/LBS channels or vice versa. At the same time, to the extent that EBS spectrum is likely to be sold or auctioned, eliminating the four-channel rule pre-transition will allow the spectrum to go to its highest value use. In addition, as HITN noted, historically, the Commission has frequently waived the four-channel rule for licensees “showing a modest desire, if not documented need, for additional channels

⁸⁹⁰ See C&W Comments at 5; Pace Comments at 5; DBC Comments at 5; SpeedNet Comments at 5; WDBS Comments at 5.

⁸⁹¹ NY3G Comments at iv. Procedurally, NY3G notes that this proposal is improperly raised in petitions for reconsideration, as the rule question was only raised in the *FNPRM*. NY3G PFR at 8.

⁸⁹² NY3G Comments at 21; NY3G PFR at 8.

⁸⁹³ NY3G Comments at 21.

⁸⁹⁴ BellSouth Reply Comments at 15, citing *FNPRM* at ¶ 346.

⁸⁹⁵ BellSouth Reply Comments at 15.

⁸⁹⁶ *Id.*

⁸⁹⁷ Amendment of Part 74 of the Commission’s Rules with Regard to the Instructional Television Fixed Service, MM Docket No. 93-24, *Report and Order*, 10 FCC Rcd 2907, 2914 ¶ 39 (1995).

within a market.”⁸⁹⁸

359. We appreciate the point raised by NY3G and BellSouth that the four-channel rule was designed in part to promote diversity of programming and ownership. In seeking comment in the *FNPRM*, however, the Commission asked commenters supporting retention to “explain why they believe the rule is appropriate and necessary given the current market and regulatory conditions.”⁸⁹⁹ We do not believe, nor have NY3G and BellSouth demonstrated, that elimination of the rule, already planned for markets that have transitioned, will limit diversity of programming or ownership. Indeed, as noted above, programming diversity could well be enhanced by elimination of the rule. Moreover, both NY3G and BellSouth admit that continued exceptions and waivers of the rule will likely be necessary, a process we believe is best avoided in this context. NY3G and BellSouth have not demonstrated that, in the context of the current market and regulatory conditions, maintaining the four-channel rule is necessary or in the public interest. Accordingly, in today’s action we have revised Section 27.5(i)(3) of the Commission’s rules as requested by CTN, NIA, and HITN.⁹⁰⁰

5. Wireless Cable Exception

360. *Background.* In 1991, as part of the Commission’s effort to enhance the potential of wireless cable as a competitive force in the multichannel video distribution marketplace, the Commission adopted a proposal to allow wireless cable entities to be licensed on vacant EBS channels if certain requirements were met.⁹⁰¹ These requirements were designed to ensure that wireless cable use did not have a negative impact on EBS.⁹⁰² Thus, a commercial operator could be licensed on EBS channels if at least 8 EBS channels remain available in the community;⁹⁰³ there are no co-channel EBS stations within 50 miles of the proposed system;⁹⁰⁴ and an EBS applicant has not applied for the same channels.⁹⁰⁵ In the *FNPRM*, the Commission concluded that the wireless cable exception would not apply post-transition, that existing licensees should be grandfathered, and that grandfathered licenses may continue to be renewed and assigned.⁹⁰⁶ In addition, the Commission sought comment on whether the restriction should

⁸⁹⁸ HITN Comments at 9.

⁸⁹⁹ *FNPRM*, 19 FCC Rcd 14165, 14292 ¶ 346.

⁹⁰⁰ CTN/NIA PFR at 22; HITN PFR at 9; HITN Comments at 9.

⁹⁰¹ Amendment of Parts 21, 43, 74, 78, and 94 of the Commission’s Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz bands Affecting Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, and Cable Television Relay Service, Gen. Docket No. 90-54, *Second Report and Order*, 6 FCC Rcd 6792 at ¶ 4 and ¶¶ 42-58 (1990) (*2.1 and 2.5 GHz Second Report and Order*); see also *2.1 and 2.5 GHz Second Report and Order* at Appendix C; 47 C.F.R. § 74.990 (1991).

⁹⁰² 47 C.F.R. § 74.990.

⁹⁰³ 47 C.F.R. § 74.990(a).

⁹⁰⁴ *Id.*

⁹⁰⁵ 47 C.F.R. § 74.990(e).

⁹⁰⁶ *FNPRM*, 19 FCC Rcd 14165, 14293 ¶¶ 349-350.

be removed pre-transition.⁹⁰⁷

361. CTN, NIA, EBS Parties, WDBS, and WCA concur with the proposal to eliminate the wireless cable exception and grandfather existing licensees.⁹⁰⁸ They assert that the exception is irrelevant because it is clear that no new EBS channels will be available or needed for future commercial video use in this manner, whether prior to or after transitions in particular markets.⁹⁰⁹ HITN asserts that the wireless cable exception was created to address the significant blocks of EBS spectrum that remained unlicensed.⁹¹⁰ Inasmuch as this condition no longer exists, the exception should be eliminated.⁹¹¹ HITN similarly surmises that the remaining blocks of vacant EBS spectrum are not sufficient both to permit commercial use and to meet the requirement that eight vacant EBS channels remain available in a market.⁹¹²

362. Choice, DBC, Nextel, and Clearwire oppose the elimination of the wireless cable exception because they believe that commercial licensees still need access to EBS spectrum.⁹¹³ Choice, an entity with demonstrated need for more spectrum as well as an expansion plan, maintains that elimination of the wireless cable exception would severely limit Choice's ability to develop new services and provide additional programming. Clearwire maintains that the wireless cable rule is necessary for new entrants that do not have nearly enough spectrum to deploy wireless broadband services.⁹¹⁴ Furthermore, Choice, Clearwire, and Sprint maintain that the right to obtain vacant EBS channels under the wireless cable exception was included in the bundle of rights that BRS BTA licensees acquired at auction.⁹¹⁵ Choice asserts that large swaths of EBS spectrum have remained unused in certain areas for more than 10 years and the wireless cable exception permits the spectrum to be used instead of laying fallow.⁹¹⁶

363. BloostonLaw asks the Commission to clarify that grandfathering existing commercial EBS licenses including license transfers and modifications.⁹¹⁷

⁹⁰⁷ *FNPRM*, 19 FCC Rcd 14165, 14293 ¶ 350.

⁹⁰⁸ CTN/ NIA Comments at 18-19; WCA Comments at 30; EBS Parties Reply Comments at 5-6; WDBS Reply Comments at 4.

⁹⁰⁹ CTN/NIA Comments at 19; WCA Comments at 30.

⁹¹⁰ HITN Comments at 10.

⁹¹¹ *Id.*

⁹¹² *Id.*

⁹¹³ DBC Reply Comments at 3; Nextel Reply Comments at 11.

⁹¹⁴ Clearwire Comments at 21.

⁹¹⁵ Choice Reply Comments at 2-3; Clearwire Comments at 21-22; Sprint Reply Comments at 16.

⁹¹⁶ Choice Reply Comments at 2.

⁹¹⁷ BloostonLaw Comments at 7.

364. *Discussion.* We agree with the commenters who argue that the continued application of the wireless cable exception is unnecessary in geographic areas that have not transitioned, and thus, we eliminate it pre-transition. We disagree with commenters who maintain that they need the wireless cable exception to gain access to spectrum. We believe that the changes we have made to our rules, especially the inclusion of BRS and EBS in our secondary market rules, provide commercial operators with sufficient access to BRS spectrum. Moreover, we do not believe, in light of the fact that EBS licensees have been unable to apply for new stations since 1995, that there will be sufficient spectrum available that will meet the requirements of the wireless cable exception. Nor do we believe, due to changes in technology, that commercial licensees need access to EBS spectrum to provide wireless cable service. Finally, we further note that the wireless cable exception could be difficult to apply in the context of geographic licensing. If, in the future, it becomes apparent that elimination of this rule is preventing entities from putting fallow spectrum to use, we reserve the right to determine whether this rule should be reinstated.

365. With regard to the rights of BTA auction winners, we disagree with commenters who claim that BTA auction winners bought the right to obtain vacant EBS channels under the wireless cable exception. Instead, we agree with the analysis presented by IMWED.⁹¹⁸ BRS BTA authorization holders bought the right to forfeited BRS spectrum. Thus, they did not buy the right to EBS channels under the wireless cable exception because the vacant channels are not BRS channels. Vacant EBS channels, as IMWED correctly points out, revert to EBS white space and are not converted to BRS. We also reject WCA's recommendation to reclassify the facilities of grandfathered commercial EBS licensees as BRS. Should a commercial EBS licensee forfeit its license, the spectrum reverts to EBS white space. Thus, the facilities of commercial EBS licensees remain EBS facilities and not BRS facilities.

366. As we stated in the *FNPRM*,⁹¹⁹ we will grandfather existing licenses granted pursuant to these rules, and such licenses may continue to be renewed and assigned. In response to BloostonLaw's concerns, we note that transfers of control of such licenses will be permitted, as well as modifications to these licenses.

6. Regulatory Fees

367. *Background.* In the *FNPRM*, the Commission sought comment on a new methodology to assess regulatory fees based on the scope of a BRS licensee's authorized spectrum use rather than the current approach of assessing a flat fee per call sign.⁹²⁰ The Commission also sought comment on its tentative conclusion to apply this updated methodology to EBS licensees to the extent they were not statutorily exempt from regulatory fees because of their status as governmental or nonprofit entities.⁹²¹ Specifically, the Commission sought comment on a proposed fee methodology that would account for the benefits of an EBS or BRS spectrum authorization based on metrics, such as covered population (MHz/pops) or area (MHz/km²), to account for the bandwidth and the potential population or area that

⁹¹⁸ See IMWED Reply Comments at 11.

⁹¹⁹ *FNPRM*, 19 FCC Rcd 14165, 14293 ¶ 350.

⁹²⁰ *FNPRM*, 19 FCC Rcd 14165, 14295-14297 ¶¶ 355-359.

⁹²¹ *Id.* at 14295 ¶¶ 355.

could be served.⁹²²

368. With regard to EBS licensees, commenters argue that it is neither lawful nor reasonable for the Commission to assess regulatory fees on EBS licensees.⁹²³ Specifically, they argue that because the Commission has not changed the eligibility standards for EBS licensees, Section 9(h) of the Act⁹²⁴ prohibits regulatory fees from being charged against governmental entities or nonprofit entities (apart from certain few grandfathered wireless cable entities which obtained EBS licenses pursuant to the old wireless cable exemption).⁹²⁵

369. With regard to BRS licensees, commenters recommend that the Commission adopt a formula based on MHz/pops, adopt a sliding scale similar to the Commission's scale for broadcast television stations, or assess a flat fee per call sign. Commenters supporting a formula based on MHz/pops argue that such a formula will ensure that similarly situated licensees will be similarly treated.⁹²⁶ These commenters recommend, however, that if the Commission were to adopt a formula based on MHz/pops, the Commission should also establish clear standards to ensure that BRS licensees can readily determine the population within their GSA.⁹²⁷ In this connection, WCA recommends that licensees be required to maintain sufficient information in ULS so that GSA boundaries can be ascertained and that the Commission use the results of the 2000 U.S. Census to determine population counts.⁹²⁸ Nextel and BellSouth maintain, however, that if the Commission does not clearly define a licensee's GSA boundary and establish a common measure to determine population, they would not support a formula based on MHz/pops, but instead would support the current procedure of assessing a regulatory fee based on call signs.⁹²⁹

370. Grand Wireless recommends that the Commission adopt a sliding scale, similar to the Commission's scale for annual fees for broadcast television stations, though with fewer categories.⁹³⁰ Grand Wireless maintains that such a system would be more equitable to rural operators than a formula based on population.⁹³¹ WCA maintains that the sliding scale approach is not more equitable because there are too few broadcast categories, only five, and the sliding scale approach fails to account for the

⁹²² *Id.* at 14296-14297 ¶¶ 358-359.

⁹²³ See CTN/NIA Comments at 19-20; HITN Comments at 11-12; WCA Comments at 31; C&W Reply Comments at 3; DBC Reply Comments at 3; SpeedNet Reply Comments at 3; WDBS Reply Comments at 4.

⁹²⁴ 47 U.S.C. § 159(h).

⁹²⁵ CTN/NIA Comments at 19-20; HITN Comments at 11-12, *citing* 47 U.S.C. § 159(h).

⁹²⁶ See Choice Comments at 2-3; WCA Comments at 32; Clearwire Reply Comments at 20.

⁹²⁷ Choice Reply Comments at 3; Nextel Comments at 11; WCA Comments at 32-33; BellSouth Reply Comments at 19; Clearwire Reply Comments at 20.

⁹²⁸ WCA Comments at 33; WCA PFR at 52-53.

⁹²⁹ Nextel Comments at 12; BellSouth Reply Comments at 19.

⁹³⁰ Grand Wireless Comments at 2.

⁹³¹ See *id.*

fact that different licensees are authorized to utilize different amounts of spectrum.⁹³²

371. C&W, DBC, SpeedNet, and WDBS argue that regulatory fees for BRS stations should be paid per call sign to simplify the payment process.⁹³³ WCA maintains, however, that under this system a licensee authorized to use a single 6 MHz channel usually pays the same regulatory fee as a licensee of a 24 MHz channel group because both are generally covered by a single call sign.⁹³⁴

372. Finally, WCA recommends that the Commission not adopt a formula based on MHz/km², it would force rural licensees to pay regulatory fees disproportionate to the number of persons actually served.⁹³⁵

373. *Discussion.* With regard to EBS licensees, we agree with commenters that we should not impose regulatory fees on EBS licensees. We note that governmental entities are statutorily exempt from fees under Section 8 of the Communications Act,⁹³⁶ and both governmental entities and nonprofit entities are statutorily exempt from Section 9 fees.⁹³⁷ EBS licensees by definition fit within these statutory exemptions, with the exception of entities licensed pursuant to the wireless cable exception.⁹³⁸

374. With regard to BRS licensees, we conclude that the regulatory fee structure for BRS should be changed as proposed in the *FNPRM* to reflect the scope of a licensee's authorized spectrum use and the benefits it receives under its spectrum authorization.⁹³⁹ We believe that the record supports our conclusion to adopt a formula based on simple calculations and that fixed variables should be used as much as possible.⁹⁴⁰ Thus, the actual fee owed will be easily discernible.⁹⁴¹ Furthermore, we believe that the public interest would be better served by assessing BRS regulatory fees based on the scope of a licensee's authorized spectrum use and the benefits they receive under their spectrum authorization, rather than pursuant to the current approach of assessing a flat fee per call sign. Although the current methodology is simple, we agree with WCA that under such a system a licensee that is licensed to use a 6

⁹³² WCA Reply Comments at 37.

⁹³³ C&W Reply Comments at 3; DBC Reply Comments at 3; SpeedNet Reply Comments at 3; WDBS Reply Comments at 4.

⁹³⁴ WCA Reply Comments at 37.

⁹³⁵ WCA Comments at 32.

⁹³⁶ 47 U.S.C. § 158(d)(1).

⁹³⁷ 47 U.S.C. § 159(h).

⁹³⁸ *FNPRM*, 19 FCC Rcd 14165, 14294-14295 ¶¶ 354-355.

⁹³⁹ *Id.* at 14296 ¶ 357.

⁹⁴⁰ *Id.* at 14295-14296 ¶ 356.

⁹⁴¹ If the total amount of regulatory fees that Congress requires us to collect varies each year, which in the past has increased on average by no more than 11.2 percent, this would be the only variable that would be less predictable. This average does not reflect the fee increase from FY 1994 to FY 1995. The FY 1994 fees covered a partial year and the percentage increase in fees from FY 1994 to FY 1995 – 84.76 percent -- was therefore atypically high.

MHz channel pays the same regulatory fees as a licensee that is licensed to use a 24 MHz channel group because both are licensed under one call sign.⁹⁴² Moreover, we believe that the current methodology for assessing regulatory fees is particularly onerous for rural operators because, on a per population basis, the fees can amount to multiple times that of fees paid by urban licensees.

375. Commenters are nearly unanimous in recommending adoption of a MHz-based formula, specifically a MHz/pops metric. We note, however, that several commenters indicated that clear standards need to be established so that BRS licensees may readily and in a consistent manner determine the population in their covered areas, as well as ascertain these areas' boundaries.⁹⁴³ In view of this, we find significant advantages to the alternative proposal suggested in the *FNPRM*,⁹⁴⁴ and supported by Grand Wireless,⁹⁴⁵ that we adopt a sliding scale for fees, similar to the scale for annual fees for broadcast television stations based upon population, but simplified compared with the number of broadcast television categories. Clearly under such a system the necessary calculations would be simpler than having to use a MHz/pops formula. Furthermore, establishing a tiered formula by market size would eliminate the difficulties involved in making the calculations necessary pursuant to a MHz/pops formula. Such a system would clearly meet our desire for a methodology that utilizes simple calculations and fixed variables. Moreover, we believe a sliding fee would more equitably distribute fees than a formula based on MHz/pops.

376. We shall adopt, therefore, a MHz-based formula with tiered fees by markets, similar to our annual scale for broadcast television stations, but on a somewhat more simplified scale. Annual fees will be charged on a per-megahertz basis based upon the size of the BRS licensee's BTA.⁹⁴⁶ For a BRS licensee licensed by GSA, its BTA is the BTA where the geographic center point of its GSA is located. We shall assess a per-megahertz fee in three categories, BTA ranked by population size those ranked 1-60 paying the highest fee, those ranked 61-200 paying a lesser fee, and those ranked 201-493 paying the lowest fee.⁹⁴⁷ We believe that, WCA's objections notwithstanding, that the benefits of such a MHz formula tiered by markets, which eliminates the difficulties and complexities involved in determining and calculating populations, would better serve all operators, while mitigating impact on rural operators, already stretched thin by low population density.

7. Gulf of Mexico Proceeding

377. *Background.* In the *NPRM*, the Commission incorporated the docket of the ongoing Gulf of Mexico proceeding, wherein the Commission proposed to establish a GSA in the Gulf of Mexico known as the "Gulf Service Area," subject to the same rules as the service areas established in the

⁹⁴² See WCA Reply Comments at 37.

⁹⁴³ See, e.g., Choice Reply Comments at 3; Nextel at 11; WCA Comments at 32-33; BellSouth Reply Comments at 19; Clearwire Reply Comments at 20.

⁹⁴⁴ *FNPRM*, 19 FCC Rcd 14165, 14296-14297 ¶ 359.

⁹⁴⁵ See Grand Wireless at 2.

⁹⁴⁶ See *supra* ¶ 62 for a discussion of BTAs.

⁹⁴⁷ BTAs ranked 1-60 generally have a population greater than 1 million, BTAs ranked 61-200 generally have a population 250,000 to 1 million, and BTAs ranked 201-493 generally have a population of less than 250,000.

BRS/EBS Report and Order, with certain limitations.⁹⁴⁸ This rulemaking was initiated by Gulf Coast MDS Service Company (“Gulf Coast”), which sought to have the Gulf of Mexico treated as one service area with BRS and EBS licenses assigned by competitive bidding.⁹⁴⁹ PetroCom License Corporation (“PetroCom”), Gulf Coast’s successor in interest, requested that the Commission establish a service area in the Gulf of Mexico using the *Report and Order* as a model.⁹⁵⁰

378. The Commission noted in the *NPRM* that the Gulf Service Area does not have a significant population center and is based primarily on the geographic confines of the Gulf and on the likely commonality of commercial interests among the potential users in the Gulf.⁹⁵¹ At the time of the *NPRM*, the Commission adopted a proposal to create a Gulf Service Area.⁹⁵² While the Commission proposed to create the Gulf Service Area for MDS services, it also proposed in the *Gulf Notice* to exclude all EBS channels from licensing in the Gulf service area.⁹⁵³ The Commission’s proposal was based on the fact that EBS licensees had not expressed an interest in seeking licenses to operate in the Gulf of Mexico, the area most likely had little need for educational service, and the requested commercial use did not require the full bandwidth available in the 2500-2690 MHz band.⁹⁵⁴ The Commission, in the *NPRM*, sought comment on this proposal and on whether we should consider unlicensed uses in the Gulf of Mexico.⁹⁵⁵ The Commission did not receive comment on these proposals, and therefore renewed its request for feedback on these issues in the *FNPRM*.⁹⁵⁶

⁹⁴⁸ Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, *Notice of Proposed Rulemaking*, WT Docket No. 02-68, 17 FCC Rcd 8446 (2002) (*Gulf NPRM*). That proceeding was incorporated alongside the matter of Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Services in the 2150-2162 and 2500-2690 MHz Bands. *NPRM*, 18 FCC Rcd 6722, 6759 ¶ 91. See *Gulf NPRM*, 17 FCC Rcd at 8447 ¶ 2.

⁹⁴⁹ Petition for Rulemaking of Gulf Coast MDS Service Company (Gulf Coast Petition) (May 21, 1996). See also *NPRM*, 18 FCC Rcd 6722, 6759 ¶ 91. See also Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service, *Report and Order*, 10 FCC Rcd 9589, 9608-17 ¶¶ 34-55 (1995) (*MDS Report and Order*).

⁹⁵⁰ See Amended Petition for Rulemaking of PetroCom License Corporation at 4 (Nov. 23, 1998). “In the *MDS Report and Order*, the Commission adopted a licensing plan under which it assigned, through a simultaneous multiple round bidding process, one MDS authorization for each of the 487 BTAs and six additional geographic areas” as defined in Rand McNally’s 1992 *Commercial Atlas and Marketing Guide*. *NPRM*, 18 FCC Rcd 6722, 6759 ¶ 89, n.190 (citing *MDS Report and Order*, 10 FCC Rcd at 9608-09 ¶¶ 34-37). BTA authorization holders may construct facilities to provide service over any usable MDS channel within the BTA, although, such channels are only usable subject to the Commission’s interference standards. *MDS Report and Order*, 10 FCC Rcd 9589, 9608-18 ¶¶ 34-55.

⁹⁵¹ See *NPRM*, 18 FCC Rcd 6722, 6761 ¶ 95.

⁹⁵² See *id.* at 6760-6761 ¶ 93.

⁹⁵³ See *Gulf NPRM*, 17 FCC Rcd 8446, 8450 ¶ 13. See also *NPRM*, 18 FCC Rcd 6722, 6761 ¶ 94.

⁹⁵⁴ See *Gulf NPRM*, 17 FCC Rcd 8446, 8450 ¶ 13.

⁹⁵⁵ See *NPRM*, 18 FCC Rcd 6722, 6761 ¶ 94.

⁹⁵⁶ See *FNPRM*, 19 FCC Rcd 14165, 14298 ¶ 362.

379. BellSouth takes the position that there is no need to delay establishing the boundaries of the Gulf Service Area and interference standards that protect incumbent operators.⁹⁵⁷ BellSouth proposes, first, that the GSA of any land-based BRS and EBS station must be grandfathered.⁹⁵⁸ BellSouth notes that when the Commission auctioned MDS BTAs in 1996, incumbent site-specific licensees were afforded interference protection from holders of BTA authorizations,⁹⁵⁹ and argues that the same principle should restrict licensees in the Gulf Service Area from suppressing the size of incumbent GSAs, and that adopting such a rule now will enable incumbent land-based licensees to develop business plans that incorporate coastal waters lying within the GSA.⁹⁶⁰ Second, BellSouth agrees with the Commission's earlier proposal to adopt the same boundary definitions the Commission adopted in establishing the WCS service.⁹⁶¹ As applied to BRS, BellSouth states that the borders of BTA authorizations would extend to the limit of the U.S. territorial waters in the Gulf of Mexico: 12 nautical miles from the coastline.⁹⁶² BellSouth contends that this boundary definition will afford land-based BRS and EBS licensees greater flexibility in locating base stations for broadband services, absent which land-based incumbents would be forced to position their base stations at inferior sites, which could preclude service to certain areas.⁹⁶³ BellSouth further contends that such service could be delivered sooner under existing land-based authorizations than under authorizations which the Commission may, at some future date, award by auction.⁹⁶⁴ In cases in which the BTA boundary does not extend to the 12-mile distance, BellSouth states that it supports WCA's proposal to create a Gulf Coastal Zone between the BTA boundary and the Gulf Service Area boundary that could be served by both the adjacent land-based BTA licensee as well as any Gulf Service Area licensee the Commission may authorize, subject to applicable interference protection standards.⁹⁶⁵

380. HITN supports the issuance of EBS frequency authorizations serving the waters of the Gulf of Mexico, provided that coastal EBS licensees are not prejudiced by the introduction of such new authorizations.⁹⁶⁶ BellSouth, in reply to HITN, retorts that HITN has failed to justify a need for EBS licensing in the Gulf.⁹⁶⁷ BellSouth argues that: (1) there are no educational institutions located in the Gulf; (2) there is no demonstrated need for institutions in the Gulf; and (3) there is no reason why other spectrum, such as satellite or BRS, could not serve such a need if it were to arise in the future. Without responding to these threshold issues, BellSouth asserts that the Commission should not make EBS

⁹⁵⁷ BellSouth Comments at 16.

⁹⁵⁸ *Id.* at 17.

⁹⁵⁹ BellSouth Comments at 17 (citing 47 C.F.R. § 21.938(b)(2)).

⁹⁶⁰ BellSouth Comments at 17.

⁹⁶¹ BellSouth Comments at 17, (citing *FNPRM* at ¶ 363, *WCS Order*, 12 FCC Rcd at 10816).

⁹⁶² BellSouth Comments at 17.

⁹⁶³ *Id.*

⁹⁶⁴ *Id.*

⁹⁶⁵ *Id.* at 17-18.

⁹⁶⁶ HITN Comments at 11.

⁹⁶⁷ BellSouth Reply Comments at 18-19.

available in the Gulf of Mexico.⁹⁶⁸

381. WCA argues that, because no party has provided any indication that there is any demand for use of the 2.5 GHz band in the Gulf waters, the Commission should refrain from deciding at this juncture how much spectrum in the 2.5 GHz band to license in the Gulf or when to conduct an auction for such spectrum.⁹⁶⁹ WCA contends, however, that the Commission should adopt rules to govern operations in the Gulf and land areas near the Gulf, because such rules are essential to provide land-based licensees with the certainty they need to design and implement wireless broadband systems.⁹⁷⁰ WCA states that the Commission must both fully protect land-based operations and not hamper the deployment of land-based systems designed to serve the population centers that are within either the GSAs afforded incumbent BRS/EBS licensees or holders of the BRS BTA authorizations auctioned in 1996.⁹⁷¹ Nextel argues that if a Gulf Service Area is indeed established, its boundaries should end well before the shoreline, and should exclude the larger of a land-based BRS/EBS licensee's authorized GSA or the area twelve miles from the shoreline at mean high tide.⁹⁷² Similarly, Sprint states that the unique propagation characteristics of radio signals over large bodies of water render any RF activity in the Gulf region a potential interference threat to land-based operations.⁹⁷³

382. WCA urges the Commission to refrain from determining how much spectrum should be licensed within the Gulf Service Area and to refrain from scheduling any auction unless there is a demonstrable interest in utilizing the Gulf of Mexico based facilities.⁹⁷⁴ WCA points out that the Commission itself in the *NPRM* has recognized that it has insufficient data to resolve issues concerning the amount of spectrum to license in the Gulf Service Area, and absolutely nothing was submitted in response to the *NPRM* or the *FNPRM* that addressed the issue.⁹⁷⁵ WCA takes the position that refraining from determining how much spectrum to license in the Gulf and when to do so would be fully consistent with the Commission's decision to defer any auction of broadband PCS spectrum in the Gulf. WCA notes that the Commission concluded that there was no basis in the record for actually licensing PCS in the Gulf despite the adoption of applicable rules.⁹⁷⁶

383. *Discussion.* We agree with WCA that refraining from determining how much spectrum to license in the Gulf of Mexico and when to do so is the prudent course of action. The record does not demonstrate a demand for BRS or EBS operations in the Gulf of Mexico at this time. The record is not sufficiently developed to resolve issues concerning the amount of spectrum to license in the Gulf Service

⁹⁶⁸ *Id.*

⁹⁶⁹ WCA Comments at 33-34.

⁹⁷⁰ *Id.* at 35.

⁹⁷¹ *Id.*

⁹⁷² Nextel Comments at 13.

⁹⁷³ Sprint Comments at 10.

⁹⁷⁴ WCA Reply Comments at 37.

⁹⁷⁵ *Id.* at 37-38.

⁹⁷⁶ *Id.* at 38.

Area. At this point, no parties have demonstrated an interest in providing BRS or EBS in the Gulf of Mexico. As such, we do not see a need to create a Gulf Service Area for BRS or EBS. We believe, at this time, that we should reverse the decision to create a Gulf Service Area for BRS or EBS. We will entertain recreating a Gulf Service Area, for BRS and EBS, once parties demonstrate an interest in providing service in the Gulf of Mexico. Thus at this point we terminate the Gulf Service proceeding, which was incorporated into the *NPRM*.⁹⁷⁷ We reserve the right to revisit the Gulf Service Area issue for BRS and EBS should future circumstances warrant.

V. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis of *BRS/EBS 3rd MO&O and 2nd R&O*

384. The Regulatory Flexibility Act (RFA)⁹⁷⁸ requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."⁹⁷⁹ Accordingly, we have prepared a Final Regulatory Flexibility Analysis concerning the possible impact of the rule changes contained in this *BRS/EBS 3rd MO&O and 2nd R&O* on small entities. The Final Regulatory Flexibility Analysis is set forth in Appendix B.

B. Final Regulatory Flexibility Act Certification of *Big LEO Order on Reconsideration*

385. For the reasons described below, we now certify that the policies and rules adopted in the *Big LEO Order on Reconsideration* will not have a significant economic impact on a substantial number of small entities. The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁹⁸⁰ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁹⁸¹ A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the U.S.

⁹⁷⁷ Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, *Notice of Proposed Rulemaking*, WT Docket No. 02-68, 17 FCC Rcd 8446 (2002) (*Gulf Notice* or *Gulf of Mexico MDS NPRM* or *Gulf NPRM*). That proceeding was incorporated alongside the matter of Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Services in the 2150-2162 and 2500-2690 MHz Bands.

⁹⁷⁸ See 5 U.S.C. § 601–612. The RFA has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

⁹⁷⁹ 5 U.S.C. § 605(b).

⁹⁸⁰ 5 U.S.C. § 601(6).

⁹⁸¹ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

Small Business Administration (SBA).⁹⁸²

386. In this *Big LEO Order on Reconsideration*, the Commission adopts specific PFD limits for MSS downlink operations in the 2496-2500 MHz band. If the MSS providers intend to operate at power levels that exceed those PFD limits, or if actual operations routinely exceed those PFD limits, the MSS operators must obtain approval from BRS systems operating in the same region that are affected by these PFD limits. These rules will help to ensure that MSS-BRS sharing in that band will not result in harmful interference to the BRS.

387. We find that our actions will not affect a substantial number of small entities because only MSS operators in the 2496-2500 MHz band will be affected. In particular, only one Big LEO MSS licensee currently is authorized to provide MSS in the 2496-2500 MHz band in United States. We find that this licensee is not a small business. Small businesses often do not have the financial ability to become MSS system operators due to high implementation costs associated with launching and operating satellite systems and services. Therefore, we certify that the requirements of the *Big LEO Order on Reconsideration* will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of this *Order*, including a copy of this Final Regulatory Flexibility Certification, in a report to Congress and the Government Accountability Office pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996, *see* 5 U.S.C. § 801(a)(1)(A).

C. Paperwork Reduction Analysis

388. This document contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

389. In this present document, we have assessed the effects of changes in the pre-transition data request, self-transition notification, Initiation Plans, Post-Transition Notifications, and transition costs, and find that in most instances the effect on entities with fewer than 25 employees will be minor. We anticipate that entities with fewer than 25 employees will be most affected by the changes to the pre-transition data request and the post-transition notification. The changes to the pre-transition data request are relatively minor, were requested by petitioners, and are designed to ease the transition. The changes to the post-transition notification eases the paperwork burden on all affected BRS and EBS licensees.

D. Further Information

390. For further information regarding the *Big LEO Order on Reconsideration and AWS Fifth Memorandum Opinion and Order*, please contact Howard Griboff, Policy Division, International Bureau, Federal Communications Commission, 445 12th Street, S.W., Washington, DC 20554, at 202-418-0657 or via the Internet at Howard.Griboff@fcc.gov or Jamison Prime, Policy and Rules Division, Office of Engineering and Technology, Federal Communications Commission, 445 12th Street, S.W., Washington,

⁹⁸² 15 U.S.C. § 632.

DC 20554, at 202-418-7474 or via the Internet at Jamison.Prime@fcc.gov. For further information concerning the *BRS/EBS Third Memorandum Opinion and Order and Second Report and Order*, contact Nancy Zaczek, Broadband Division, Wireless Telecommunications Bureau, Federal Communications Commission, 445 12th Street, S.W., Washington, D.C. 20554, at (202) 418-2487 or via the Internet to Nancy.Zaczek@fcc.gov.

VI. ORDERING CLAUSES

391. Accordingly, IT IS ORDERED, pursuant to sections 1, 2, 4(i), 7, 10, 201, 214, 301, 302, 303, 307, 308, 309, 310, 319, 324, 332, 333 and 706 of the Communications Act of 1934, 47 U.S.C. §§ 151, 152, 154(i), 157, 160, 201, 214, 301, 302, 303, 307, 308, 309, 310, 319, 324, 332, 333, and 706, that this *Order on Reconsideration and Fifth Memorandum Opinion and Order, Third Memorandum Opinion and Order and Second Report and Order* is hereby ADOPTED.

392. IT IS FURTHER ORDERED that the Petitions for Reconsideration filed in these proceedings ARE GRANTED to the extent indicated and are otherwise DENIED.

393. IT IS FURTHER ORDERED, pursuant to Section 4(i) of the Communications Act of 1934, 47 U.S.C. § 154(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the "Request for Waiver" filed by W.A.T.C.H. TV Company on April 29, 2005 IS GRANTED.

394. IT IS FURTHER ORDERED, that the proceeding entitled Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, WT Docket No. 02-68 IS TERMINATED.

395. IT IS FURTHER ORDERED that the Final Regulatory Flexibility Analysis and the Final Regulatory Flexibility Certification ARE ADOPTED.

396. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Order on Reconsideration and Fifth Memorandum Opinion and Order, Third Memorandum Opinion and Order and Second Report and Order, including the Final Regulatory Flexibility Analysis and Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Rules

Part 25 and Part 27 of Title 47 of the Code of Federal Regulations are amended as follows:

I. PART 25 – SATELLITE COMMUNICATIONS

1. The authority citation for Part 25 continues to read as follows:

AUTHORITY: 47 U.S.C. 701-744. Interprets or applies Sections 4, 301, 302, 303, 307, 309, and 332 of the Communications Act, as amended. 47 U.S.C. Sections 154, 301, 302, 303, 307, 309, and 332, unless otherwise noted.

2. Amend Section 25.208 by adding a new paragraph (v) to read as follows:

§ 25.208 Power flux density limits

(v) In the band 2496-2500 MHz, the power flux-density at the Earth's surface produced by emissions from non-geostationary space stations for all conditions and all methods of modulation shall not exceed the following values:

- (1) -144 dB (W/m²) in 4 kHz for all angles of arrival between 0 and 5 degrees above the horizontal plane;
-144 dB (W/m²) + 0.65(δ -5) in 4 kHz for all angles of arrival between 5 and 25 degrees above the horizontal plane; and
-131 dB (W/m²) in 4 kHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane.
- (2) -126 dB (W/m²) in 1 MHz for all angles of arrival between 0 and 5 degrees above the horizontal plane;
-126 dB (W/m²) + 0.65(δ -5) in 1 MHz for all angles of arrival between 5 and 25 degrees above the horizontal plane; and
-113 dB (W/m²) in 1 MHz and for all angles of arrival between 25 and 90 degrees above the horizontal plane.

These values are obtained under assumed free-space propagation conditions.

3. Amend Section 25.213 by revising paragraph (b) to read as follows:

§ 25.213 Inter-Service coordination requirements for the 1.6/2.4 GHz mobile-satellite service

(b) If a Mobile-Satellite Service space station operator in the 2496-2500 MHz band intends to operate at powers levels that exceed the PFD limits in § 25.208(v), or if actual operations routinely exceed these PFD limits, we require the Mobile-Satellite Service operator to receive approval from each operational BRS system in the affected geographical region.

II. PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

1. The authority citation for Part 27 continues to read as follows:

AUTHORITY: 47 U.S.C. 154 and 303, unless otherwise noted.

2. Section 27.4 is amended by adding the following definition to read as follows:

§ 27.4 Terms and definitions.

Commercial EBS licensee. A licensee authorized to operate on EBS channels pursuant to the provisions of former §§ 27.1201(c) or 74.990 through 74.992 of this Chapter, and that does not meet the eligibility requirements of § 27.1201(a) of this part.

3. Section 27.5(i) is amended by revising paragraphs (1), (2)(ii), (2)(iii), and (3) to read as follows:

§ 27.5 Frequencies.

(i) ***

(1) Pre-transition frequency assignments.

BRS Channel 1: 2150-2156 MHz or 2496-2500 MHz

BRS Channel 2: 2156-2162 MHz or 2686-2690 MHz

BRS Channel 2A: 2156-2160 MHz

EBS Channel A1: 2500-2506 MHz

EBS Channel B1: 2506-2512 MHz

EBS Channel A2: 2512-2518 MHz

EBS Channel B2: 2518-2524 MHz

EBS Channel A3: 2524-2530 MHz

EBS Channel B3: 2530-2536 MHz

EBS Channel A4: 2536-2542 MHz

EBS Channel B4: 2542-2548 MHz

EBS Channel C1: 2548-2554 MHz
EBS Channel D1: 2554-2560 MHz
EBS Channel C2: 2560-2566 MHz
EBS Channel D2: 2566-2572 MHz
EBS Channel C3: 2572-2578 MHz
EBS Channel D3: 2578-2584 MHz
EBS Channel C4: 2584-2590 MHz
EBS Channel D4: 2590-2596 MHz
BRS Channel E1: 2596-2602 MHz
BRS Channel F1: 2602-2608 MHz
BRS Channel E2: 2608-2614 MHz
BRS Channel F2: 2614-2620 MHz
BRS Channel E3: 2620-2626 MHz
BRS Channel F3: 2626-2632 MHz
BRS Channel E4: 2632-2638 MHz
BRS Channel F4: 2638-2644 MHz
EBS Channel G1: 2644-2650 MHz
BRS Channel H1: 2650-2656 MHz
EBS Channel G2: 2656-2662 MHz
BRS Channel H2: 2662-2668 MHz
EBS Channel G3: 2668-2674 MHz
BRS Channel H3: 2674-2680 MHz
EBS Channel G4: 2680-2686 MHz
I Channels: 2686-2690 MHz

(2) ***

(i) ***

(ii) Middle Band Segment (MBS): The following channels shall constitute the Middle Band Segment:

EBS Channel A4: 2572-2578 MHz
EBS Channel B4: 2578-2584 MHz
EBS Channel C4: 2584-2590 MHz
EBS Channel D4: 2590-2596 MHz
EBS Channel G4: 2596-2602 MHz
BRS/EBS Channel F4: 2602-2608 MHz
BRS/EBS Channel E4: 2608-2614 MHz

(iii) Upper Band Segment (UBS): The following channels shall constitute the Upper Band Segment:

BRS Channel KH1: 2614.00000-2614.33333 MHz
BRS Channel KH2: 2614.33333-2614.66666 MHz
BRS Channel KH3: 2614.66666-2615.00000 MHz
EBS Channel KG1: 2615.00000-2615.33333 MHz
EBS Channel KG2: 2615.33333-2616.66666 MHz
EBS Channel KG3: 2615.66666-2616.00000 MHz

BRS Channel KF1: 2616.00000-2616.33333 MHz
 BRS Channel KF2: 2616.33333-2616.66666MHz
 BRS Channel KF3: 2616.66666-2617.00000 MHz
 BRS Channel KE1: 2617.00000-2617.33333 MHz
 BRS Channel KE2: 2617.33333-2617.66666 MHz
 BRS Channel KE3: 2617.66666-2618.00000 MHz
 BRS Channel 2: 2618-2624 MHz
 BRS/EBS Channel E1: 2624-2629.5 MHz
 BRS/EBS Channel E2: 2629.5-2635 MHz
 BRS/EBS Channel E3: 2635-2640.5 MHz
 BRS/EBS Channel F1: 2640.5-2646 MHz
 BRS/EBS Channel F2: 2646-2651.5 MHz
 BRS/EBS Channel F3: 2651.5-2657 MHz
 BRS Channel H1: 2657-2662.5 MHz
 BRS Channel H2: 2662.5-2668 MHz
 BRS Channel H3: 2668-2673.5 MHz
 BRS Channel G1: 2673.5-2679 MHz
 BRS Channel G2: 2679-2684.5 MHz
 BRS Channel G3: 2684.5-2690 MHz

Note to paragraph (i)(2): No 125 kHz channels are provided for channels in operation in this service. The 125 kHz channels previously associated with these channels have been reallocated to Channel G3 in the upper band segment.

(3) During the transition (see §§ 27.1230-27.1239 of this part) EBS and BRS licensees may exchange channels to effectuate the transition of the 2.5 GHz band in a given BTA.

4. Amend § 27.14 by adding a new paragraph (e) to read as follows:

§ 27.14 Construction requirements; Criteria for comparative renewal proceedings.

(e) BRS and EBS licensees must make a showing of “substantial service” no later than May 1, 2011. Incumbent BRS licensees must file their “substantial service” showing with their renewal application. “Substantial service” is defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal. Substantial service for BRS and EBS licensees is satisfied if a licensee meets the requirements of paragraph (e)(1) or (e)(2) of this section. If a licensee has not met the requirements of paragraph (e)(1) or (e)(2) of this section, then demonstration of “substantial service” shall proceed on a case-by-case basis. All substantial service determinations will be made on a license-by-license basis. Except for BTA licenses, BRS licensees must file their “substantial service” showing with their renewal applications. Failure by any licensee to meet this requirement will result in forfeiture of the license and the licensee will be ineligible to regain it.

(1) A BRS or EBS licensee has provided “substantial service” by:

(i) Constructing six permanent links per one million people for licensees providing fixed point-

to-point services;

(ii) Providing coverage of at least 30 percent of the population of the licensed area for licensees providing mobile services or fixed point-to-multipoint services;

(iii) Providing service to “rural areas” (a county (or equivalent) with a population density of 100 persons per square mile or less, based upon the most recently available Census data) and areas with limited access to telecommunications services:

(A) for mobile service, where coverage is provided to at least 75% of the geographic area of at least 30% of the rural areas within its service area; or

(B) for fixed service, where the BRS or EBS licensee has constructed at least one end of a permanent link in at least 30% of the rural areas within its licensed area.

(iv) Providing specialized or technologically sophisticated service that does not require a high level of coverage to benefit consumers; or

(v) Providing service to niche markets or areas outside the areas served by other licensees.

(2) An EBS licensee has provided “substantial service” when:

(i) the EBS licensee is using its spectrum (or spectrum to which the EBS licensee’s educational services are shifted) to provide educational services within the EBS licensee’s GSA;

(ii) the EBS licensee’s license is actually being used to serve the educational mission of one or more accredited public or private schools, colleges or universities providing formal educational and cultural development to enrolled students; or

(iii) the level of service provided by the EBS licensee meets or exceeds the minimum usage requirements specified in § 27.1214.

(3) An EBS or BRS licensee may be deemed to provide substantial service through a leasing arrangement if the lessee is providing substantial service under paragraph (e)(1) of this section. The EBS licensee must also be otherwise in compliance with this Chapter (including the programming requirements in § 27.1203 of this subpart).

5. Amend § 27.53 by revising the introductory text of paragraph (l) to read as follows:

§ 27.53 Emission limits.

(l) For BRS and EBS stations, the power of any emissions outside the licensee’s frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts. BRS and EBS stations that are not in compliance with the standards below, after receiving a documented interference complaint from an adjacent channel licensee, have 60 days to coordinate with the affected licensee and meet a mutual resolution before both parties employ a more rigorous emission mask.

6. Amend § 27.1201 by removing and reserving paragraph (c), revising paragraph (a) introductory text, and adding a new paragraph (d) to read as follows:

§ 27.1201 EBS Eligibility.

(a) A license for an Educational Broadband Service station will be issued only to an accredited institution or to a governmental organization engaged in the formal education of enrolled students or to a nonprofit organization whose purposes are educational and include providing educational and instructional television material to such accredited institutions and governmental organizations, and which is otherwise qualified under the statutory provisions of the Communications Act of 1934, as amended.

(b) ***

(d) This paragraph applies to EBS licensees and applications licensed or filed pursuant to the provisions of former §§ 27.1201(c) or 74.990 through 74.992 of this Chapter, and that do not meet the eligibility requirements of paragraph (a) of this section. Such licensees may continue to operate pursuant to the terms of their existing licenses, and their licenses may be renewed, assigned, or transferred, so long as the licensee is otherwise in compliance with this Chapter. Applications filed pursuant to the provisions of former §§ 27.1201(c) or 74.990 through 74.992 of this Chapter may be processed and granted, so long as such applications were filed prior to **[insert effective date of new rules]**.

7. Amend § 27.1202 by revising paragraph (c) to read as follows:

§ 27.1202 Cable/BRS cross-ownership.

(c) Applications for new stations, station modifications, assignments or transfers of control by cable operators of BRS stations shall include a showing that no portion of the GSA of the BRS station is within the portion of the franchise area actually served by the cable operator's cable system, or of any entity indirectly affiliated, owned, operated, controlled by, or under common control with the cable operator. Alternatively, the cable operator may certify that it will not use the BRS station to distribute multichannel video programming.

8. Amend § 27.1203 by revising paragraph (b) to read as follows:

§ 27.1203 EBS programming requirements.

(b) Educational Broadband Service stations are intended primarily through video, data, or voice transmissions to further the educational mission of accredited public and private schools, colleges and universities providing a formal educational and cultural development to enrolled students. Authorized educational broadband channels must be used to further the educational mission of accredited schools offering formal educational courses to enrolled students.

9. Amend § 27.1213 by revising paragraph (c)(2) to read as follows:

§ 27.1213 Designated entity provisions for BRS in Commission auction commencing prior to January 1, 2004.

(c) ***

(2) *Conditions and obligations.* See §1.2110(g)(4) of this chapter.

10. Amend § 27.1214 by revising paragraphs (b)(1) and (c) and adding new paragraph (e) to read as follows::

§ 27.1214 EBS spectrum leasing arrangements and grandfathered leases.

(b) ***

(1) The licensee must reserve a minimum of 5% of the capacity of its channels for educational uses consistent with § 27.1203(b) and (c) of this part, and may not enter into a spectrum leasing arrangement involving this reserved capacity. In addition, before leasing excess capacity, the licensee must provide at least 20 hours per licensed channel per week of EBS educational usage. This 5% reservation and this 20 hours per licensed channel per week EBS educational usage requirement shall apply spectrally over the licensee's whole actual service area. However, regardless of whether the licensee has an educational receive site within its GSA served by a booster, the licensee may lease excess capacity without making at least 20 hours per licensed channel per week of EBS educational usage, provided that the licensee maintains the unabridgeable right to recapture on one months' advance notice such capacity as it requires over and above the 5% reservation to make at least 20 hours per channel per week of EBS educational usage.

(c) All spectrum leasing arrangements involving EBS spectrum must afford the EBS licensee an opportunity to purchase or to lease dedicated or common EBS equipment used for educational purposes in the event that the spectrum leasing arrangement is terminated.

(e) The maximum permissible term of an EBS spectrum leasing arrangement entered into on or after **[insert effective date of this rule]** (including the initial term and all renewal terms that commence automatically or at the sole option of the lessee) shall be 30 years. In furtherance of the educational purposes for which EBS spectrum is primarily allocated, any spectrum leasing arrangement in excess of 15 years that is entered into on or after **[insert effective date of this rule]** must include terms which provide the EBS licensee on the 15th year and every 5 years thereafter, with an opportunity to review its educational use requirements in light of changes in educational needs, technology, and other relevant

factors and to obtain access to such additional services, capacity, support, and/or equipment as the parties shall agree upon in the spectrum leasing arrangement to advance the EBS licensee's educational mission.

11. Add new § 27.1216 to read as follows:

§ 27.1216 Grandfathered E and F group EBS licenses.

(a) Except as noted in paragraph (b) of this section, grandfathered EBS licensees authorized to operate E and F group co-channel licenses are granted a geographic service area (GSA) on **[insert effective date of rule]**. The GSA is the area bounded by a circle having a 35 mile radius and centered at the station's reference coordinates, and is bounded by the chord(s) drawn between intersection points of that circle and those of respective adjacent market, co-channel licensees.

(b) If there is more than 50 percent overlap between the calculated GSA of a grandfathered EBS license and the protected service area of a co-channel BRS license, the licensees shall not be immediately granted a geographic service area. Instead, the grandfathered EBS license and the co-channel BRS licensee must negotiate in good faith to reach a solution that accommodates the communication needs of both licensees. If the co-channel licensees reach a mutually agreeable solution on or before **[insert date ninety days from the effective date of this rule]**, then the GSA of each co-channel license shall be as determined pursuant to the agreement of the parties. If a mutually agreeable solution between co-channel licensees is not reached on or before **[insert date ninety days from effective date of this rule]**, then each co-channel licensee shall receive a GSA determined pursuant to paragraph (a) of this section and Section 27.1206(a) of this part.

12. Revise § 27.1221(a) to read as follows:

§ 27.1221 Interference protection.

(a) Interference protection will be afforded to BRS and EBS on a station-by-station basis based on the heights of the stations in the LBS and UBS and also on height benchmarking, although the heights of antennas utilized are not restricted.

13. Revise § 27.1230 to read as follows:

§ 27.1230 Conversion of the 2500-2690 MHz band.

BRS and EBS licensees in the 2500-2690 MHz band on the pre-transition A-I Channels will be transitioned from the frequencies assigned to them under § 27.5(i)(1) of this part to the frequencies assigned to them under § 27.5(i)(2) of this part. The transition, which will be undertaken by one or more proponent(s), will occur in the following five phases: initiating the transition process (see § 27.1231), planning the transition (see § 27.1232), reimbursing transition costs (see §§ 27.1233 and 27.1237-1239), terminating existing operations in transitioned markets that do not comport with § 27.5(i)(2) of this part (see § 27.1234), and filing the post-transition notification (see § 27.1235). Licensees may also self-transition (see § 27.1236).

14. Revise § 27.1231 to read as follows:

§ 27.1231 Initiating the transition.

(a) *Transition areas.* Unless paragraph (b) of this section applies, the transition will occur by Basic Trading Area (BTA). BTAs are based on the Rand McNally 1992 Commercial Atlas & Marketing Guide, 123rd Edition, at pages 38-39, that identifies 487 BTAs based on the 50 States; it also includes the following additional BTA-like areas: American Samoa; Guam, Northern Mariana Islands; Mayaguez/Aguadilla-Ponce, Puerto Rico; San Juan, Puerto Rico; and the United States Virgin Islands, for a total of 493 BTAs. The Mayaguez/Aguadilla-Ponce BTA-like area consists of the following municipios: Adjuntas, Aguada, Aguadilla, Anasco, Arroyo, Cabo Rojo, Coamo, Guanica, Guayama, Guayanilla, Hormigueros, Isabela, Jayuya, Juana Diaz, Lajas, Las Marias, Maricao, Maunabo, Mayaguez, Moca, Patillas, Penuelas, Ponce, Quebradillas, Rincon, Sabana Grande, Salinas, San German, Santa Isabel, Villalba, and Yauco. The San Juan BTA-like area consists of all other municipios in Puerto Rico. The BTA associated with the Gulf of Mexico will not be transitioned.

(b) *Overlapping GSAs.* When a Geographic Service Area (GSA) overlaps two or more BTAs:

(1) The proponents of the adjacent BTAs may agree on how to transition a GSA that overlaps their respective BTAs.

(2) If an agreement has not been reached between or among the proponents of the adjacent BTAs:

(i) each proponent must transition all of the facilities associated with the GSA that are inside the GSA and inside the proponent's BTA if all of the adjacent BTAs are transitioning; or

(ii) the proponent of the BTA that is transitioning must transition all of the facilities associated with the GSA that are within the GSA but outside the BTA, if the adjacent BTA is not transitioning.

(c)(1) *Proponent(s).* The proponent or co-proponent must:

(i) be a BRS or EBS licensee or BRS or EBS lessee;

(ii) send a Pre-Transition Data Request (see paragraph (d) of this section) and a Transition Notice (see paragraph (e) of this section) to every BRS and EBS licensee in the BTA, using the contact information in the Commission's Universal Licensing System; and

(iii) be first to file an Initiation Plan (see paragraph (f) of this section) with the Secretary of the Commission.

(2) Before filing an Initiation Plan, BRS or EBS licensees or BRS or EBS lessees may agree to be co-proponents. After the Initiation Plan is filed the proponent may accept a co-proponent at its sole discretion.

(d) *Pre-Transition Data Request.* The Pre-Transition Data Request must include the potential proponent's full name, postal mailing address, contact person, e-mail address, and phone and fax numbers.

(1) BRS and EBS licensees that receive a Pre-Transition Data Request must provide the following information to the potential proponent within 45 days of receiving the Pre-Transition Data Request:

(i) The BRS or EBS licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax number.

(ii) The location (by street address and by geographic coordinates) of every constructed EBS receive site that, as of the date of receipt of the Pre-Transition Data Request, is entitled to a replacement downconverter (see § 27.1233(a) of this part). The response must:

(A) Specify whether the downconverting antenna is mounted on a structure attached to the building or on a free-standing structure;

(B) Specify the approximate height above ground level of the downconverting antenna; and

(C) Specify, if known, the adjacent channel D/U ratio that can be tolerated by any receiver(s) at the receive site.

(iii) The location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection, including:

(A) The make and model of the antenna for that main station or booster, along with the radiation pattern if it is not included within the Commission's database;

(B) The ground elevation, above mean sea level (AMSL), of the building or antenna supporting structure on which the main station or booster transmission antenna is installed;

(C) The height above ground level (AGL) of the center of radiation of the transmission antenna;

(D) The orientation of the main lobe of the transmission antenna;

(E) Any mechanical beamtilt or electrical beamtilt not reflected in the radiation pattern provided or included within the Commission's database;

(F) The bandwidth of each channel or subchannel, the emission type for each channel or subchannel, and the EIRP measured in the main lobe for each channel or subchannel; and

(G) The make and model of the receive antenna installed at that site, along with the radiation pattern if it is not included within the Commission's database.

(iv) The number and identification of EBS video programming or data transmission tracks the EBS licensee is entitled to receive in the MBS and whether the EBS licensee will accept fewer tracks in the MBS (see § 27.1233(b) of this part).

(v) Whether it will seek or has sought a waiver from the Commission as a Multichannel Video Programming Distributor (MVPD).

(2) BRS and EBS licensees that do not respond to the Pre-Transition Data Request within 45 days of its receipt may not object to the Transition Plan.

(e) *The Transition Notice.* The potential proponent(s) must send a Transition Notice to all BRS and EBS licensees in the BTA(s) being transitioned. The potential proponent(s) must include the following information in the Transition Notice:

(1) the potential proponent(s)'s full name; postal mailing address, contact person, e-mail address,

and phone and fax numbers;

(2) the identification of the BRS and EBS licensees that will be transitioned;

(3) copies of the most recent response to the Pre-Transition Data Request for each participant in the process; and

(4) a certification that the potential proponent(s) has the funds available to pay the reasonably expected costs of the transition based on the information in the Pre-Transition Data Request.

(f) *Initiation Plan.* To initiate a transition, a potential proponent(s) must submit an Initiation Plan to the Commission at the Office of the Secretary in Washington, DC within 30 months of **[INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]**.

(1) An Initiation Plan must contain the following information:

(i) a list of the BTA(s) that the proponent(s) is transitioning;

(ii) a list by call sign of all of the BRS and EBS licensees in the BTA(s) that are being transitioned;

(iii) a “best estimate” of when the transition will be completed;

(iv) a statement indicating that an agreement has been concluded with the proponent(s) of the adjoining or adjacent BTA(s) when a licensee or licensees in an adjacent or adjoining BTA must be transitioned to avoid interference to licensees in the BTA being transitioned, or in lieu of an agreement, the proponent(s) may provide an alternative means of transitioning the licensees in an adjacent or adjoining BTA;

(v) a statement indicating that an agreement has been concluded with another proponent(s) on how a BTA will be transitioned when there are two or more proponents seeking to transition the same BTA and they agree to be co-proponents before the Initiation Plan is filed, and a statement that identifies the specific portion of the BTA each proponent will be responsible for transitioning; and

(vi) a certification that the proponent or joint proponents have the funds available to pay the reasonable expected costs of the transition based on the information contained in the Pre-Transition Data Request (see paragraph (d) of this section).

(2) A proponent, at its own discretion, may withdraw from transitioning a BTA by notifying the Commission and all affected BRS and EBS licensees in the BTA that it is withdrawing the Initiation Plan.

(3) A proponent may amend an Initiation Plan after it has been filed with the Commission to correct minor or inadvertent errors.

(g) *MVPD waiver requests.* MVPD licensees that seek to opt-out of the transition must seek a waiver within 60 days after the proponent files the Initiation Plan or on or before April 30, 2007, whichever occurs first.

15. Amend §27.1232 by revising paragraph (a), the introductory text of paragraph (b), paragraph (c)(1), the first sentence of paragraph (d)(1), and the first two sentences of paragraph (d)(2), and adding new paragraphs (d)(3) and (d)(4) to read as follows:

§ 27.1232 Planning the Transition.

(a) *The Transition Planning Period.* The Transition Planning Period is a 90-day period that commences on the day after the proponent(s) files the Initiation Plan with the Commission.

(b) *The Transition plan.* The proponent(s) must provide to each BRS and EBS licensee within a BTA, a Transition Plan no later than 30 days prior to the conclusion of the Transition Planning Period.

(c) ***

(1) Accept the counterproposal, modify the Transition Plan accordingly, and send the modified Transition Plan to all EBS and BRS licensees in the BTA;

(d) ***

(1) *Safe harbor No. 1.* This safe harbor applies when the default high-power channel assigned to each channel group is authorized to operate after the transition with the same transmission parameters (coordinates, antenna pattern, height of center radiation, EIRP) as the downstream facilities before the transition. ***

(2) *Safe harbor No. 2.* This safe harbor applies when an EBS licensee has channel-shifted its single video programming or data transmission track to spectrum licensed to another licensee. Under § 27.5(i)(2) of this part, that track must be on the high-power channel licensed to the EBS licensee upon completion of the transition. ***

(3) *Safe harbor No. 3.* This safe harbor applies when a four-channel group is shared among multiple licensees in a given geographic area. Absent an agreement otherwise, a proponent may:

(i) Secure a 6 MHz MBS channel for each licensee in exchange for the non-MBS channels assigned to the group. Following the channel swap(s) necessary to secure those additional MBS channels, the Transition Plan can provide for the licensing of the remaining channels in the LBS, UBS, and Guard Bands on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment);

(ii) Provide for pro rata segmentation of the default MBS channel for the group, provided that the proponent commits to provide each of the licensees with the technology necessary for its EBS video programming or data transmissions to be digitized, transmitted and received utilizing the provided bandwidth. The non-MBS channels would be divided among the sharing licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment); or

(iii) Assign the default MBS channel assigned to the channel group to one of the licensees, if that licensee is the only one that elects to migrate video programming or data transmission tracks to the MBS.

The remaining spectrum assigned to the group may be allocated among the licensees on a pro rata basis, with the 6 MHz in the MBS counting against that licensee's portion. To the extent necessary, the non-MBS spectrum can be disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment. If the proponent chooses to effectuate a channel swap to provide more than one channel in the MBS, the remaining channels assigned to the group (after considering that one or more LBS/UBS channels and associated Transition Band channels will have been swapped away to provide the additional MBS channel) can be allocated among the licensees on a pro rata basis (with channel(s) in each segment being disaggregated when and if necessary to provide each with its pro rata share of the spectrum in each segment).

(4) *Safe harbor No. 4.* This safe harbor applies when an EBS licensee uses one or more of its channels for studio-to-transmitter links. The proponent may provide for one of the following options:

(i) the use of the LBS and/or UBS band for the point-to-point transmission of the EBS video or data (through superchannelization of the licensee's contiguous LBS or UBS channels), provided the proponent commits to retune the existing point-to-point equipment to operate on those channels or to replace the existing equipment with new equipment tuned to operate on those channels and the proposal complies with the LBS/UBS technical and interference protection rules;

(ii) the migration of the EBS programming to the MBS by retuning the existing point-to-point equipment to operate in the MBS or replacing it with equipment tuned to operate in the MBS; or

(iii) the replacement of the point-to-point link with point-to-point equipment licensed to the EBS licensee in alternative spectrum, so long as the replacement facilities meet the definition of "comparable facilities" set out in §101.75(b) of this Chapter.

16. Amend § 27.1233 by removing paragraph (c) and revising paragraphs (a)(1)(i) and (b)(3)(ii) to read as follows:

§ 27.1233 Reimbursement costs of transitioning.

(a) ***

(1)***

(i) a reception system was installed at that site on or before the date the EBS licensee receives its Pre-Transition Data Request (see § 27.1231(d) of this subpart);

(b) ***

(3) ***

(ii) *Adjacent Channel D/U Ratio.* The actual adjacent channel D/U must equal or exceed the lesser of 0 dB or the actual pre-transmission D/U ratio. However, in the event that the receive site uses receivers or is upgraded by the proponent(s) as part of the Transition Plan to use receivers that can tolerate negative adjacent channel D/U ratios, the actual adjacent channel D/U ratio at such receive site must equal or exceed -10 dB. Provided that the receive site receiver is not upgraded and cannot tolerate -10 dB, the adjacent channel D/U ratio would be 0dB.

17. Amend § 27.1235 by revising the introductory text and paragraph (a) and adding a new paragraph (d) to read as follows:

§ 27.1235 Post-transition notification.

The proponent(s) must certify to the Commission at the Office of the Secretary, Washington DC, that the Transition Plan has been fully implemented.

(a) The notification must provide the identification of the licensees that have transitioned to the band plan in § 27.5(i)(2) of this part and the specific frequencies on which each licensee is operating.

(d) A BRS or EBS licensee must file any objection to the post-transition notification within 30 days from the date the post-transition notification is placed on Public Notice.

18. Amend Subpart M by adding new §§ 27.1236- 27.1239 to read as follows:

§ 27.1236 Self-transitions.

(a) If an Initiation Plan is not filed within 30 months of INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER for a BTA, BRS and EBS licensees in that BTA may self-transition by relocating to their default channel locations specified in § 27.5(i)(2) of this part and complying with §§ 27.50(h), 27.53, 27.55 and 27.1221 of this part.

(b) To self-transition, a BRS or EBS licensee must:

(1) Notify the Secretary of the Commission on or before 90 days after the Initiation Plan must be filed with the Commission that it will self-transition (see paragraph (a) of this section);

(2) Send a Self-Transition Notification (see paragraph (c) of this section) to other BRS and EBS licensees in the BTA where the self-transitioning licensee's GSA geographic center point is located that it is self-transitioning;

(3) Notify other licensees whose GSAs overlap with the self-transitioning licensee that it is self-transitioning.

(4) Address interference concerns with other BRS and EBS licensees in the BTA that are also self-transitioning;

(5) File a modification application with the Commission, and

(6) Complete the self-transition within 57 months of INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER.

(c) *Self-Transition Notification.* The Self-Transition Notification must include the EBS licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax numbers. A Self-Transitioning EBS licensee must provide the following information to all BRS and EBS licensees located in the BTA where the self-transitioning licensees GSA geographic center point is located:

(1) The location (by street address and by geographic coordinates) of every constructed EBS receive site that, as of the date the Self-Transition Notification is sent, is entitled to a replacement downconverter (see § 27.1233(a) of this part). The response must:

(i) Specify whether the downconverting antenna is mounted on a structure attached to the building or on a free-standing structure;

(ii) Specify the approximate height above ground level of the downconverting antenna; and

(iii) Specify, if known, the adjacent channel D/U ratio that can be tolerated by any receiver(s) at the receive site.

(2) The location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection, including:

(i) The make and model of the antenna for that main station or booster, along with the radiation pattern if it is not included within the Commission's database;

(ii) The ground elevation, above mean sea level (AMSL), of the building or antenna supporting structure on which the main station or booster transmission antenna is installed;

(iii) The height above ground level (AGL) of the center of radiation of the transmission antenna;

(iv) The orientation of the main lobe of the transmission antenna;

(v) Any mechanical beamtilt or electrical beamtilt not reflected in the radiation pattern provided or included within the Commission's database;

(vi) The bandwidth of each channel or subchannel, the emission type for each channel or subchannel, and the EIRP measured in the main lobe for each channel or subchannel; and

(vii) The make and model of the receive antenna installed at that site, along with the radiation pattern if it is not included within the Commission's database.

(3) The number and identification of EBS video programming or data transmission tracks the EBS licensee is entitled to receive in the MBS (see § 27.1233(b) of this part).

§ 27.1237 Pro rata allocation of transition costs.

(a) *Self-transitions.* EBS licensees that self-transition may seek reimbursement for their costs to replace eligible downconverters (see § 27.1233(a)) and to migrate video programming and data transmission tracks (see § 27.1233(b)) from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in the BTA where the center point of the EBS licensee's GSA is located. In addition, BRS licensees and lessees, EBS lessees, and commercial EBS licensees in the LBS or UBS must reimburse the self-transitioning EBS licensee a pro rata share of the eligible costs of transitioning EBS licensees, based on the formula in paragraph (c) of this section. Eligible costs are listed in § 27.1238 of this part.

(b) *Proponent-driven transitions.* BRS licensees and lessees, entities that lease EBS spectrum for a commercial purpose, and commercial EBS licensees must pay their own transition costs. In addition, except for MVPD operators that opt-out of the transition, BRS licensees and lessees, EBS

lessees, and commercial EBS licensees in the LBS or UBS must reimburse the proponent a pro rata share of the eligible costs of transitioning EBS licensees, based on the formula in paragraph (c) of this section. Eligible costs are listed in § 27.1238 of this part.

(c) *Formula.* The pro rata share shall be based on the following formula:
$$R = \frac{L \times LP}{T \times TP}$$

(1) R equals the pro rata share;

(2) L equals the amount of spectrum used by a BRS licensee or lessee or commercial EBS licensee or lessee to provide a commercial service, either directly or through a lease agreement with an EBS or BRS licensee;

(3) T equals the total amount of spectrum licensed or leased for commercial purposes in the BTA;

(4) LP equals the population of the geographic service area or BTA served by the BRS licensee or lessee or commercial EBS licensee or lessee based on the data in the 2000 United States Census; and

(5) TP equals the population of the BTA based on the data in the 2000 United States Census.

§ 27.1238 Eligible costs.

(a) The costs listed in paragraphs (b) – (f) of this Section are eligible costs.

(b) *Pre-transition costs:*

(1) Engineering/Consulting

(i) Evaluation of equipment;

(ii) RX site identification;

(iii) EBS Programming plan covering the BTA;

(iv) Market Analysis (MHz per POP Study);

(v) RF study (interference analysis); and

(vi) Transition Plan creation and support;

(2) Project management (may be sourced external);

(3) Filing fees;

(4) Legal fees;

(5) Site acquisition fees-contractor; and

(6) Arbitrator fee;

(c) *Transmission facility--analog conversion costs:*

-
- (1) Transmitter upgrading or retuning;
 - (2) Combiner re-tuning or new;
 - (3) Power divider/circulator adjacent channel combiner hardware;
 - (4) STL/fiber relocation;
 - (5) Miscellaneous material costs (including cabling and connectors);
 - (6) Contract labor:
 - (i) Tower;
 - (ii) Building modifications;
 - (iii) Electrical/HVAC; and
 - (iv) Mechanical
 - (7) Engineering:
 - (i) Structural; and
 - (ii) Pathway Interference Analysis.
 - (8) Equipment disposal/shipping
 - (9) Program Management (third party or internal costs to manage the BTA conversion); and
 - (10) Travel and Per Diem Cost.
- (d) *Transmission facility—digital conversion costs:*
- (1) New transmitter or retuning;
 - (2) Digital compression equipment-TX site (including encoders, controller, and software);
 - (3) Combiners-new or retune;
 - (4) Power divider/circulator adjacent channel combiner hardware;
 - (5) Cabinets, cabling, feedline and connectors;
 - (6) STL – fiber digital upgrade;
 - (7) Installation cost due to adding additional broadcast antenna (4 or more digital channels required);
 - (8) Contract labor:
 - (i) Tower;

- (ii) Building modifications;
- (iii) Electrical/HVAC; and
- (iv) Mechanical.
- (9) Proof of performance testing (may be contracted);
- (10) Engineering:
 - (i) Structural; and
 - (ii) Path engineering analysis.
- (11) Equipment disposal/shipping;
- (12) Training;
- (13) Program management (third party or internal costs to manage BTA conversion);
- (14) Travel and per diem costs.
- (e) *Qualified receive-sites only-modifications (analog and digital):*
 - (1) Digital set top boxes;
 - (2) Downconverters (with filtering)/antennas (replacement downconverters);
 - (3) Contract labor:
 - (i) Antenna change/DC install (antenna change may be necessary); and
 - (ii) Electrical; and mechanical
 - (4) Project management (third party or internal costs to manage the BTA conversion);
 - (5) Proof of performance testing (may be contracted);
 - (6) Mini headend (cost effective distribution method):
 - (i) Modulators, combiners;
 - (ii) Equipment racks; and
 - (iii) Amplifiers
 - (7) Cable, connectors; and
 - (8) Training.
- (f) *Miscellaneous transition fees.*
 - (1) Filing fees;

- (2) Arbitrator fee; and
- (3) Legal fees.

§ 27.1239 Reimbursement obligation.

(a) A proponent may request reimbursement from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in a BTA after the Transition Notification has been filed with the Secretary of the Commission and the proponent has accumulated the documentation to substantiate the full and accurate cost of the transition. A self-transitioning licensee may request reimbursement from BRS licensees and lessees, EBS lessees, and commercial EBS licensees in a BTA where its GSA geographic center point is located after it has completed the self-transition and has filed a modification application with the Commission and has accumulated the documentation to substantiate the full and accurate cost of the transition.

(b) If a license is assigned, transferred, partitioned, or disaggregated, all parties to the assignment, transfer, disaggregation, or partition are jointly and severally liable for paying the reimbursement obligation until that obligation is paid.

APPENDIX B**Final Regulatory Flexibility Analysis**

(For Third Memorandum Opinion and Order and Second Report and Order)

As required by the Regulatory Flexibility Act of 1980, as amended (RFA),⁹⁸³ an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Further Notice of Proposed Rule Making (FNPRM)* was incorporated therein. The Commission sought written public comment on the proposals in the *FNPRM*, including comment on the IRFA. No comments were submitted specifically in response to the IRFA; we nonetheless discuss certain general comments below. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁹⁸⁴

Need for, and Objectives of the Rules:

On July 29, 2004, the Commission released the *BRS/EBS R&O & FNPRM*. In the *BRS/EBS R&O*, the Commission adopted a band plan that restructured the 2500-2690 MHz band into upper and lower-band segments for low-power operations (UBS and LBS, respectively), and a mid-band segment (MBS) for high-power operations, in order to reduce the likelihood of interference caused by incompatible uses. The Commission also designated the 2495-2500 MHz band for use in connection with the 2500-2690 MHz band.⁹⁸⁵ Through the adoption of the new band plan, the Commission provided incentives for the development of low-power cellularized broadband use and, accordingly, renamed MDS and ITFS as the “Broadband Radio Service” and “Educational Broadband Service,” respectively, to more accurately describe the kinds of the services anticipated in this band. In order to facilitate the transition to the new band plan, the *BRS/EBS R&O* adopted a market-oriented, transition mechanism that enables incumbent licensees to develop regional plans for moving to new spectrum assignments in the restructured band plan. The *BRS/EBS R&O* also adopted service rules that give licensees increased flexibility, reduce administrative burdens on both licensees and the Commission, and promotes regulatory parity.

In this *Third Memorandum Opinion and Order and Second Report and Order (3rd MO&O and 2nd R&O)* we adopt a number of changes concerning the rules governing the 2500-2690 MHz band, for the Broadband Radio Service (BRS) and the Educational Broadband Service (EBS). The rules we adopt today include: requiring licensees to transition based on Basic Trading Areas (BTAs), rather than Major Economic Areas (MEAs) as specified in the *BRS/EBS R&O*; permitting licensees to self-transition if a proponent does not file an Initiation Plan by a date certain or withdraws an Initiation Plan and another

⁹⁸³ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA) Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

⁹⁸⁴ See 5 U.S.C. § 604.

⁹⁸⁵ See Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Service Systems in the 1.6/2.4 GHz Bands, *Report and Order, Fourth Report and Order, and Further Notice of Proposed Rulemaking*, IB Docket No. 02-364, 19 FCC Rcd 13356, 13358 ¶¶ 2 (2004). See also ¶¶ 6-19 *supra*.

proponent does not come forward by a date certain; requiring all commercial licensees, in a proponent-driven transition, to reimburse the proponent a pro rata share of the cost of transitioning a BTA to the new band plan; requiring commercial licensees to pay their own costs if they self-transition, but permitting non-commercial EBS licensees to seek reimbursement from commercial licensees; establishing a geographic service area for grandfathered E and F channel EBS licensees, and allowing such licensees to modify or assign their licenses; eliminating the overlap between a grandfathered EBS licensee and a BRS site-based incumbent by “splitting the football; eliminating the rule that limits EBS licensees to four channels in a given geographic area; eliminating the wireless cable exception to the EBS eligibility rules; altering, where possible, the regulatory fee structure for the BRS services to establish a tiered regulatory fee structure based on market size/MHz; adopting a substantial service standard for BRS and EBS licensees, with safe harbors; and requiring all licensees to establish substantial service by May 1, 2011.

We believe the rules we adopt today will both encourage the enhancement of existing services using this band and promote the development of new innovative services to the public, such as providing wireless broadband services, including high-speed Internet access and mobile services. We also believe that our new rules will allow licensees to adapt quickly to changing market conditions and the marketplace, rather than to government regulation, in determining how this band can best be used.

Summary of Significant Issues Raised by Public Comments in Response to the IRFA:

No comments were submitted specifically in response to the IRFA.

Description and Estimate of the Number of Small Entities to Which the Rules Will Apply:

The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules.⁹⁸⁶ The RFA generally defines the term “small entity” as having the same meaning as the terms, “small business,” “small organization,” and “small governmental jurisdiction.”⁹⁸⁷ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹⁸⁸ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁹⁸⁹ A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”⁹⁹⁰ Nationwide, as of 2002, there were approximately 1.6 million small organizations.⁹⁹¹ The term “small governmental

⁹⁸⁶ 5 U.S.C. § 603(b)(3).

⁹⁸⁷ 5 U.S.C. § 601(6).

⁹⁸⁸ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act 15 U.S.C. § 632. Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

⁹⁸⁹ 15 U.S.C. § 632.

⁹⁹⁰ 5 U.S.C. § 601(4).

⁹⁹¹ Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

jurisdiction" is defined as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."⁹⁹² The term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."⁹⁹³ Census Bureau data for 2002 indicate that there were 87,525 local governmental jurisdictions in the United States.⁹⁹⁴ We estimate that, of this total, 84,377 entities were "small governmental jurisdictions."⁹⁹⁵ Thus, we estimate that most governmental jurisdictions are small. Below, we discuss the total estimated numbers of small businesses that might be affected by our actions.

Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).⁹⁹⁶ In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than \$40 million in the previous three calendar years.⁹⁹⁷ The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.⁹⁹⁸ After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA or the Commission's rules. Some of those 440 small business licensees may be affected by the decisions in this 3rd MO&O and 2nd R&O.

In addition, the SBA has developed a small business size standard for Cable and Other Program

⁹⁹² 5 U.S.C. § 601(5).

⁹⁹³ 5 U.S.C. § 601(5).

⁹⁹⁴ U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, page 272, Table 415.

⁹⁹⁵ We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, Statistical Abstract of the United States: 2006, section 8, page 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

⁹⁹⁶ Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, MM Docket No. 94-131 and PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd 9589, 9593 ¶ 7 (1995) (*MDS Auction R&O*).

⁹⁹⁷ 47 C.F.R. § 21.961(b)(1).

⁹⁹⁸ 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of Section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard.

Distribution, which includes all such companies generating \$13.5 million or less in annual receipts.⁹⁹⁹ According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.¹⁰⁰⁰ Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.¹⁰⁰¹ Consequently, we estimate that the majority of providers in this service category are small businesses that may be affected by the rules and policies adopted herein. This SBA small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.¹⁰⁰² Thus, we estimate that at least 1,932 licensees are small businesses.

There are presently 2032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions may be included in the definition of a small entity.¹⁰⁰³ EBS is a non-profit non-broadcast service. We do not collect, nor are we aware of other collections of, annual revenue data for EBS licensees. We find that up to 1932 of these educational institutions are small entities that may take advantage of our amended rules to provide additional flexibility to EBS.

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements:

While these requirements are new with respect to potential licensees in the EBS and BRS bands, the Commission has applied these requirements to licensees in other bands. Moreover, the Commission is also eliminating many burdensome filing requirements that have previously been applied to BRS and EBS.¹⁰⁰⁴

To enable transition, proponents to arrange for the installation of required equipment, BRS and EBS licensees will be required to provide the following information to potential proponents: the transitioning licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax number.¹⁰⁰⁵ Licensees will also be required to provide the location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection and other pertinent technical information on the antenna for that main station or booster. These requirements are being adopted in response to a request from commenters that such information be provided. This information is critical to ensuring a smooth transition, because the Commission's ULS database does not contain information concerning the desired signal level at each EBS receive site entitled to protection

⁹⁹⁹ 13 C.F.R. § 121.201, NAICS code 517510.

¹⁰⁰⁰ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

¹⁰⁰¹ *Id.* An additional 61 firms had annual receipts of \$25 million or more.

¹⁰⁰² The term "small entity" within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on EBS licensees.

¹⁰⁰³ *See* 5 U.S.C. §§ 601 (3)-(5).

¹⁰⁰⁴ *See* Sections IV.B.1.d(ii) and IV.B.1.g(iii) *supra*.

¹⁰⁰⁵ *See* Section IV.B.1.d(i)(a) *supra*.

during the transition. Furthermore, this information should be readily available to the licensee and is not particularly burdensome to collect and provide.

Licensees that self-transition must provide the following information to all BRS and EBS licensees in the BTA where the self-transitioning licensee is located: the self-transitioning licensee's full name, postal mailing address, contact person, e-mail address, and phone and fax number.¹⁰⁰⁶ Self-transitioning licensees will also be required to provide the location (street address and geographic coordinates) of the main station or booster serving each EBS receive site entitled to protection and other pertinent technical information on the antenna for that main station or booster.¹⁰⁰⁷

Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered:

The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.”¹⁰⁰⁸

Regarding our decision to require licensees to transition by BTA instead of by MEA, we do not anticipate any significant economic impact on small entities. The overwhelming majority of petitioners preferred BTAs over the alternative of MEAs because they believe BTAs are both significantly easier to transition and less expensive to transition than MEAs. The record reflects that licensees almost unanimously agreed that the Commission should alter the transition area from MEAs to BTAs because these areas are more likely to conform to the size and location of geographic markets where systems have developed, and licensees, in many cases, have already developed interference and other interoperating relationships along BTA lines. Petitioners also requested that the transition area be changed to BTAs because transitioning such areas will be less expensive, making it easier for licensees to transition, especially small and rural operators. Thus, we believe this decision will actually result in cost-savings to entities that are responsible for transition costs.¹⁰⁰⁹

Regarding our decision to grant individual waivers of the rules rather than adopt a blanket “opt-out” for Multichannel Video Programming Distributors (MVPD), we believe that a large number of small entities will not be unduly burdened. While individual waivers require more work on the part of licensees, we anticipate that only a very few licensees, fewer than twenty, will be affected by the waiver process. Given that so few entities will be affected, we believe that an individual waiver is the more appropriate

¹⁰⁰⁶ See Section IV.B.1.f(ii) *supra*.

¹⁰⁰⁷ See *id.*

¹⁰⁰⁸ See 5 U.S.C. § 603(c).

¹⁰⁰⁹ See Section IV.B.1.a *supra*.

regulatory response than crafting a rule that covers so few entities.¹⁰¹⁰

Regarding our decision to allow licensees the option to self-transition in markets where a proponent does not come forward by a date certain or has withdrawn and no other proponent has come forward by a date certain, we do not believe this rule will impose any significant burdens on licensees because self-transitioning EBS licensees will be able to seek reimbursement for the costs of self-transitioning from commercial licensees and lessees in the BTA. BRS licensees that self-transition will be required to pay for their own costs. Licensees that do not transition will be faced with the prospect of losing their licenses. Thus, this rule provides an additional transition option for licensees who wish to comply with transition rules but cannot afford to be a proponent to retain their spectrum. Pursuant to this rule, EBS licensees can avoid losing their licenses for reasons that may be beyond their control (such as the financial inability to transition all licensees within its transition area, or the absence of a commercial proponent that can do so, or the failure of a commercial proponent to complete the process). We considered the alternative of requiring self-transitioning EBS licensees to pay their costs and rejected it as too costly for educational entities. There was overwhelming support in the record to permit licensees to self-transition and no opposition.¹⁰¹¹

Regarding our decision to require that all commercial licensees, in a proponent-driven transition, reimburse the proponent a pro rata share of the cost of transitioning a BTA to the new band plan, this decision is beneficial to licensees in that it avoids the “free rider” problem by requiring those who provide commercial service, whether through their own BRS or EBS channels or through leased EBS channels, to share the costs of transitioning the 2.5 GHz band. This relieves any particular commercial provider from having to pay for expenses of other commercial providers and institutes a cost-sharing regime that provides greater incentive for a proponent to come forward. We recognize that developing a list of reimbursable costs in the BRS/EBS context may be difficult given the varied types of operations in the band, but interested parties, such as Sprint, have already developed proposed lists. We also recognize that it may be difficult for the FCC to determine the population of a GSA, which is based on a 35-mile protected service area and not on a particular jurisdiction. Nonetheless, we believe that this scheme provides a fair and equitable solution, which outweighs the calculation difficulties that may arise.

Regarding our decision to adopt substantial service standards with safe harbors for BRS and EBS licensees, this decision does not impose any burdens on licensees above what is traditionally required for one to be a license holder. It is reasonable to expect that a licensee will deploy service on spectrum on which they have been licensed to operate, and the Commission routinely obligates licensees to do so lest the spectrum lie fallow and valuable spectrum resources go unutilized. Furthermore, substantial service standards are preferable to the alternative of construction benchmarks that focus solely on population served or geography covered and do not take into account qualitative factors important to end-users and the market, such as reliability of service, and the availability of technologically sophisticated premium services. Moreover, these standards reduce the likelihood of scenarios where licensees construct solely to meet regulatory requirements as opposed to satisfying market conditions.¹⁰¹² These standards are more lenient and flexible than the construction benchmarks that applied to these services prior to the rules adopted in this proceeding. The safe harbors adopted today give licensees offering a variety of services

¹⁰¹⁰ See Section IV.B.1.b *supra*.

¹⁰¹¹ See Section IV.B.1.f *supra*.

¹⁰¹² See section IV.C.1 *supra*.

ample opportunity to meet at least one safe harbor while ensuring that the 2.5 GHz band is used to provide an appropriate level of service.

Regarding our decision to establish a geographic service area for grandfathered E and F channel EBS licensees, allow such licensees to modify or assign their licenses, and employ a “splitting the football” mechanism where there is overlap, we do not believe this rule will impose any burdens upon licensees. To the contrary, this procedure will eliminate deadlocks in areas where licensees have overlapping service areas and have been unable to deploy service as a result thereof. Furthermore, this rule will permit grandfathered E and F EBS licenses, which have been providing service for 20 years, to modernize their systems to better serve the public. Granting this type of flexibility is consistent with the *BRS/EBS R&O*'s geographic area licensing and greater flexibility approaches. Moreover, there is substantial support from the commenters regarding this decision.¹⁰¹³

Regarding our decision to eliminate the rule that limits EBS licensees to four channels in a given geographic area, we do not believe that this action will impose additional obligations upon a licensee. To the contrary, given the wider range of services that EBS channels can now be used for and the changes to the Commission's leasing rules, retention of the four-channel rule may actually unduly limit the ability of educational institutions and organizations to take full advantage of the potential of EBS. We recognize that this rule was designed to promote diversity of programming and ownership, and that, in many cases, four channels should provide sufficient capacity for EBS operations. However, this concern is mitigated by the fact that the four-channel rule could result in spectrum laying fallow when an educator wishes to use the spectrum. Furthermore, choosing the alternative option of retaining the restriction could undermine transition planning, which may in some instances require licensees to swap MBS for UBS/LBS channels or vice versa. Moreover, commenters overwhelmingly support elimination of the rule, which will obviate the need for the Commission to review numerous waiver requests by EBS licensees.¹⁰¹⁴

Regarding our decision to eliminate the wireless cable exception to the EBS eligibility rules, we recognize that BTA licensees who acquired their rights at auction may contend that they had an expectation that the exception would apply. However, this concern is mitigated by the fact that changes made by the *BRS/EBS R&O* to the 2.5 GHz band and the continued availability of EBS spectrum on a leased basis will provide commercial operators with sufficient access to spectrum even if the exception is eliminated. Furthermore, due to changes in technology and the video marketplace, there is unlikely to be a growing need for spectrum for wireless cable systems.¹⁰¹⁵

Regarding our decision to, where possible, change the regulatory fee structure for the BRS services to establish a tiered regulatory fee structure based on market size/MHz, we do not believe this new structure would be burdensome to licensees. On the contrary, the current methodology for assessing regulatory fees can be onerous for rural operators because, on a per population basis, the fees can amount to multiple times that of fees paid by urban licensees who serve more customers. In contrast, a sliding fee—based upon population density—would more equitably distribute fees. We recognize that assessing fees based on the benefits of spectrum requires quantification and measurement of those benefits to the greatest

¹⁰¹³ See section IV.C.3 *supra*.

¹⁰¹⁴ See section IV.C.4 *supra*.

¹⁰¹⁵ See section IV.C.5 *supra*.

extent possible, and that to the extent that variables used for fee calculation can change or become unknown, the fee could be difficult to ascertain. However, we believe that the public interest is better served by assessing BRS regulatory fees based on the scope of a licensee's authorized spectrum use and the benefits they receive under their spectrum authorization. Furthermore, this concern is mitigated by the fact that calculations will actually be simpler for licensees than employing a MHz/pops formula. Moreover, establishing a tiered formula by market size eliminates the difficulties involved in ascertaining population within a GSA.¹⁰¹⁶

The regulatory burdens contained in the 3rd MO&O and 2nd R&O are necessary in order to ensure that the public receives the benefits of innovative new services, or enhanced existing services, in a prompt and efficient manner. As described above, we have reduced burdens wherever possible by eliminating a number of unnecessary regulations.

Report to Congress:

The Commission will send a copy of this 3rd MO&O and 2nd R&O, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.¹⁰¹⁷ In addition, the Commission will send a copy of this 3rd MO&O and 2nd R&O, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of this 3rd MO&O and 2nd R&O and FRFA (or summaries thereof) will also be published in the *Federal Register*.¹⁰¹⁸

¹⁰¹⁶ See section IV.C.6 *supra*.

¹⁰¹⁷ See generally, 5 U.S.C. § 801 (a)(1)(A).

¹⁰¹⁸ See 5 U.S.C. § 604(b).

APPENDIX C

List of Filers to Big LEO Order On Reconsideration and AWS 5th MO&O**Petitions for Reconsideration**

Globalstar LLC (Globalstar)
Nextel
Society of Broadcast Engineers (SBE)
Sprint
Wireless Communications Association International (WCA)

Oppositions to Petitions for Reconsideration

BellSouth Corporation, BellSouth Wireless Cable, Inc. and South Florida Television, Inc. (joint)
BRS Rural Advocacy Group
Fusion UV Systems (Fusion)
Globalstar
International Microwave Power Institute
LG Electronics Inc.
Nextel
Sprint
WCA

Reply to Opposition to Petitions for Reconsideration

Association of Home Appliance Manufacturers (AHAM)
GE Company
Globalstar
Matsushita Electric Corporation of America (MECA)
SBE
WCA
WCA, Sprint, Nextel (joint)
Whirlpool

Surreply

WCA

Joint Motion to Dismiss

WCA, Sprint, and Nextel

Opposition to Joint Motion to Dismiss

AHAM

Motion for Leave to Accept Late-Filed Opposition

Fusion

Opposition to Motion for Leave to Accept Late-Filed Opposition or Motion for Leave to File Reply

Motion of WCA, Sprint and Nextel (joint)

Ex Partes

AHAM

Fusion

Globalstar

Motorola, Inc.

Sprint Nextel Corporation

WCA

APPENDIX D**List of Petitioners to *BRS/EBS R&O*****Petitions for Reconsideration**

Blooston, Mordkofsky, Dickens, Duffy & Prendergast
BRS Rural Advocacy Group
Catholic Television Network
Central Texas Communications, Inc.
Cheboygan-Ostego-Presque Isle Educational Service District/Pace Telecommunications Consortium
Choice Communications, LLC
Clearwire Corporation
Concord Community Schools
Creighton University
C&W Enterprises, Inc.
Digital Broadcast Corporation
Florida Atlantic University
The George Mason University Instructional Foundation, Inc.
Grand Wireless Company Michigan Operations
Hispanic Information and Telecommunications Network, Inc
Independent MMDS Licensee Coalition
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc.
Michigan Center School District
National ITFS Association
Nextel
North American Catholic Educational Programming Foundation, Inc.
Plateau Telecommunications, Inc.
Santa Rosa Junior College
School Board of Miami-Dade County, Florida
School Board of Palm Beach County, Florida
Shekinah Network
Southern Florida Instructional Television, Inc.
SpeedNet, L.L.C.
Sprint Corporation
WATCH TV Company
WBSWP Licensing Corporation (Sprint Corporation)
Wireless Communications Association International, Inc.
Wireless Direct Broadcast System

Opposition to Petitions for Reconsideration

BellSouth Corporation
BellSouth Wireless Cable, Inc.
Blooston, Mordkofsky, Dickens, Duffy & Prendergast
BRS Rural Advocacy Group
Choice Communications, LLC
Clearwire Corporation
C&W Enterprises, Inc.
Digital Broadcast Corporation
Hispanic Information and Telecommunications Network, Inc.

Illinois Institute of Technology
Independent MMDS Licensee Coalition
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc.
Luxon Wireless Inc.
National Telecommunications Cooperative Association
Nextel Communications
NY3G Partnership
SBC Communications Inc.
School Board of Broward County, Florida
School Board of Miami Dade County, Florida
School Board of Palm Beach County, Florida
Southern Florida Instructional TV, Inc.
South Florida Television, Inc.
SpeedNet, LLC
Sprint Corporation
Wireless Communications Association International, Inc.
Wireless Direct Broadcast System

Reply to Opposition to Petitions for Reconsideration

BellSouth Corporation
BellSouth Wireless Cable, Inc.
The BRS Rural Advocacy Group
Catholic Television Network
Central Texas Communications, Inc.
Clearwire Corporation
C&W Enterprises, Inc.
Digital Broadcast Corporation
Independent MMDS Licensee Coalition
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, In
National ITFS Association
Nextel Communications
School Board of Miami-Dade County, Florida
South Florida Television, Inc.
Sprint Corporation
WATCH TV Company
WHTV Broadcasting Corp. d/b/a Digital TV ONE
Wireless Communications Association International, Inc.
Wireless Direct Broadcast System

APPENDIX E

List of Commenters to *BRS/EBS FNPRM***Comments**

BellSouth Corporation
BellSouth Wireless Cable, Inc.
Blooston, Mordkofsky, Dickens, Duffy & Prendergast
Catholic Television Network
Cheboygan Otsego Presque Isle Educational Service District/PACE Telecommunications
Choice Communications, LLC
Clearwire Corporation
C&W Enterprises, Inc.
Digital Broadcast Corporation
The George Mason University Instructional Foundation, Inc.
Gila River Telecommunications, Inc.
Grand Wireless Company, Inc. / John de Celis
Hispanic Information and Telecommunications Network, Inc.
Independent MMDS Licensee Coalition
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc.
National ITFS Association
National Telecommunications Cooperative Association
Nextel
NY3G Partnership
OnTarget Technologies, LLC
Precision Data Solutions
Red New York E Partnership
School Board of Miami-Dade County, Florida
School Board of Palm Beach County, Florida
South Florida Television, Inc.
SpeedNet, L.L.C.
Sprint Corporation
Trans Video Communications, Inc.
Wireless Communications Association International, Inc.
Wireless Direct Broadcast System

Reply Comments

Ad Hoc MMDS Licensee Coalition
BellSouth Corporation
BellSouth Wireless Cable, Inc.
Blooston, Mordkofsky, Dickens, Duffy & Prendergast
The Board of Trustees of the Leland Stanford Junior University
Catholic Television Network
Choice Communications, LLC
Clearwire Corporation
C&W Enterprises, Inc.
Department of Education, Archdiocese of New York
Digital Broadcast Corporation
EBS Parties

Hispanic Information and Telecommunications Network, Inc.
Illinois Institute of Technology
Independent MMDS Licensee Coalition
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc.
National ITFS Association
Nextel Communications, Inc.
NY3G Partnership
Polar Communications Mutual Aid Corporation
South Florida Television, Inc.
SpeedNet, L.L.C.
Sprint Corporation
Stanford University
Trans Video Communications, Inc.
Wireless Communications Association International, Inc.
Wireless Direct Broadcast System

Ex Parte Comments

Abilene Christian University
BellSouth Corporation
BRS Rural Advocacy Group and Central Texas Communications, Inc.
Catholic Television Network
Clearwire Corporation
Clarendon Foundation
Concordia University
C&W Enterprises, Inc.
Dana College
DeLawder Communications, Inc.
Diocese of Lafayette
Diocese of Rockville Centre
E-Copernicus
Evangeline Parish Schools
Franciscan Canticle, Inc.
The George Mason University Instructional Foundation, Inc.
Heritage Baptist Church & Christian Academy
Hispanic Information and Telecommunications Network, Inc.
Gryphon Wireless, LLC
The ITFS/2.5 GHz Mobile Wireless Engineering & Development Alliance, Inc.
Madison Dearborn Partners, LLV
Media Access Project
Morrisonville Community Unit School District #1
NAF
National ITFS Association
National Telecommunications Cooperative Association
Nextel Communications
NextWave Broadband Inc.
NY3G Partnership
Patoka Community Unit School District No. 100
Pearsall Independent School District
Pegasus Communications Corporation

Roberts County Telecommunications Cooperative Association
School District of Clay County
Sprint Nextel Corporation
Teton Wireless
Trans Video Communications
Wireless Communications Association International

**JOINT STATEMENT OF
CHAIRMAN KEVIN J. MARTIN
AND
COMMISSIONER DEBORAH TAYLOR TATE**

Re: Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Use of the Universal Licensing System in the 2500-2690 MHz Band; Part 1 of the Commission's Rules – Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico; Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands; 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, *Order on Reconsideration and Fifth Memorandum Opinion and Order, and Third Memorandum Opinion and Order and Second Report and Order*, (WT Docket No. 03-66, IB Docket No. 02-364, ET Docket No. 00-258), FCC 06-46

In 2004, the Commission initiated a fundamental restructuring of the 2500-2690 MHz band to give educational and commercial licensees contiguous spectrum in the low power segments of the band, while preserving the high power segment for video uses, such as long-distance learning.

Today, we affirm the allocation decisions adopted in the original order, including the reservation of spectrum for educational users. In addition, we take steps today to ease the transition for relocating licensees to the restructured band plan, including reducing the size of transition areas from Major Economic Areas to smaller Basic Trading Areas. We also modify the leasing requirements of Educational Broadcast Service licensees to balance their need to reserve the right to periodically re-evaluate their educational needs with the needs of commercial operators for the certainty of longer-term leasing arrangements. Encouraging education and promoting the deployment of commercial broadband services are both important goals of the Commission, and we believe the leasing provisions the Commission adopts today will support them both. We are also optimistic that this item will help enable this spectrum band to fulfill its potential as a home for innovative broadband and educational services.

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS, CONCURRING**

RE: Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational, and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands (Third Memorandum Opinion and Order and Second Report and Order, WT Docket No. 03-66).

I have long stated my belief that the EBS band must be used, above all else, to benefit educators. I supported our 2004 *Order* reorganizing the EBS and BRS bands because I believed – as did the great majority of the EBS community – that it would allow educational licensees to get more out of this valuable spectrum. In particular, I believed – and I continue to believe – that access to capacity on low-power, cellularized broadband wireless networks would be a great boon to the universities, high schools, elementary schools, and a wide array of non-profit educational organizations that currently hold EBS licensees. I accepted the argument that educational licensees needed freedom to partner with industry in order to build out the network infrastructure necessary to provide wireless broadband access using this spectrum.

Now we are asked by industry, as well as a portion of the EBS community, to go farther down that road. It is no longer enough, they say, for educational licensees to lease up to 95% of their capacity to commercial users for up to 15 years. Instead, educational licensees seek authority to lease up to 95% of their capacity for up to 30 years and with only a limited and poorly-defined opportunity to revisit the terms of the lease at 15, 20, and 25 years.

The net result of these new ground rules, we are told, will be to enhance the value that educators draw from the EBS band. I certainly hope they are right. I have no doubt that the educational licensees have given this matter careful thought and are genuinely seeking to protect the interests of their present and future students – both rural and urban, young and old. These are precisely the interests that led to the creation of the predecessor to the EBS program over four decades ago.

But I have to tell you that I worry whether we may be going too far today. I am not so certain that it is really wise for any educational institution to lock up, even partially, use of its valuable EBS license for the next 30 years. In making our judgment, it is sobering to remember that 30 years ago the best and the brightest of our engineers believed that the optimal use of this spectrum was for Multipoint Distribution Systems meant to compete with cable video providers. Satellite broadcasting was not even on the radar screen – let alone the low-power, cellularized wireless broadband access technologies that we seek to encourage today.

For my part, I would strongly have preferred to accept the suggestion of one commenter to give EBS licensees the right to reclaim up to 5% of the capacity of their spectrum every year up to a limit of 25% percent. Indeed, I would have supported an even higher limit. That strikes me as a far better way to ensure that the EBS spectrum will ultimately benefit those it is meant to benefit. But because that choice is not before me, I concur, with some hesitation, in today's item.

Finally, I also want to emphasize this Commission's ongoing responsibility to monitor progress – or lack thereof – in the EBS band. We should be enormously proud of the varied and creative uses to which educational licensees have put this band to date:

- Stanford University's Instructional Television Network transmits 350 hours per week of engineering and scientific educational programming to the university's own students as well as to over 6,000 adult students working in the Bay Area.
- South Carolina's Educational Television Network provides distance learning resources to nearly half a million K-12 students.
- The North American Catholic Educational Programming Foundation provides reading and phonics instruction to state and county correctional facilities across the country to remedy high inmate illiteracy rates.
- The Chicago Instructional Technology Foundation delivers video service to area schools as well as the Chicago Children's Memorial Hospital and five community churches.

These are just a few of literally many thousands of valuable contributions that have been made by innovative use of this spectrum. I am confident that as technology marches forward, tomorrow's educators will be able to conceive new and exciting uses for the EBS band. But this band will remain available to educators only if we keep a watchful eye on how it is actually being used. So let no one think the Commission is abdicating its ongoing responsibilities to protect the people's spectrum and the public interest with the changes we make today. I intend to track how these changes evolve, how the spectrum is utilized, how reviews are conducted, and how the integrity of the program is perpetuated in the months and years ahead. If we do our job, we can ensure that the educational promise of this spectrum has a future even brighter than its past.

**STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN
APPROVING IN PART, CONCURRING IN PART**

Re: Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands; Order on Reconsideration and Fourth Memorandum Opinion and Order, and Third Memorandum Opinion and Order and Second Report and Order; WT Docket No. 03-66 et al.

With this omnibus item, we move another step closer to the widespread deployment of wireless broadband services in the 2.5 GHz spectrum band. It's taken a little longer than I hoped, but we are finally clarifying the set of rules that should accommodate future innovative technologies offered by Broadband Radio Service (BRS) and Educational Broadband Service (EBS) operators and facilitate the provision of advanced spectrum offerings. We are establishing a policy regime that will bring these the EBS and BRS services squarely into the 21st century.

When we adopted the underlying Order in this proceeding back in June 2004, I expressed my disappointment that the Order adopted a transition process that was based on major economic areas (MEAs) instead of smaller markets. I was concerned that the obligation to transition an entire MEA would make it exceedingly difficult for proponents to effectuate transitions in their particular market. While it is small comfort to be proven right when it comes to broadband deployment, it is telling that not a single transition plan has been filed in the almost two years since that decision was made. That is why I am so pleased that in our item today, we reverse this earlier decision and agree with a large number of commenters to implement transitions by Basic Trading Areas (BTAs) rather than MEAs. For the foreseeable future, I believe that BRS and EBS services will be local ones, and our decision to adopt BTAs as the transition market should make it a lot easier for proponents to effectuate transitions and start rolling out broadband services.

While much has been said in the record over the past several months about the length of leases between EBS and BRS licensees, I am very pleased to support the compromise advanced by the Wireless Communications Association and the Catholic Television Network that we ultimately adopt in this item. This compromise is a significant one and will enable educational and business entities to engage in meaningful partnerships that ultimately will lead to the deployment of wireless broadband networks. There is so much potential in the 2496-2690 MHz band and this compromise will enable educators, as well as commercial operators, to take full advantage of the opportunities presented by the latest technologies.

I am excited about the future use of the spectrum for broadband services, both commercial and educational. Broadband has the power to transform the lives of individuals and the future of communities. But these networks won't come cheap, and it was critical that parties could come together and find common ground so students and educators can also benefit from the deployment of these state of the art facilities.

On a different subject, I have lingering concerns about our treatment of existing BRS operators who are interested in "opting-out" of the Commission's transition plan. These service providers have complied with our rules for many years, and have deployed digital video (and sometimes even digital broadband) systems that ably serve their respective communities. While there was not sufficient support to move beyond the waiver language that we adopted in our last item, I have tried to provide these BRS

operators with some improved structure by advocating an automatic grant provision for those parties that filed waivers for opt-out that went unopposed. I am disappointed that we ultimately were unable to provide these operators with additional certainty but am pleased we make commitments to review these waivers expeditiously.

Finally, I have concerns with that portion of the item addressing construction requirements of the EBS/BRS services going forward. I have long had a strong interest in promoting active spectrum use and was pleased to work with Sprint and Nextel this past fall to secure significant build out commitments from the companies for their BRS/EBS spectrum holdings in association with their merger Order. I think we have a real opportunity in our decision today to further jumpstart wireless broadband efforts in the 2.5 GHz band by adopting “safe harbors” that are meaningful. Safe harbors are just that – they are not a requirement; parties are not obligated to meet them. A safe harbor is non binding, but if met, it provides operators the security that they absolutely have complied with our substantial service requirements. But if we are to provide that security option by adopting safe harbors, we should make them worthwhile. Operators already are providing significant wireless services in these bands today, so meeting the enhanced safe harbors that I proposed clearly was possible.

I want to thank the staff of the Wireless Telecommunications Bureau and the International Bureau for all of their time and hard work spent on the second massive item in this monumental proceeding. This Order represents another important step by the Commission to ensure that providers continue to have opportunities to deploy broadband wireless so that all consumers across America have access to the best communications possible.