

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

In the Matter of)
)
Petition for Rulemaking of Jansky-Barmat) RM-11351
Telecommunications to Amend Parts 2 and 25 of)
the Commission’s Rules to Implement Results of)
WRC-03 Pertaining to FSS Use of the 13.75-14.00)
GHz Band)
)

ORDER

Adopted: July 30, 2012

Released: July 30, 2012

By the Chief, Office of Engineering and Technology:

1. On February 24, 2006, Jansky-Barmat Telecommunications Inc. filed a petition for rulemaking asking that the Commission modify Parts 2 and 25 of its rules pertaining to earth stations that operate in the Fixed Satellite Service (FSS) in the 13.75-14.0 GHz band to allow the use of smaller antennas and a blanket licensing regime.¹ We deny the petition based on the interference concerns discussed below.

2. As background, both Federal and non-Federal users share use of the 13.75-14.0 GHz band. The band is allocated on a primary basis for Federal radiolocation use and non-Federal Fixed Satellite Service (earth-to-space), with several additional secondary allocations – most notably, the Space Research Service.² The United States Navy uses this band for radiolocation systems that may operate anywhere within the United States. In addition, the National Aeronautics and Space Administration (NASA) uses the band for the Tracking Data Relay Satellite System (TDRSS). TDRSS supports space missions by relaying communications between ground stations and low earth orbiting satellites and spacecraft, including the International Space Station, when the spacecraft are over the horizon and not capable of direct communications with ground stations within the United States.³ A footnote to the Table of Frequency Allocations, US337, directs the FCC to coordinate earth stations in the fixed satellite service in the 13.75-13.8 GHz band with NASA on a case-by-case basis to minimize harmful interference to TDRSS.⁴

3. The Commission’s rules require FSS earth stations in the 13.75-14.0 GHz band to use antennas with diameters of at least 4.5 meters.⁵ An application for each FSS earth station in this band

¹ Petition for Rulemaking, Jansky-Barmat Telecommunications Inc., RM-11351, Feb. 24, 2006 at 10-11 (*Jansky Petition*).

² 47 C.F.R. § 2.106.

³ See Amendment of Parts 2, 25, 90 of the Commission’s Rules to Allocate the 13.75-14.0 GHz Band to the Fixed-Satellite Service, ET Docket No. 96-20, *Report and Order*, 11 FCC Rcd 11951 at ¶ 3 (1996); Reply Comments of National Aeronautics and Space Administration, RM-11351, Jan. 17, 2007.

⁴ 47 C.F.R. § 2.106, footnote US337.

⁵ 47 C.F.R. § 2.106, footnote US356.

must be filed with the Commission. The Commission refers earth station applications for this band to the Frequency Assignment Subcommittee (FAS) of the Interdepartment Radio Advisory Committee for coordination with Federal government operations.⁶

4. The *Jansky Petition* seeks rule modifications that would allow the use of earth stations with antenna diameters as small as 1.2 meters, a “blanket licensing” regime for Very Small Aperture Terminal (VSAT) networks,⁷ and routine licensing of earth stations with antenna diameters from 1.2 to 4.5 meters without coordination subject to certain conditions.⁸ These modifications, it asserts, would serve to benefit FSS use and deployment. Specifically, it claims that the proposed rule changes would allow the FSS to more fully utilize existing in-orbit capacity to provide service; to increase the amount of Ku-band FSS uplink spectrum to more closely balance the amount of Ku-band FSS downlink spectrum; and to make the Commission’s regulations consistent with the criteria for the FSS in the Ku-band contained in the final acts of the 2003 World Radiocommunications Conference (WRC-03).⁹ On December 1, 2006, the Commission issued a *Public Notice* requesting comments on the *Jansky Petition*.¹⁰ Several commenters supported the contention that the proposed modifications would facilitate FSS use.¹¹ NASA filed reply comments, expressing concern that the proposed rule modifications would jeopardize the protection of TDRSS operations in the band.¹²

5. As part of our coordination of the *Jansky Petition* with Federal stakeholders, the Department of Defense (DoD) objected to the proposed rule modifications and expressed concern that the proposed 1.2 meter earth station antenna diameter will increase the potential for interference to military operations.¹³ The National Telecommunications Information Administration (NTIA) notes that in subsequent discussions with DoD spectrum managers, DoD has remained opposed to decreasing the minimum earth station antenna size and allowing blanket licensing of earth stations. NTIA recommends that the Commission deny the *Jansky Petition*.¹⁴

6. Given the interference concerns raised by DoD and NASA and the recommendation of NTIA, we find that the *Jansky Petition* plainly does not warrant further consideration. It appears that reducing

⁶ For a description of the FAS, see National Telecommunications and Information Administration, Manual of Regulations and Procedures for Federal Radio Frequency Management (Redbook), 1-9, 1-10 (Jan. 2008).

⁷ Under a blanket license scheme, a single license typically provides authorization for the operation of a specified number of stations. This eliminates the need to individually authorize or coordinate each station.

⁸ The *Jansky Petition* requests that earth stations with antenna diameters between 1.2 meters and 4.5 meters or larger that meet certain separation distances from coastal areas and power limits be processed routinely. The FCC and NTIA would have to agree on the performance criteria, including calculations of power flux density (PFD), which the *Petition* argues would eliminate the need to coordinate each application. The petition also requests that earth stations with antenna diameters greater than 4.5 meters be processed routinely without calculating the PFD limits that would apply to smaller antennas. *Jansky Petition* at 10-11, 45-46.

⁹ See *Jansky Petition* at 11.

¹⁰ *Public Notice*, RM-11351, Dec. 1, 2006.

¹¹ See, e.g., Joint Comments of Intelsat, Ltd., New Skies Satellites, Inc., SES Americom, Inc., et. al., filed Jan. 3, 2007; Comments of European Satellite Operates Association, filed Jan. 3, 2007.

¹² Reply Comments of NASA, filed Jan. 17, 2007.

¹³ Letter from Badri Younes, Director Spectrum Management, Office of Assistant Secretary of Defense, March 8, 2007. This letter is included in the NTIA letter of May 1, 2012, see *infra* note 14.

¹⁴ Letter from Karl Nebbia, Associate Administrator, NTIA, May 1, 2012 (attaching March 8, 2007 and March 1, 2012 letters from the Department of Defense).

the minimum earth station antenna size to 1.2 meters would increase the potential for interference to military operations, and thus would be inconsistent with our interest in ensuring shared Federal/non-Federal use of the band. Moreover, given that Federal operations in this band are not geographically restricted, we conclude that it would not be appropriate to propose blanket licensing of earth stations in the band.¹⁵ Blanket licensing is appropriate for deploying large numbers of technically identical earth stations whose operations are unlikely to cause interference to other users regardless of location. In this case, individual licensing of earth stations and coordination with government operations through the FAS process is the better approach: since the location of each authorized earth station is known, the Commission and the affected government agencies can evaluate each deployment and thereby reduce the likelihood of interference and ensure that spectrum is used efficiently.

7. Accordingly, IT IS ORDERED that pursuant to the authority contained in Sections 4(i), 5(c), 301, 302, 303(c), 303(e), 303(f), and 303(r) of the Communications Act of 1934, as amended, 47 USC Sections 154(i), 155(c), 301, 302a, 303(c), 303(e), 303(f), and 303(r), and Sections 0.241(e) and 1.401(e) of the Commission's Rules, 47 C.F.R. §§ 0.241(e) and 1.401(e), the Petition for rulemaking filed by Jansky-Barmat Telecommunications Inc. on February 24, 2006 IS DENIED without prejudice and RM-11351 IS TERMINATED, effective upon issuance of this Order.

8. For further information regarding this Order, contact Nicholas Oros, Office of Engineering and Technology, at (202) 418-0636, Nicholas.Oros@fcc.gov.

FEDERAL COMMUNICATIONS COMMISSION

Julius Knapp
Chief
Office of Engineering and Technology

¹⁵ Although the record contains some discussion regarding the potential for geographic-based protection of TDRSS operations, we note that Federal radiolocation operations can occur anywhere within the United States.