

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

In the Matter of)
)
DIRECTV Enterprises, Inc.) File No. SAT-MOD-199990603-00062
)
Application for Modification of)
Direct Broadcast Satellite System and)
for Authorization to Relocate DBS-1)
Satellite to the 109.8° W.L. Orbital Location)

ORDER AND AUTHORIZATION

Adopted: September 1, 1999 **Released:** September 1, 1999

By the Chief, Satellite and Radiocommunication Division:

Introduction

i) By this Order we grant DIRECTV Enterprises, Inc. ("DIRECTV") authority to effect a modification to its Direct Broadcast Satellite ("DBS") system authorization to relocate its DBS-1 satellite from 101° W.L. and operate it at the 109.8° W.L. orbital location.¹

ii) On August 2, 1999, DIRECTV received authority to launch and operate its DBS-1R satellite and collocate it with DIRECTV's existing system of DBS satellites at the 101° W.L. orbital location.² DBS-1R is intended to replace DBS-1, which has experienced a failure of its primary spacecraft control processor ("SCP"). When the failure occurred, DBS-1 automatically switched to its back-up SCP, which has enabled DBS-1 to continue to provide DBS service. DIRECTV concluded, however, that the loss of DBS-1's primary SCP had compromised its DBS system's ability to guarantee long-term, uninterrupted subscription service to its customers. DIRECTV, therefore, requested authority to replace DBS-1 with DBS-1R.

iii) DIRECTV explains that DBS-1, despite its SCP failure, remains a valuable and

¹ In its application, DIRECTV generally refers to 110° W.L., which it uses as shorthand references to the 109.8° W.L. orbital location. See Letter from James H. Baker and Kimberly S. Reindl, Counsel for DIRECTV, to Magalie Roman Salas, Secretary, Federal Communications Commission (July 16, 1999).

² *DIRECTV Enterprises, Inc.*, Order & Authorization, DA 99-1524 (Int'l Bureau, August 2, 1999).

useful asset, capable of providing continued DBS service. Consequently, DIRECTV proposes to relocate DBS-1 to the 109.8° W.L. orbital location during the fall of 1999, following the successful launch and testing of DBS-1R. From this orbital location, DIRECTV says it intends to operate DBS-1 on a non-common carrier basis, as it operates its current satellite capacity at 101° W.L., and it may sell and/or lease a portion of its capacity, also on a non-common carrier basis for complementary business services. However, DIRECTV says that its primary plan for DBS-1, once it is relocated, is to immediately begin providing an integrated and unprecedented variety of Spanish-language programming that will supplement its core DBS service from the 101° W.L. orbital position. The programming transmitted from 109.8° W.L., like that transmitted from 101° W.L., says DIRECTV, will be received by consumers using a small earth station antenna capable of receiving DBS signals from multiple orbital locations.

Discussion

iv) In considering DIRECTV's proposed modification application to re-locate its DBS-1 satellite to 109.8° W.L., we must evaluate its interference potential to other DBS permittees and the radiocommunication systems of other countries. Specifically, pursuant to Section 100.21 of the Commission's rules, we must ensure that the DBS-1 satellite will be operated in accordance with Appendices S30 and S30A of the International Telecommunication Union (ITU) Radio Regulations. Annexes 1 of Appendices S30 and S30A provide the methodology and criteria for determining whether a specific satellite system might interfere with frequency assignments operated in accordance with the Region 2 broadcasting-satellite service (BSS) Plan and its associated Feeder Link Plan,³ other satellite systems, or terrestrial services.⁴

v) DIRECTV has submitted sufficient technical information to allow evaluation of the interference potential of its satellite at 109.8° W.L., including the information requested in Annex 2 of Appendices S30 and S30A of the ITU's Radio Regulations.⁵ DIRECTV has also provided analyses demonstrating its compliance with the limits contained in Annex 1 to Appendices S30 and S30A. We have reviewed this information, and we find that the potential interference level of DIRECTV's modified system is below that allowed under Appendices S30 and S30A at the 110° W.L. orbital location. However, because the technical parameters of DBS-1 vary from those set forth for U.S. assignments in the Region 2 BSS Plan and its associated

³ Region 2 includes North and South America. Unless referring specifically to the Region 2 BSS Plan and its associated Feeder Link Plan, in the United States the term DBS is used interchangeably with BSS.

⁴See International Telecommunication Union Radio Regulations, Appendices 30 and 30A.

⁵ Annex 2 to Appendices S30 and S30A state the basic characteristics to be furnished in notices relating to space stations in the broadcasting-satellite service.

Feeder Link Plan,⁶ the Commission must request modification of the Region 2 BSS Plan and its associated Feeder Link Plan. Until the Region 2 BSS Plan and its associated Feeder Link Plan are modified to include the technical parameters of DBS-1 and its associated feeder links at 110° W.L., DBS-1 may not cause greater interference to other BSS or feeder link assignments, or other services or satellite systems, operating in accordance with the ITU Radio Regulations, than that which would occur from the current USA Plan assignments at 110° W.L. Furthermore, we remind DIRECTV that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless and until Appendices S30 and S30A Plan procedures are successfully and timely completed. DIRECTV will be expected to provide continuing documentation, as necessary, for the international coordination of its DBS-1 network.⁷

vi) For its telemetry, tracking and control (TT&C) functions, DIRECTV requests authority to use frequencies in the guardbands of the service bands. Use of frequencies within the bands used for service links for TT&C functions is consistent with Commission rules.⁸ EchoStar Satellite Corporation and EchoStar 110 Corporation (collectively "EchoStar"), the other licensee with channels assigned at the 110 W.L. orbital location, also uses frequencies in the guardbands of the Plans for its TT&C functions. In informal comments, EchoStar submits that certain TT&C frequencies of DBS-1 overlap those of EchoStar's satellites at 110 W.L. EchoStar believes this presents the potential for harmful interference. Nevertheless, EchoStar says it "is optimistic that these issues can be resolved in the coordination process."⁹ EchoStar also states that it expects DIRECTV to cooperate in avoiding interference with EchoStar's collocated satellites.¹⁰ DIRECTV asserts that it will coordinate with "all affected parties" and that it shares EchoStar's optimism that any interference issues can be resolved.¹¹ We expect both

⁶ Some of these varying parameters include digital modulation, lower EIRP, and the use of a shaped beam.

⁷ This includes, but is not limited to, the submission of any information or analyses necessary for completing the Plan modification process and coordination of the network. Modifications of the BSS Plans are expected not only to continue, but also to increase, in the future. Accordingly, DIRECTV may be required to assist the Commission in future coordination of its network with the administrations of later implemented systems.

⁸ See 47 C.F.R. § 25.202(g).

⁹ Letter to Magalie Roman Salas, Secretary, FCC, from Pantelis Michalopoulos, Counsel for EchoStar (August 25, 1999).

¹⁰ See Comments filed by EchoStar on July 19, 1999.

¹¹ Letters from James H. Baker and Kimberly S. Reindl, Counsel for DIRECTV, to Magalie Roman Salas, Secretary, Federal Communications Commission (July 29, 1999 and August 27, 1999).

DIRECTV and EchoStar to cooperate with each other and coordinate to avoid interference at the 110° W.L. orbital location. Given the willingness of both EchoStar and DIRECTV to coordinate with each other, and their mutual optimism that any potential interference issues can be resolved through such coordination, we will grant use of these frequencies for TT&C functions, including transfer orbit operations. The grant, however, is conditioned on coordination as necessary of this use with other potentially affected DBS licensees.

vii) Based on the above considerations, we find sufficient evidence to conclude that relocating DBS-1 from the 101° W.L. to the 109.8° W.L. orbital location will comport fully with all applicable international interference criteria and limitations, including DIRECTV's obligation to cooperate in ensuring that any potential for harmful interference to the satellites authorized to operate at 110° W.L. orbital location be avoided. Moreover, we find that DIRECTV's proposal to provide DBS service from this location will serve the public interest, convenience and necessity. Relocating DBS-1 at the general location of 110° W.L. will enhance competition in the MVPD market by providing DBS service from another full-CONUS DBS orbital location.¹²

Ordering Clauses

viii) Accordingly, pursuant to authority delegated by Section 0.261 of the Commission's rules, 47 C.F.R. § 0.261, IT IS ORDERED that Application file No. SAT-MOD-199990603-00062 IS GRANTED, and DIRECTV IS AUTHORIZED to relocate the satellite designated DBS-1 at the 109.8° W.L. orbital position in accordance with the terms, representations, and technical specifications set forth in its application.

ix) IT IS FURTHER ORDERED that the application for DIRECTV's authority to relocate DBS-1 satellite to the 109.8° W.L. location orbital location, File No. SAT-MOD-199990603-00062, IS GRANTED SUBJECT TO THE FOLLOWING CONDITIONS that: (1) until the ITU Region 2 BSS Plan and its associated Feeder Link Plan are modified to include the technical parameters of DBS-1 and its associated feeder links at 110° W.L., these satellite systems shall not cause greater interference than that which would occur from the current USA Plan assignments at 110° W.L. to other BSS or feeder link assignments, or other services or satellite systems, operating in accordance with the ITU Radio Regulations; (2) No protection from interference caused by radio stations authorized by other administrations is guaranteed to DBS-1 unless and until Appendices S30 and S30A Plan modification procedures are successfully and timely completed.

¹² Although this application is not subject to Section 100.53 of the Commission's rules, we note that the DBS-1 service area will include parts of Alaska. In addition, should DIRECTV launch a new satellite to replace DBS-1, we would expect full compliance with the Commission's geographic service requirements. See 47 C.F.R. § 100.53(b).

x) IT IS FURTHER ORDERED that DIRECTV shall coordinate its operations, including on-station and transfer orbit TT&C operations, with all potentially affected DBS licensees.

xi) IT IS FURTHER ORDERED that this order is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Thomas S. Tycz
Chief, Satellite and Radiocommunication Division
International Bureau