

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of

THE ESTABLISHMENT OF POLICIES AND SERVICE RULES FOR THE BROADCASTING-SATELLITE SERVICE AT THE 17.3-17.7 GHZ FREQUENCY BAND AND AT THE 17.7-17.8 GHZ FREQUENCY BAND INTERNATIONALLY, AND AT THE 24.75-25.25 GHZ FREQUENCY BAND FOR FIXED SATELLITE SERVICES PROVIDING FEEDER LINKS TO THE BROADCASTING-SATELLITE SERVICE AND FOR THE BROADCASTING SATELLITE SERVICE OPERATING BI-DIRECTIONALLY IN THE 17.3-17.7 GHZ FREQUENCY BAND

IB Docket No. 06-123

PETITION FOR RECONSIDERATION OF DIRECTV, INC.

Pursuant to Section 1.106 of the Commission's rules, DIRECTV, Inc. ("DIRECTV") hereby petitions for reconsideration of the Report and Order on licensing and service rules for Broadcasting Satellite Systems operating in the 17.3-17.7 GHz (downlink) and 24.75-25.25 GHz (uplink) bands ("17/24 GHz BSS") issued in the above referenced proceeding.¹ Specifically, DIRECTV requests that the Commission (1) clarify that it will not prohibit licensing of 17/24 GHz BSS earth stations in areas licensed to terrestrial fixed operators using the 24 GHz band ("24GFS") for frequencies not covered by 24GFS authorizations, or where the operators have reached coordination arrangements; and (2) stay the effectiveness of the interference zones effectively created by amendment of footnote US402 of the U.S. Table of Frequency Allocations, pending

¹ See *Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Broadcasting Satellite Service Operating Bi-directionally in the 17.3-17.7 GHz Frequency Band*, 22 FCC Rcd. 8842 (2007) ("BSS R&O"). A summary of this order was published in the Federal Register on August 29, 2007. See 72 Fed. Reg. 50000 (Aug. 29, 2007).

the provision of additional information and an opportunity for public notice and comment.

A. The Commission Should Clarify That 17/24 GHz BSS Earth Stations May Be Licensed in Spectrum Coordinated With or Not Previously Licensed to 24GFS Systems

In the *BSS R&O*, the Commission established procedures for licensing of 17/24 GHz BSS feeder link earth stations, subject to coordination with 24GFS licensees when warranted.² In doing so, however, the Commission recognized that spectrum sharing is “considerably more complicated” when 17/24 GHz BSS feeder link earth stations and 24GFS stations operate in the same licensed area rather than contiguous areas.³

Accordingly, the Commission said that its rules would “presume[] that the earth station’s location is outside of the 24 GHz FS license area,” and further stated that it does not “intend to license 17/24 GHz BSS feeder links to operate in an existing 24 GHz FS license area.”⁴ In implementing this decision, Section 25.203(l) states that 17/24 GHz BSS feeder link earth stations operating in the 25.05-25.25 GHz band “may be licensed only in Economic Areas where no existing FS licensee has been authorized.”⁵

While DIRECTV understands the Commission’s desire to protect 24GFS operations over the entire area for which they are licensed, it believes that the language chosen to do so is much broader than necessary to accomplish this goal and could be read to preclude earth station operations that pose no threat to licensed 24GFS systems.

Specifically, there are two instances in which the rule is overbroad. First, it is possible

² See 47 C.F.R. § 25.203(l).

³ *BSS R&O*, ¶ 127.

⁴ *Id.*

⁵ 47 C.F.R. § 25.203(l).

that satellite and terrestrial systems can reach coordination arrangements for shared use of the band. Second, because 24GFS spectrum is licensed in 40 MHz increments, there are many areas in which terrestrial operators are licensed to operate over only a portion of the 25.05-25.25 GHz band. In such cases, the Commission should allow 17/24 GHz BSS earth stations to operate using coordinated spectrum or the remaining spectrum not licensed for terrestrial use – a clarification consistent with the co-primary satellite allocation in the band.

A real-world example shows the importance of this clarification. DIRECTV currently operates one of its two major uplink centers in Castle Rock, Colorado, which falls within the Denver-Boulder Economic Area (“EA”) used for licensing 24GFS systems. According to the Commission’s electronic database, only two 24GFS licenses have been issued for that area, which together authorize use of the 25.09-25.17 GHz band.⁶ Even were the Commission to preclude use of this 80 MHz of spectrum by 17/24 GHz BSS feeder link earth stations in order to protect 24GFS operations in the area, there would still remain 120 MHz between 25.05-25.25 GHz not licensed for terrestrial use that could be used without any effect on terrestrial operations in this EA. When combined with the 300 MHz of additional spectrum allocated exclusively to satellite use (*i.e.*, 24.75-25.05 GHz), there is 420 MHz of spectrum available for feeder link use that is not licensed for terrestrial use in this area. This is particularly significant, given that precluding use of the entire 25.05-25.25 GHz band at this location would mean that only 300 MHz would be available for BSS feeder link use. By allowing all spectrum not licensed by 24GFS operators to be used for BSS feeder link operations, 420 MHz of

⁶ See Call Signs WMT329 and WQCJ304.

spectrum would be available at this location, which closely matches the 400 MHz of BSS spectrum in the downlink band.

Accordingly, the Commission need not preclude 17/24 GHz BSS feeder link operations across the entire 25.05-25.25 GHz band in order to accomplish its stated goal of protecting 24GFS licensees within their entire area of license. Such protection should apply only to the extent of actual 24GFS licensing in the relevant EA. In many cases, terrestrial systems will hold licenses for the entire 200 MHz available for their use. But in those EAs where this is not the case, the Commission should clarify that it will not preclude licensing of feeder link earth stations using spectrum not previously licensed for 24GFS use.

Moreover, there is no reason to categorically preclude satellite use of this spectrum where the satellite and terrestrial operators are able to arrive at mutually agreeable arrangements for shared use of the band. Indeed, in most contexts, the Commission affirmatively encourages operators to reach accommodations that allow more intensive use of valuable spectrum resources. And in this particular case, there is reason to believe that satellite and terrestrial operators could arrive at such arrangements.

Years ago, the Commission advised that coordination between 24GFS systems licensed to operate in adjacent service areas is not necessary if the power flux density (“PFD”) at the boundary of the relevant adjacent area is lower than -114 dBW/m^2 in any one MHz.⁷ In the *BSS R&O*, the Commission extended this coordination threshold to sharing between 24GFS and 17/24 GHz BSS systems in adjacent service areas.⁸ Many

⁷ See 47 C.F.R. § 101.509(e).

⁸ See *BSS R&O*, ¶ 125; 47 C.F.R. § 25.203(l).

uplink facilities, such as DIRECTV's in Castle Rock, are located in sparsely populated areas. It is not unreasonable to assume that some 24GFS licensees would view the area near a 17/24 GHz BSS feeder link earth station over which the -114 dBW/ m² PFD level would be exceeded as non-viable for commercial 24GFS service deployment – and thus available for coordination.

For example, using a simplified analysis and some standard assumptions about operating power, bandwidth, and elevation angle,⁹ DIRECTV calculates that the PFD towards the horizon in the direction of transmission would be no more than -114 dBW/m² for any 24GFS system operating more than approximately 30 miles from a 17/24 GHz BSS uplink site. Assuming a BSS feeder link site communicating with a number of 17/24 GHz BSS satellites located across 20° of GSO arc results in a coordination zone extending 30 miles over 20° of azimuth in the direction of transmission, creating a more or less “pie shaped” area of concern that covers only approximately 157 square miles.¹⁰ While this might sound large, for the case of DIRECTV'S Castle Rock uplink facility it is less than 0.2% of the area covered by the Denver-Boulder EA where this facility is located.¹¹

Moreover, this is almost certainly a significant overestimate of the likely issue. For example, if uplink antenna performance were just 6 dB better than the minimum required under Section 25.209 (not an unreasonable assumption for the types of large

⁹ For purposes of this illustration, DIRECTV assumed a maximum transmit power of 11 dBW, 36 MHz bandwidth, 30 degree minimum elevation angle, and an antenna minimally compliant with the requirements of Section 25.209 of the Commission's rules.

¹⁰ This figure is derived by determining the area of a circle with a 30-mile radius (*i.e.*, 900π) and then taking 1/18 of that figure to reflect the assumption that the earth station transmissions will only affect a 20° arc.

¹¹ The Denver-Boulder EA comprises over 82,000 square miles.

antennas used for BSS feeder links), the area of concern would be cut by a factor of four. And because these calculations do not take into account the effects of shielding from terrain or other obstacles (either natural or man-made), the real effect is likely to be much smaller still. In these circumstances, it is certainly possible that satellite and terrestrial operators could voluntarily coordinate a system for more intensive use of this band – and no reason for the Commission to preclude such arrangements out of hand.

B. The Commission Should Stay the Effect of the Interference Zones Created Around Government Facilities Without Notice or Comment Pending Further Proceedings

In a letter sent to the Commission less than two weeks before adoption of the *BSS R&O*, the National Telecommunications and Information Administration (“NTIA”) requested on behalf of the Department of Defense (“DoD”) that the Commission adopt a new footnote to the U.S. Table of Frequency Allocations.¹² The proffered footnote proposed creation of a new primary allocation in the 17.3-17.7 GHz band for Federal satellites and associated earth stations in the fixed-satellite service (Earth-to-space) in two geographic locations. Specifically, receiving 17/24 GHz BSS earth stations would not be allowed to claim protection from Federal earth stations (1) in the 17.6-17.7 GHz band within a 120 km radius of a location near Denver, CO, and (2) in the 17.375-17.475 GHz band within a 160 km radius of a location near Washington, DC. The resulting “interference zones” – plotted in Figures 1 and 2 attached hereto – could potentially preclude receipt of 17/24 GHz BSS service by consumers in two of the nation’s twenty largest metropolitan television markets.

¹² See *BSS R&O*, ¶ 136 (citing Letter from John M. R. Kneuer to Chairman Kevin J. Martin (dated Mar. 21, 2007) (“NTIA Letter”)).

The Commission did not place the NTIA Letter on public notice or seek comment on it. Nonetheless, it adopted the NTIA proposal as submitted.¹³ In doing so, the Commission cited its authority to waive the requirements of the Administrative Procedures Act (“APA”) pursuant to Section 1.412 of the Commission’s rules and its findings that this rule change relates to the exercise of military functions of the United States in support of urgent national security interests, and that for good cause shown, notice and public comment procedures were impracticable, unnecessary, and contrary to the public interest.¹⁴

As the D.C. Circuit has recognized,

The notice requirement of the APA does not simply erect arbitrary hoops through which federal agencies must jump without reason. Rather, the notice requirement “improves the quality of agency rulemaking” by exposing regulations “to diverse public comment,” ensures “fairness to affected parties,” and provides a well-developed record that “enhances the quality of judicial review.”¹⁵

Accordingly, “[t]he salutary effect of the Act’s public comment procedures cannot be gainsaid, so only reluctantly should courts recognize exemptions therefrom.”¹⁶

In this case, the Commission invoked APA exceptions based on a single, two-page letter submitted by NTIA just two weeks before the *BSS R&O* was adopted. The NTIA Letter does not explain the criteria used by NTIA and/or DoD to determine the proposed 120 km or 160 km radius of federal primacy around Denver and Washington,

¹³ *Id.* at ¶ 138.

¹⁴ *Id.* (citing 47 C.F.R. §§ 1.412(b)(1) and (c)).

¹⁵ *Sprint Corp. v. FCC*, 315 F.3d 369, 373 (D.C. Cir. 2003) (citing *Small Refiner Lead Phase-Down Task Force v. United States*, 705 F.2d 506, 547 (D.C. Cir. 1983)).

¹⁶ *Humana of South Carolina, Inc. v. Califano*, 590 F.2d 1070, 1082 (D.C. Cir. 1978). *See also Independent Guard Ass’n v. O’Leary*, 57 F.3d 766, 769 (9th Cir. 1995) (exceptions to the APA’s notice and comment requirements are to be “narrowly construed and only reluctantly countenanced”).

either with respect to assumptions about government operations or assumptions about the protection criteria applied to 17/24 GHz BSS receive antennas. In fact, the NTIA Letter does not discuss any salient aspect of the systems in question that might allow a commercial operator to assess the potential for interference they pose.¹⁷ Nonetheless, the Commission found this sufficient to conclude that it could dispense with the bedrock APA requirement for public notice and comment.

In this regard, the facts of this case differ markedly from the facts of the previous occasion in which the Commission (1) adopted new rules to protect government satellite earth stations (2) operating at almost the exact same locations near Denver and Washington, DC involved here (3) against potential inference from various commercial terrestrial services operating in a spectrum band (17.8-19.7 GHz) contiguous to the one used by 17/24 GHz BSS downlinks.¹⁸ The letters submitted by NTIA in that proceeding evidence discussions between the Commission and government system operators going back more than two years before the rule change was adopted, as well as an ongoing FCC-NTIA dialogue during the rulemaking proceeding to hone the ultimate exclusion/coordination zone proposal.¹⁹ Such collaboration provided the Commission with sufficient information to make an informed determination as to the basis for NTIA's

¹⁷ Unfortunately, in the more than four months since the *BSS R&O* was adopted, DIRECTV has been unable to obtain any further insight or information from NTIA on the criteria used to develop the protection zones, despite numerous attempts to do so.

¹⁸ *See Amendment of the Commission's Rules to Relocate the Digital Electronic Message Service from the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service*, 13 FCC Rcd. 3581 (1997).

¹⁹ *See, e.g.*, Letter from Richard Parlow to Richard Smith, ET Docket No. 97-99, at 1-2 (dated Jan. 7, 1997) (*citing* letter to FCC Chairman dated July 12, 1995 requesting change to frequency allocation to protect government systems in the 17.8-20.2 GHz band, and referring to "a series of discussions with Commission staff concerning specific facilities" at two locations).

request, rather than simply accepting it without any technical description or justification whatsoever. The absence of such an exchange of information seriously undercuts the Commission's decision to dispense with public participation in the process.

Moreover, there is no basis for the Commission's conclusion that public notice and comment would have been impracticable, unnecessary, and contrary to the public interest in this case, as required under Section 1.412(c). The legislative history of the APA makes clear that Congress intended this exception to have a narrow scope.

The exemption of situations of emergency or necessity is not an "escape clause" in the sense that any agency has discretion to disregard its terms or the facts. A true and supported or supportable finding of necessity or emergency must be made and published. "Impracticable" means a situation in which the due and required execution of the agency functions would be unavoidably prevented by its undertaking public rule-making proceedings.²⁰

Here, there is no exigency that requires immediate and reflexive protection of government earth stations in this band. The NTIA Letter makes clear that federal systems "have operated compatibly with the BSS feederlinks for many years," so the status quo is not a concern.²¹ As for new 17/24 GHz BSS systems made possible by the *BSS R&O*, there are no such systems in operation or even under construction – *and none have even been licensed by the Commission yet*. Thus, the potential issue this rule change is designed to address will not arise until years from now – more than enough time to accommodate a period for public comment. Nor can public disclosure be a concern, as the NTIA Letter is already available to the public in the record of this proceeding. In

²⁰ Report of the Senate Judiciary Committee, S. Doc. No. 248, 79th Cong., 2d Sess. 200 (1946).

²¹ NTIA Letter at 1.

these circumstances, there is no basis to find that the APA requirement of notice and comment would be impracticable or contrary to the public interest.

The affected areas surrounding Denver and Washington, DC encompass millions of consumers whose ability to receive new satellite services may be partially compromised or totally precluded by the NTIA proposal. Given the magnitude of this potential impact and the patent lack of any exigency, the Commission should not lightly dispense with procedural safeguards to which these consumers are entitled under the APA. Accordingly, the Commission should stay the effectiveness of the amendment to footnote US402 in the Table of Frequency Allocations pending further consideration after an opportunity for public notice and comment.

CONCLUSION

DIRECTV continues to look forward to making productive use of the 17/24 GHz BSS band to bring more innovative services to American consumers. By deciding many of the technical and operational issues in the band, the Commission moved that process along significantly with adoption of the *BSS R&O*. DIRECTV submits that, by granting the clarification and opportunity for further comment requested above, the Commission will take another important step in promoting the intensive and timely use of valuable spectrum resources. Accordingly, DIRECTV requests that the Commission grant the reconsideration requested herein.

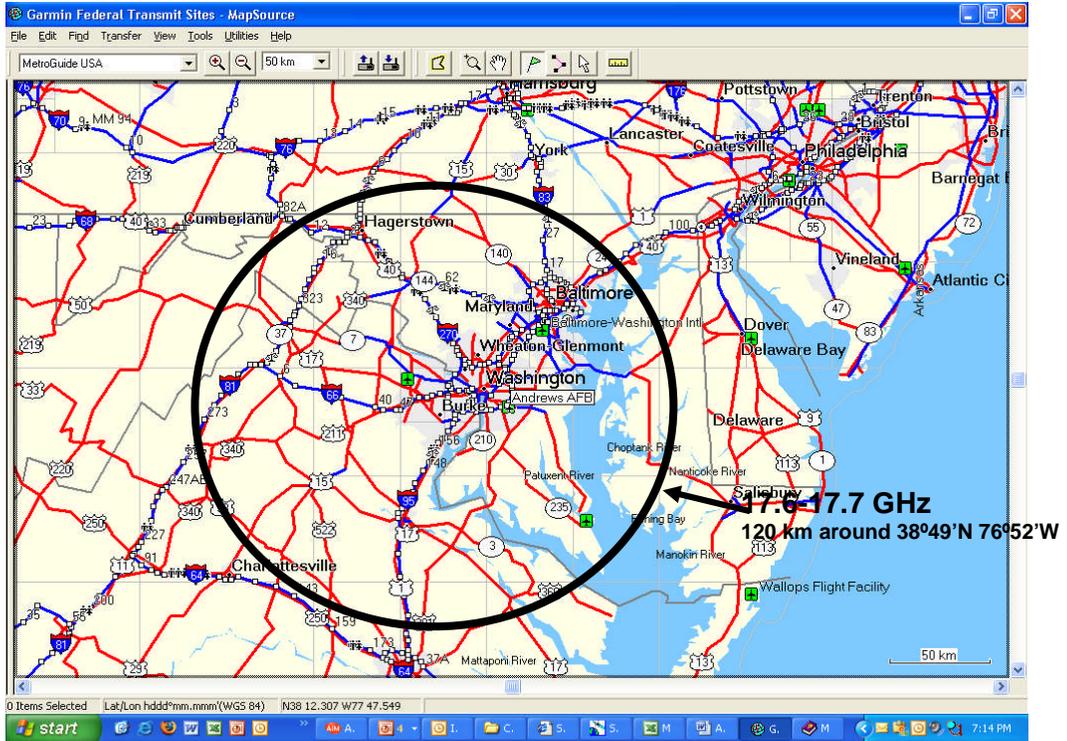


Figure 1. Interference Zone near Washington, DC

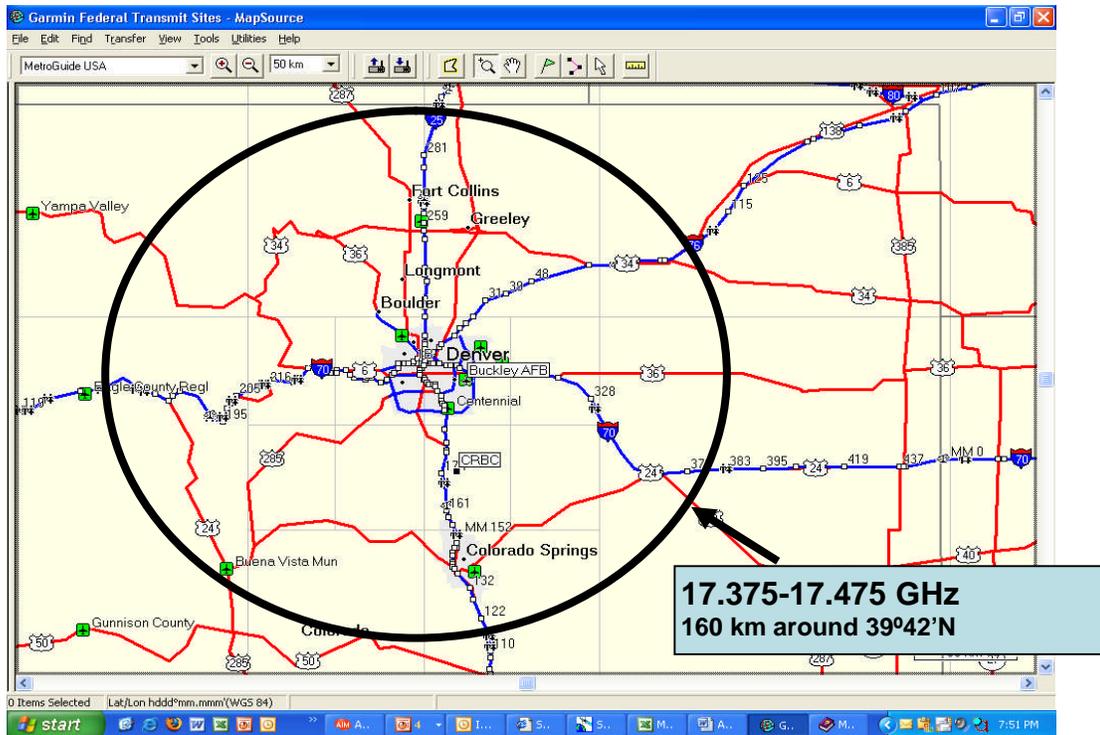


Figure 2. Interference Zone near Denver, CO