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

In the Matter of	)	
	)	
Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile-Satellite Service	)	ET Docket No. 95-18
	)	
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
	)	
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

THIRD REPORT AND ORDER AND THIRD MEMORANDUM OPINION AND ORDER

Adopted: November 5, 2003 **Released: November 10, 2003**

By the Commission:

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INTRODUCTION

1. By this action, we are modifying the rules that new 2 GHz Mobile-Satellite Service (MSS) licensees are to follow when relocating incumbent Broadcast Auxiliary Service (BAS) licensees in the 1990-2025 MHz band and Fixed Service (FS) microwave licensees in the 2180-2200 MHz band.[1] We take these actions in light of our recent decision to reallocate 30 megahertz of 2 GHz MSS spectrum to new Fixed and Mobile services as part of our Advanced Wireless Services (AWS) proceeding,[2] and to allow MSS licensees to provide an Ancillary Terrestrial Component (ATC) in conjunction with their MSS networks.[3] We also consider a number of outstanding petitions for reconsideration filed in response to our initial decision to reallocate these bands to MSS.[4] Together, these decisions will resolve outstanding issues relating to the introduction of MSS at 2 GHz and the consequential relocation of BAS and FS licensees in these bands, which in turn will set the stage for the introduction of a variety of new and highly anticipated advanced services into these bands.

[1] BAS spectrum in the 2 GHz band is also authorized for use by the Cable Television Relay Service (CARS) and the Local Television Transmission Service (LTTS). *See* 47 C.F.R. §§ 74.602, 78.18(a)(6) and 101.801. As in previous actions in this proceeding, we will refer to these services collectively as "BAS," and all decisions apply to CARS and LTTS in the band, as well as BAS.

[2] *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*, 18 FCC Rcd 2223 (2003) (*AWS Third Report and Order*), *petitions for reconsideration pending.*

[3] *See* 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*, 18 FCC Rcd 1962 (2003), *Errata* (rel. March 7, 2003) (*ATC Report and Order*), *appeal pending*, AT&T Wireless Services, Inc. and Cellco Partnership d/b/a Verizon Wireless v. FCC, No. 03-1191 (D.C. Cir. filed July 8, 2003); *Order on Reconsideration*, IB Docket No. 01-185, FCC 03-162 (rel. July 3, 2003) (*ATC Sua Sponte Recon*).

[4] *See* Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile-Satellite Service, ET Docket No. 95-18, *Second Report and Order and Second Memorandum Opinion and Order*, 15 FCC Rcd 12315 (2000) (*MSS Second Report and Order*).

EXECUTIVE SUMMARY

2. As described in further detail, below, we are retaining in substantial part the BAS and FS relocation procedures that new MSS entrants in the 2 GHz band will follow and that were originally adopted in the Commission's *MSS Second Report and Order*. The modifications we make herein respond to comments filed in response to the *Further Notice of Proposed Rulemaking* in the AWS proceeding[5] and the *Notice of Proposed Rulemaking* in the MSS-ATC proceeding.[6] In both of those actions, the Commission sought comment on how the introduction of new services into the 2 GHz MSS band would affect the existing BAS and FS relocation procedures. We also address petitions for reconsideration filed in response to the *MSS Second Report and Order*. Specifically, we make the following decisions herein:

For relocation of BAS in the 1990-2025 MHz band by new MSS entrants, we:

- Require the relocation of BAS incumbents in all television markets to the final (Phase II) plan at 2025-2110 MHz. This will eliminate the necessity of relocating BAS licensees to an interim (Phase I) channel plan as part of the previously adopted two-phase approach to relocation.
- Retain the requirement that all BAS operations in markets 1-30 must be relocated prior to the initiation of new MSS in the band.
- Amend the rules to specify that the time period for calculating a one-year mandatory BAS negotiation period for markets 1-30 and the ten-year sunset period commence upon publication of this Report and Order in the *Federal Register*.
- Require the relocation of all fixed BAS stations on channels 1 and 2 nationwide prior to the initiation of new MSS in the band.
- Decline to require the reimbursement of relocation expenses for BAS facilities for which initial applications were filed at the Commission after adoption of the *MSS Second Report and Order*.
- Modify our final (Phase II) BAS channel plan to provide for seven channels of 12 megahertz each, and a 500 kilohertz data return link (DRL) band at both ends of the seven channels.
- Permit BAS licensees to operate indefinitely on their existing 17-megahertz wide channels in the 2025-2110 MHz band on a secondary basis, if they so choose.
- Clarify that an assignment or transfer of control does not disqualify a BAS incumbent from relocation eligibility.

For FS microwave relocation by MSS/ATC licensees in the 2180-2200 MHz band, we:

- Clarify that TIA TSB 10-F, or its successor, is an appropriate interference standard that may be used for determining interference from MSS ATC stations to incumbent FS operations in the 2 GHz band.
- Clarify that FS incumbents relocated through the negotiation process are eligible for reimbursement for relocation to leased facilities or alternative media, but decline to extend reimbursement eligibility to FS incumbents that voluntarily self-relocate.

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[5] 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, *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 16043 (2001) (*AWS Further Notice*).

[6] 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 Band, IB Docket No. 01-185, *Notice of Proposed Rulemaking*, 16 FCC Rcd 15532 (2001) (*ATC Notice*).

- Decline to establish separate "rolling" negotiation periods for each FS incumbent as they are approached by MSS licensees for relocation negotiation.
- Amend the rules to specify that the time period for calculating the mandatory FS negotiation periods and the ten-year sunset period commence upon publication of this Report and Order in the *Federal Register*.
- Clarify that an assignment or transfer of control does not disqualify a FS incumbent from relocation eligibility.
- Decline to require MSS licensees to relocate FS incumbents from which the MSS operation would only receive, but not cause, interference prior to the ten-year sunset date.

BACKGROUND

3. In 1997, the Commission reallocated the 1990-2025 MHz band to the MSS (Earth-to-space) and the 2165-2200 MHz band to the MSS (space-to-Earth),[7] displacing existing BAS and FS licensees, respectively. The relocation procedures for incumbent BAS facilities at 1990-2025 MHz and incumbent FS facilities at 2165-2200 MHz adopted in the *MSS Second Report and Order* represented a comprehensive plan for clearing this 70 megahertz of spectrum for use by new MSS licensees. The plan was modeled on the policies set forth in our earlier Emerging Technologies proceeding,[8] and requires MSS entrants to provide comparable facilities to BAS and FS incumbents that are relocated prior to the sunset dates specified in the *MSS Second Report and Order*.[9] Both the BAS and FS relocation procedures call for mandatory negotiation periods; after which, if a relocation agreement has not been reached, MSS licensees may involuntarily relocate the incumbent operator(s). The obligation of MSS licensees to provide relocation compensation was scheduled to sunset ten years after the initial negotiations with FS incumbents begin, and on September 6, 2010, for BAS incumbents. Petitions for reconsideration, oppositions and replies were filed in response to the *MSS Second Report and Order*.[10] Last year, the Commission issued an *Order* suspending the expiration date of the initial two-year mandatory negotiation period between BAS incumbents and new MSS licensees.[11] This *Suspension Order* was based on the fact that AWS and MSS-ATC matters, which had the potential to affect use of the band, were still pending at

[7] *See* Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, *First Report and Order and Further Notice of Proposed Rule Making*, 12 FCC Rcd 7388 (1997) (*MSS First Report and Order*).

[8] Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule* Making, 7 FCC Rcd 6886 (1992); *Second Report and Order*, 8 FCC Rcd 6495 (1993); *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589 (1993); *Memorandum Opinion and Order*, 9 FCC Rcd 1943 (1994); *Second Memorandum Opinion and Order*, 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").

[9] *MSS Second Report and Order*, 15 FCC Rcd 12315, paras. 50 and 80.

[10] These pleadings are listed in Appendix A.

[11] Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile-Satellite Service, ET Docket No. 95-18, *Order*, 17 FCC Rcd 15141 (2002) (*Suspension Order*).

that time. Our Office of Engineering and Technology granted two additional suspensions of this date, such that the initial two-year mandatory negotiation period is now due to expire on November 13, 2003.[12]

4. The Commission recently has made several decisions that will affect the planned relocation of these BAS and FS incumbents by increasing the number and nature of new entrants in the 1990-2025 MHz and 2165-2200 MHz bands. In the AWS proceeding, ET Docket No. 00-258, the Commission examined the suitability of a variety of frequency bands for the provision of advanced wireless services.[13] The Commission had previously identified the 2 GHz MSS bands as potential candidates for the provision of AWS, including those technologies to be used as part of so-called third-generation, or "3G," applications, in the 2001 *AWS Further Notice*.[14] In addition to proposing to reallocate some MSS spectrum to new Fixed and Mobile Services, including AWS, the *AWS Further Notice* sought comment on what changes would be necessary to the rules governing the relocation of BAS and FS licensees in the 1990-2025 MHz and 2165-2200 MHz bands.[15] In a *Third Report and Order* released this February, the Commission reallocated from the 2 GHz MSS spectrum 30 megahertz in the 1990-2000 MHz, 2020-2025 MHz, and 2165-2180 MHz bands for Fixed and Mobile services on a primary basis.[16] The decision retained the remaining 40 megahertz of spectrum in the 2000-2020 MHz and 2180-2200 MHz bands for MSS use.[17] The *AWS Third Report and Order* did not address the relocation issues raised in the *AWS Further Notice*. In a *Third Notice of Proposed Rulemaking* portion of the same document, we sought comment on the best use of these reallocated bands. Such uses could include, for example, additional AWS spectrum – either under new service rules or as an expansion of adjacent-band Broadband PCS frequencies; replacement spectrum for Multipoint Distribution Service (MDS) operations in the 2.1 GHz band; or replacement Specialized Mobile Radio (SMR) spectrum in conjunction with a plan to resolve public safety and Commercial Mobile Radio Service (CMRS) interference issues in the 800 MHz band.[18] With regard to this last possibility – use of the MSS bands to help resolve 800 MHz public safety interference issues – we note that an extensive record has developed under the proceeding in WT Docket No. 02-55. These matters are still under consideration.

5. With respect to MSS licensing, we note that the Commission requires 2 GHz MSS networks to meet an implementation milestone schedule as a condition of authorization, and non-compliance with implementation milestones will result in cancellation of the authorization. Acting in accordance with this process, the International Bureau has nullified authorizations held by Constellation Communications Holdings, Inc., Mobile Communications Holdings, Inc., Globalstar L.P., and TMI

[12] Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for use by the Mobile-Satellite Service, ET Docket No. 95-18, *Order*, 18 FCC Rcd 18353 (OET, 2003) (*Second Suspension Order*); *Order*, DA 03-3543 (OET, rel. Nov. 4, 2003) (*Third Suspension Order*).

[13] *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, *Second Report and Order*, 17 FCC Rcd 23193, 23194-95, paras. 2-3 (2002) (*AWS Second Report and Order*) (describing the history of the AWS proceeding and listing the bands that have been considered).

[14] *AWS Further Notice*, 16 FCC Rcd at 16055-56, paras. 24-29.

[15] *Id.*, 16 FCC Rcd at 16057-58, paras. 32-34.

[16] *AWS Third Report and Order*, 18 FCC Rcd at 2238, para. 28.

[17] *Id.*

[18] *Id.*, 18 FCC Rcd at 2242-2257, paras. 38-73.

Communications and Company, Limited Partnership.[19] Currently, The Boeing Company, Celsat America, Inc. (Celsat), ICO Satellite Services, G.P. (ICO), and Iridium 2GHz LLC are authorized to provide 2 GHz MSS.[20]

6. We also have permitted MSS licensees to provide an Ancillary Terrestrial Component to their satellite systems in IB Docket No. 01-185. In the *ATC Notice of Proposed Rulemaking*, the Commission recognized that the introduction of terrestrial operations in the MSS bands – such as the services proposed as part of ATC – might affect the existing BAS and FS relocation and reimbursement rules, and sought comment on whether the existing relocation procedures would be sufficient to accommodate the introduction of MSS terrestrial operations.[21] In the subsequent *ATC Report and Order*, released February 10, 2003, the Commission concluded that it would be more efficient, feasible and practical to permit MSS licensees to include a terrestrial component in their satellite systems than to award terrestrial use rights in the MSS band to third parties.[22] ATC operations will not be permitted until after a MSS licensee files an application with the Commission that demonstrates compliance with measures designed to ensure the integrity of the underlying satellite operations.[23] These measures require MSS licensees to develop and deploy their satellite service before they can offer ATC services.[24] The *ATC Report and Order* did not address the relocation issues raised in the *ATC Notice*.

[19] Mobile Communications Holdings, Inc. and ICO Global Communications (Holdings) Limited, et al., *Memorandum Opinion and Order*, 18 FCC Rcd 1094 (Int'l Bur. 2003), *joint app. for review pending*; Globalstar, L.P., *Memorandum Opinion and Order*, 18 FCC Rcd 1249 (Int'l Bur. 2003), *request for stay and emergency app. for review pending*; TMI Communications and Company, Limited Partnership, *Memorandum Opinion and Order*, 18 FCC Rcd 1725 (Int'l Bur. 2003), *request for stay and app. for review pending*.

[20] The Boeing Company, *Order and Authorization*, 16 FCC Rcd 13691 (Int'l Bur. 2001), *app. for review denied*, 18 FCC Rcd 1405 (2003), *appeal pending*, AT&T Wireless Services, Inc. v. FCC, No. 03-1042 (D.C. Cir. filed Feb. 26, 2003), *modified*, *Order and Authorization*, DA 03-2073 (Int'l Bur., rel. June 24, 2003); Celsat America, Inc., *Order and Authorization*, 16 FCC Rcd 13712 (Int'l Bur. 2001) *app. for review denied*, 18 FCC Rcd 1405 (2003), *appeal pending*, AT&T Wireless Services, Inc. v. FCC, No. 03-1042 (D.C. Cir. filed Feb. 26, 2003), *modified*, *Order and Authorization*, 16 FCC Rcd 14278 (Int'l Bur. 2001), *modified*, *Order*, DA 03-2076 (Int'l Bur., rel. June 24, 2003); ICO Services Limited, *Order*, 16 FCC Rcd 13762 (Int'l Bur./OET 2001), *app. for review denied*, 18 FCC Rcd 1405 (2003), *appeal pending*, AT&T Wireless Services, Inc. v. FCC, No. 03-1042 (D.C. Cir. filed Feb. 26, 2003), *modified*, ICO Satellite Services G.P., *Order*, DA 03-2077 (Int'l Bur., rel. June 24, 2003); Iridium LLC, *Order and Authorization*, 16 FCC Rcd 13778 (Int'l Bur. 2001), *app. for review denied*, 18 FCC Rcd 1405 (2003), *appeal pending*, AT&T Wireless Services, Inc. v. FCC, No. 03-1042 (D.C. Cir. filed Feb. 26, 2003), *modified*, Iridium 2GHz LLC, *Order*, DA 03-2075 (Int'l Bur., rel. June 24, 2003). In this document, the term "application" refers to submissions by parties seeking to operate U.S.-licensed systems; the term "MSS licensee" includes MSS systems licensed by the Commission to serve the United States, as well as non-U.S.-licensed satellite systems for which the Commission reserved spectrum to serve the United States. *See* Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, IB Docket No. 96-111, *Report and Order*, 12 FCC Rcd 24094, 24173-74 para. 185 (1997) (detailed discussion of the procedures under which foreign-licensed satellite systems may provide service in the United States).

[21] *ATC Notice*, 16 FCC Rcd at 15560-61, paras. 72-74.

[22] *ATC Report and Order*, 18 FCC Rcd at 1990-1995, paras. 47-55.

[23] *See generally ATC Sua Sponte Recon*, FCC 03-162.

[24] *See generally ATC Report and Order*, 18 FCC Rcd at 2001-2016, paras. 72-102.

DISCUSSION

7. By this Third Report and Order and Third Memorandum Opinion and Order, we address BAS and FS relocation issues as they pertain to 2 GHz MSS licensees as part of an overall effort to promote the rapid introduction of MSS into the 2 GHz bands. As such, we combine a Report and Order addressing the relevant comments that discuss BAS and Fixed Service relocation issues in two proceedings, ET Docket 00-258 and IB Docket No. 01-185, with a Memorandum Opinion and Order addressing the seven petitions that seek reconsideration or clarification of relocation decisions made in the *MSS Second Report and Order*.[25] The issues we consider generally relate to relocation timing, reimbursement eligibility, negotiation commencement, and technical/interference matters. Our decisions are designed to account for the actions the Commission has taken in the subsequent proceedings, described above, regarding the reallocation of a portion of the MSS band and the introduction of ATC services by MSS licensees.[26]

8. As an initial matter, we are not altering the fundamental workings of the relocation process that was adopted in the *MSS Second Report and Order*. For example, throughout the AWS proceeding, commenters representing incumbent licensees' interests have urged us to maintain the general relocation principles of the Emerging Technologies proceeding even if we expand the nature and scope of services in the band.[27] We agree.

9. In order to provide for MSS entry into the band in accordance with construction milestones, MSS licensees generally will have to relocate BAS and FS incumbents. We note that, due to the reallocation of the 1990-2000 MHz and 2020-2025 MHz bands in the AWS proceeding, non-MSS licensees that may begin service later will benefit from the band clearing paid for by MSS licensees. For this reason, we will provide an equitable mechanism by which MSS licensees can recover some of the relocation costs incurred from other licensees who will benefit from the band clearing in the 1990-2000 MHz and 2020-2025 MHz segments of the 1990-2025 MHz band. Thus, licensees benefiting from MSS licensees' efforts to clear incumbent BAS from the 1990-2025 MHz band will be expected to share the costs of this relocation.

10. However, because the nature and scope of new Fixed and Mobile service licensees that will operate in the 1990-2000 MHz and 2020-2025 MHz bands has not yet been determined, we do not set forth herein a comprehensive set of procedures that new Fixed and Mobile service providers (including AWS entrants) in these bands must follow to relocate incumbent BAS licensees and/or to reimburse MSS licensees that will have incurred relocation costs. We will instead consider such matters in a separate, future proceeding. This is because the decisions we make with respect to these bands may affect the manner by which we apply the general cost-sharing principles embodied in the Emerging Technologies

[25] An eighth petition, filed by the Cellular Telecommunications and Internet Association (CTIA) on October 15, 2001, in ET Docket No. 00-258, ET Docket No. 95-18, and IB Docket No. 99-81, was addressed in the Second Memorandum Opinion and Order portion of the *AWS Third Report and Order*, 18 FCC Rcd at 2257-2258, paras. 74-75.

[26] However, the decisions we make herein are limited to those actions that will allow MSS licensees to continue the relocation of BAS and FS incumbents in order to begin service in the 2 GHz band. We will address specific pleadings that pertain to the *ATC Order* and the spectrum reallocation decisions in the *AWS Third Report and Order* separately.

[27] *See, e.g.*, Cox and Cosmos Reply Comments to the *AWS Further Notice* at 6 (stating that "[h]owever the Commission may propose to revise the BAS relocation plan, Cox and Cosmos agree with MSTV and NAB that, consistent with the Commission's decisions in this proceeding, all new entrants must ensure full compensation of BAS incumbents' relocation expenses.")

procedures. For example, it is not clear how we would apply our traditional cost-sharing principles were we to use portion of the bands to provide relocation spectrum for Nextel's operations in the 800 MHz band or for MDS licensees in the 2150-2160/62 MHz band,[28] to relocate federal government operations,[29] or to provide interference separation between new AWS licensees and existing users in adjacent spectrum bands.[30] We expect, however, that licensees that ultimately benefit from spectrum cleared by MSS shall bear the cost of reimbursing MSS licensees for the accrual of that benefit.

11. Some petitioners also note the complexity that introducing different services with potentially different geographic licensing schemes will have on cost-sharing in the band. For example, PCIA has suggested, *inter alia*, that we authorize a third-party clearinghouse to administer relocation matters.[31] We likewise defer consideration of this issue because we have not yet adopted service rules for the Fixed and Mobile allocation in the band and, therefore, do not know the characteristics of new licensees that will share the 2 GHz band with the existing MSS licensees. We will be able to make more meaningful decisions with respect to these and other cost-sharing procedures at a future time.

12. Finally, since the actions taken herein include the relocation of existing services and the addition of new services within the subject frequency bands, there may be some impact on international coordination arrangements currently in effect. Therefore, operation in the border areas may be constrained pending the completion of consultations with foreign administrations, as necessary, and until existing agreements are revised and new agreements are developed, as appropriate.

A. BAS

1. Background

13. *BAS Use and Band Plan.* The 1990-2110 MHz band (2 GHz BAS band) is currently used extensively by the BAS for mobile TV pickup (TVPU) operations, including electronic newsgathering (ENG) operations to cover events of interest.[32] Such stations can operate in a variety of configurations within their operating area. TVPU stations may transmit from an ENG truck, helicopter, blimp, etc., directly to a fixed receiver at the station or through a relay link at a remote receiver location.[33] TVPU signals may also originate or relay through aeronautical TVPU platforms, such as helicopters, to a fixed receive point, a mobile satellite uplink truck, or other facilities, to reach the ultimate receive point – typically a studio. The band may also be used for mobile operations in the Cable Television Relay Service.[34] It is also used by fixed BAS operations such as studio-transmitter link (STL) stations, TV relay

[28] *See AWS Third Report and Order*, 18 FCC Rcd at 2248, para. 29. *See also* Nextel comments in WT Docket No. 00-258 (filed April 14, 2003).

[29] *See, e.g.*, Cingular comments in WT Docket No. 00-258 (filed April 14, 2003) at 2-3.

[30] *See, e.g.*, Ericsson comments in WT Docket No. 00-258 (filed April 14, 2003) at 2-4.

[31] PCIA, the Wireless Infrastructure Association, Petition for Partial Reconsideration of the *AWS Second Report and Order* at 4. *See also* PCIA, the Wireless Infrastructure Association, Comments to the *AWS Third Report and Order*.

[32] A TVPU station is a land mobile station used for the transmission of TV program material and related communications from scenes of events back to the TV station or studio. *See* 47 C.F.R. § 74.601(a) (listing classes of TV broadcast auxiliary stations).

[33] Fixed receiver sites for TVPU signals are typically located on tall buildings, towers, or mountain tops and employ remotely steerable directional antennas, thus affording maximum coverage of TVPU transmissions within the operations area. *See* SBE Comments in ET Docket No. 98-206, filed Jan.12, 2000, at 3.

[34] 47 C.F.R. § 78.18(a)(6).

stations, and TV translator relay stations, but the majority of those operations are in higher frequency bands allocated to the BAS.[35] Further, communications common carriers in the LTTS may be assigned any of the 2 GHz BAS channels to provide service to TV broadcast stations, TV broadcast network-entities, cable system operators, and cable network entities.[36]

14. Traditionally, the 2 GHz BAS channel plan divided the bands 1990-2110 MHz and 2450-2483.5 MHz into nine channels, each consisting of between 16.5 and 18 megahertz. These channels are available for assignment to various fixed and mobile BAS applications.[37] Table 1, below, depicts the existing channel plan for 1990-2110 MHz in column 1. While a TVPU licensee may be authorized to operate on any or all frequencies,[38] fixed link BAS/LTTS stations are authorized to operate on one channel only.[39] When necessary, short-term itinerant operation under the provisions of 47 C.F.R. § 74.24 may be used to deploy outside a licensee's authorized operational area for up to 720 hours annually.[40] This capability is generally used to cover special events and breaking news such as natural disasters and other emergency situations that occur outside a licensee's area of normal operations.

[35] A TV STL station (studio-transmitter link) is a fixed station used for the transmission of TV program material and related communications from the studio to the transmitter. A TV relay station is a fixed station used for transmission of TV program material and related communications for use by TV broadcast stations or other purposes as authorized in Section 74.631. A TV translator relay station is a fixed station used for relaying programs and signals of TV stations to TV translators or other communications facilities that the Commission may authorize. *See* 47 C.F.R. §74.601(b). *See generally* 47 C.F.R. §74.600 ("Eligibility for license").

[36] LTTS operations are limited to the permissible uses described in Sections 74.631 and 78.11. *See* 47 C.F.R. §101.803(b).

[37] *See* 47 C.F.R. § 74.602(a). In addition, the Commission grandfathered incumbent facilities on a co-primary basis when it reallocated BAS channel 10 (2483.5-2500 MHz) to the MSS (space-to-Earth), a.k.a. "Big LEO" systems.

[38] Authorization of multiple frequencies enables licensees to avert interference to other operations by allowing licensees to select the channel that is best suited for the site characteristics and antenna pointing for a particular TVPU remote location.

[39] *See* 47 C.F.R. § 74.602(c).

[40] *See* 47 C.F.R. § 74.24.

Table 1: 2 GHz BAS Channel Plans		
Existing Channel Plan	Previous Phase II Channel Plan	Revised Phase II Channel Plan
Channel 1 1990-2008 MHz (18 MHz)	The 1990-2025 MHz band will no longer be available for BAS/LTTS/CARS use after a DMA has been cleared.	
Channel 2 2008-2025 MHz (17 MHz)		
Channel 3 2025-2042 MHz (17 MHz)	Channel A01 2025-2037.4 MHz (12.4 MHz)	Lower DRL Band 2025-2025.5 MHz (500 kHz)
		Channel A1r 2025.5-2037.5 MHz (12 MHz) (Fully within existing Channel 3)
Channel 4 2042-2059 MHz (17 MHz)	Channel A02 2037.4-2049.5 MHz (12.1 MHz)	Channel A2r 2037.5-2049.5 MHz (12 MHz)
	Channel A03 2049.5-2061.6 MHz (12.1 MHz)	Channel A3r 2049.5-2061.5 MHz (12 MHz)
Channel 5 2059-2076 MHz (17 MHz)	Channel A04 2061.6-2073.7 MHz (12.1 MHz)	Channel A4r 2061.5-2073.5 MHz (12 MHz) (Fully within existing Channel 5)
Channel 6 2076-2093 MHz (17 MHz)	Channel A05 2073.7-2085.8 MHz (12.1 MHz)	Channel A5r 2073.5-2085.5 MHz (12 MHz)
	Channel A06 2085.8-2097.9 MHz (12.1 MHz)	Channel A6r 2085.5-2097.5 MHz (12 MHz)
Channel 7 2093-2110 MHz (17 MHz)	Channel A07 2097.9-2110 MHz (12.1 MHz)	Channel A7r 2097.5-2109.5 MHz (12 MHz) (Fully within existing Channel 7)
		Upper DRL Band 2109.5-2110 MHz (500 kHz)