

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

In the Matter of)
EchoStar Satellite Corporation)
Application for Minor Modification of)
Four DBS Space Station Authorizations) File Nos.
To Operate on 11 Channels at 119° W.L.) SAT- MOD-20030303-00024
To Operate on 10 Channels at 119° W.L.) SAT-MOD-20030303-00025
To Operate on 28 Channels at 110° W.L.) SAT-MOD-20030303-00026
To Operate on 1 Channel at 110° W.L.) SAT-MOD-20030303-00027
Application for Renewal of Special Temporary) SAT-STA-20030508-00092
Authority to Operate a Direct Broadcast)
Satellite at the 110° W.L. Orbital Location)

Memorandum Opinion and Order

Adopted: July 21, 2003

Released: July 22, 2003

By the Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. By this Order we grant EchoStar Satellite Corporation (EchoStar) authority to make minor modifications to its Direct Broadcast Satellite (DBS) constellation. Specifically, we authorize EchoStar to operate its EchoStar 5 satellite on its assigned channels at the 119° W.L. orbital location, and its EchoStar 6 satellite on its assigned channels at the 110° W.L. orbital location. We find that these modifications will enable EchoStar to ensure continued quality DBS service to millions of consumers.

II. BACKGROUND

2. EchoStar provides DBS services to customers throughout the United States from four orbital locations using eight DBS satellites. The orbit locations include 119° W.L. and 110° W.L. Specifically, EchoStar has licenses to operate 21 channels at 119° W.L. and 29 channels at 110° W.L.¹ EchoStar was

1 See EchoStar Satellite Corporation, Assignment of Direct Broadcast Satellite Orbital Position and Channels, Memorandum Opinion and Order, 7 FCC Rcd 1765 (1992) (authorizing EchoStar to use channels 1-21 odd at 119° W.L.); DirectSat Corp. for Assignment of Direct Broadcast Satellite Orbital Positions and Channels, Memorandum Opinion and Order, 8 FCC Rcd 7962 (1993) (authorizing DirectSat, EchoStar's predecessor in interest, to use channels 2-20 even at 119° W.L. and channel 24 at 110° W.L.); MCI Telecommunications Corp., and EchoStar 110° Corp., Assignee, for Consent to Assignment of Authorization to Construct, Launch and Operate a Direct Broadcast (continued...)

initially authorized to operate both the EchoStar 5 and 6 satellites at the 110° W.L. orbital location.² While EchoStar 5 was launched and operated from 110° W.L. pursuant to its initial authority, EchoStar 6 was instead launched to the 119° W.L. orbital location pursuant to a grant of a modification of its authorization.³

3. Thus, until the recent grant of several Special Temporary Authorizations (STA), EchoStar's fleet was configured so that its satellites, EchoStar 5 and 8, were providing service from the 110° W.L. orbital location. Likewise, its satellites EchoStar 4, 6 and 7 were providing service from the 119° W.L. orbit location. In January 2003, the International Bureau's Satellite Division granted EchoStar a STA to move EchoStar 5 from 110° W.L. to 119° W.L. and operate it at the 119° W.L. orbital location.⁴ It subsequently granted EchoStar a STA to move EchoStar 6 from 119° W.L. to 110° W.L. and operate it at the 110° W.L. orbital location.⁵

4. Presently, EchoStar operates EchoStar 4, 5 and 7 at the 119° W.L. orbital location. At the 110° W.L. orbital location, it operates EchoStar 6 and EchoStar 8. In its modification application, EchoStar seeks permanent authority to operate the EchoStar 5 satellite over the channels licensed to EchoStar at 119° W.L. and to operate the EchoStar 6 satellite over the channels licensed to EchoStar at 110° W.L.

5. In support of its modification requests, EchoStar states that it wants to operate EchoStar 6 on the channels licensed to it at the 110° W.L. orbital location on a permanent basis in order to provide sufficient redundancy for the recently launched EchoStar 8 satellite.⁶ EchoStar explains that as a result of a thruster anomaly, the EchoStar 8 spacecraft is less than optimally reliable.⁷ According to EchoStar, any risks associated with EchoStar 8's ability to provide service would be alleviated by the operation of EchoStar 6.⁸

6. As to the EchoStar 5 satellite, EchoStar states it does not need three satellites (EchoStar 5, 6, and 8) at the 110° W.L. orbital location. Rather, it seeks permanent authority to operate EchoStar 5 on the channels licensed to it at the 119° W.L. orbital location. EchoStar 7 uses all 21 channels licensed to EchoStar at 119° W.L. using EchoStar 4 as a back up. EchoStar states that EchoStar 4, however, is

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Satellite System Using 28 Frequency Channels at the 110° W.L. Orbital Location, *Order and Authorization*, 16 FCC Rcd 21608 (1999).

² MCI Telecommunications Corp., for Modification of Direct Broadcast Satellite Authorization, *Memorandum Opinion and Order*, 14 FCC Rcd 9966 (1999) (*MCI Order*).

³ EchoStar Satellite Corporation, Application for Authority to Make Minor Modifications to Direct Broadcast Satellite Authorizations, Launch and Operation Authority, *Memorandum Opinion and Order*, 15 FCC Rcd 23626 (2000).

⁴ EchoStar Satellite Corporation, Application for Special Temporary Authority to Move a Direct Broadcast Satellite to and Operate on the 119° W.L. Orbital Location, File No., SAT-STA-20030225-00017, granted March 3, 2003 for 30 days and renewed on April 30, 2003, File No. SAT-STA-20030325-00017.

⁵ EchoStar Satellite Corporation, Application for Special Temporary Authority to Move a Direct Broadcast Satellite to and Operate on the 110° W.L. Orbital Location, File No. SAT-STA-20030124-0005, and renewed on March 12, 2003, File NO. SAT-STA-20030225-00018. EchoStar subsequently requested an additional STA to operate EchoStar 6 at the 110° W.L. orbital location. Because we grant EchoStar permanent authority to operate EchoStar 6 at 110° W.L. we dismiss the renewal request as moot.

⁶ EchoStar Application at 4.

⁷ EchoStar Application at 4.

⁸ EchoStar Application at 4.

capable of using only a limited number of frequencies and may have to be moved to a new orbital location.⁹ As a result, EchoStar proposes to operate EchoStar 5 at 119° W.L. along with EchoStar 7 to share the “burden of EchoStar operations.”¹⁰

7. EchoStar asserts that its proposed modifications will not cause harmful interference to any authorized user of the spectrum.¹¹ As EchoStar notes, EchoStar 6 had originally been licensed for the 110° W.L. orbital location and thus the Commission and the International Telecommunication Union (ITU) have already confirmed the absence of harmful interference for EchoStar 6 at that location.¹² Similarly, EchoStar 6 was later authorized to operate from 119° W.L. and the relevant ITU documentation was submitted demonstrating that the modification would not affect any foreign administration or cause harmful interference to any authorized user of the spectrum. Consequently, EchoStar states, because EchoStar 5 is technically similar to EchoStar 6, the operation of EchoStar 5 at 119° W.L. is covered by the EchoStar 6 ITU filing and there is no need for further analysis.¹³ In addition, DIRECTV, the only other DBS licensee currently authorized to provide service from 119° W.L., has no objection to the relocation of EchoStar 5 to the 119° W.L. orbital location.¹⁴

8. Finally, EchoStar states that the requested modifications are in the public interest because they will ensure continued high-quality DBS service to millions of subscribers by increasing the efficiency of EchoStar’s satellite fleet. EchoStar maintains that the combination of the EchoStar 4, 5 and 7 satellites at 119° W.L. and EchoStar 6 and 8 at 110° W.L. is the most efficient deployment of the satellites at these two locations.¹⁵

III. DISCUSSION

9. Upon review, we find that grant of EchoStar’s request for minor modification will serve the public interest by ensuring DBS service and improving operations to millions of consumers throughout the continental United States, Alaska and Hawaii. The Commission has granted requests by satellite operators to move their satellite resources to their other authorized orbit locations subject to certain conditions, including operations consistent with any coordination agreements associated with the particular orbit location and frequency band.¹⁶ In addition, the operation of EchoStar 5 and EchoStar 6 at 119° W.L. and 110° W.L., respectively, does not present any significant interference issues.

10. We also note that EchoStar’s license at 110° W.L. gives it the flexibility to operate its assigned channels, except 27, 29 and 31, at any location within the 109.8° W.L. and 110.2° W.L. cluster.¹⁷ EchoStar is authorized to operate channels 27, 29 and 31 only at the 110.2° W.L. orbital

⁹ EchoStar Application at 5. Subsequent to filing its application, EchoStar was authorized to move EchoStar 4 to the 157° W.L. orbital location. *See* EchoStar Satellite Corporation, Assignment of Direct Broadcast Satellite Orbital Positions and Channels, *Order*, DA 03-1510 (rel. May 7, 2003).

¹⁰ EchoStar Application at 5.

¹¹ EchoStar Application at 6.

¹² EchoStar Application at 6.

¹³ EchoStar Application at 7.

¹⁴ EchoStar Application, Exhibit E, Letter to David Bair from Jim Butterworth dated February 19, 2003.

¹⁵ EchoStar Application at 6.

¹⁶ *See e.g.*, EchoStar Satellite Corporation Application for Authority to Make Minor Modification of Direct Broadcast Satellite, *Order and Authorization*, DA 03-1263 (rel. April 25, 2003).

¹⁷ *MCI Order*, 14 FCC Rcd 9966; EchoStar Satellite Corporation, *Memorandum Opinion and Order*, 15 FCC Rcd 6727, 6730 (Int’l Bur., Sat. & Rad. Div. 1999). In the 12.2-12.7 GHz band, the ITU Radio Regulations assign channels to administrations at certain orbital locations to provide broadcasting-satellite service (“BSS”) to their
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location. Consequently, the operations of EchoStar 6 at the 110° W.L. orbital location are subject to this limitation.¹⁸

11. Although we generally condition DBS authorizations on completing modifications to Appendices 30 and 30A of the ITU Radio Regulations, we find that it is not necessary to do so in this case. EchoStar notes, as part of its application to operate EchoStar 6 at 119° W.L., it provided the relevant information with the parameters for EchoStar 6 to the Commission, which in turn forwarded the information to the ITU. Because EchoStar 5 is technically similar to EchoStar 6, and in fact has a slightly lower effective isotropically radiated power, it is covered by the EchoStar 6 filing with the ITU. Likewise, EchoStar 6 was initially licensed for the 110° W.L. orbital location, and the ITU has already published the technical characteristics of EchoStar 6 for that location, thus no additional information or modification is required.

IV. CONCLUSION AND ORDERING CLAUSES

12. Based on the foregoing, we find that grant of EchoStar's applications will serve the public interest by providing for the efficient use of the geostationary satellite orbit and spectrum to the benefit of U.S. consumers.

13. Accordingly, IT IS ORDERED, that the applications of EchoStar Satellite Corporation, File Nos., SAT-MOD-20030303-00024; 00025; 00026 and 00027 are GRANTED.

14. IT IS FURTHER ORDERED, that EchoStar Satellite Corporation is authorized to operate EchoStar 6 on its assigned channels, except channels 27, 29 and 31, at any location within the 109.8° W.L. and 110.2° W.L. cluster. EchoStar is authorized to operate channels 27, 29 and 31 only at the 110.2° W.L. orbital location. The polarization used shall be in accordance with the ITU Region 2 Broadcast Satellite Service Plans with odd numbered channels operating with right-hand circular polarization and even numbered channels operating with left-hand circular polarization.

15. IT IS FURTHER ORDERED, that EchoStar Satellite Corporation shall coordinate all transfer orbit Telemetry, Tracking, and Control operations with other potentially affected in-orbit DBS or Fixed-Satellite Service operators.

16. IT IS FURTHER ORDERED, that EchoStar's application for renewal of its special temporary authorization to operate EchoStar 6 at the 110° W.L. orbital location, File No. SAT-STA-20030508-00092, is dismissed as moot.

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countries under specified conditions. In the U.S., DBS operates within this BSS allocation. Each nominal orbital location (i.e., 110° W.L.) is subdivided into two locations, 0.2 degrees East and West of the nominal location (i.e., 109.8° W.L. and 110.2° W.L.). All orbital positions within these two locations define a "cluster." The United States is the only administration assigned channels at the 110° W.L. cluster in the Region 2 BSS and Feeder Link Plans. *MCI Order*, 14 FCC Rcd 9967.

¹⁸ DIRECTV is assigned channels 28, 30 and 32 at 109.8° W.L. EchoStar is assigned channels 27, 29 and 31 at 110.2° W.L. Because these channels are adjacent, the placement of EchoStar at 110.2° W.L. limits the potential for interference to and from DIRECTV.

17. This Order is issued pursuant to Section 0.261 of the Commission's rules, 47 C.F.R. § 0.261 and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Thomas S. Tycz
Chief
Satellite Division