

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

In the Matter of	)	
	)	
International Bureau Seeks Comment on	)	Report No. SPD-196
Proposals to Permit Reducing Orbital	)	DA 03-3903
Spacings Between U.S. Direct Broadcast	)	
Satellites	)	
	)	

**REPLY COMMENTS OF RAINBOW DBS COMPANY LLC**

Rainbow DBS Company LLC (“Rainbow DBS”), by its attorneys, hereby submits these reply comments in response to the International Bureau’s Public Notice seeking views on proposals to permit reduced orbital spacings between U.S. Direct Broadcast Satellites (“DBS”).<sup>1/</sup> Comments were filed by various entities on January 23, 2004.<sup>2/</sup>

**I. INTRODUCTION**

Rainbow DBS launched its “VOOM” DBS television service to customers throughout the nation on October 15, 2003 from the Rainbow 1 satellite, one of the world’s most advanced high-

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<sup>1/</sup> International Bureau Seeks Comment on Proposals to Permit Reducing Orbital Spacings Between U.S. Direct Broadcast Satellites, Report No. SPB-196, Public Notice, DA 03-3903 (rel. Dec. 16, 2003) (“Public Notice”). The Public Notice was issued in response to the filing of two applications seeking authority to provide DBS service at orbital locations in between existing authorizations. *See* Petition of SES Americom, File No. SAT-PDR-20020425-0071 (filed April 25, 2002); Applications of EchoStar Satellite Corporation, File Nos. SAT-LOA-20030606-00107, SAT-LOA-20030605-00109 and SAT-LOA-20030609-00113 (filed June 2003). DIRECTV subsequently filed a Petition for Rulemaking asking the Commission to evaluate all the issues related to reducing the orbital spacing environment for U.S. DBS satellites. *See* Petition of DIRECTV Enterprises, LLC for a Rulemaking on the Feasibility of Reduced Orbital Spacing in the U.S. Direct Broadcast Satellite Service (filed Sept. 5, 2003) (“DIRECTV Petition for Rulemaking”).

<sup>2/</sup> On January 23, 2004, Bell ExpressVu LP. (“ExpressVu”), The Boeing Company (“Boeing”), DIRECTV, Inc., EchoStar Satellite L.L.C. (“EchoStar”), the Gibraltar Regulatory Authority (“GRA”), the State of Hawaii, New Skies Satellites N.V (“New Skies”), the Office of Communications of the United

power DBS spot-beam satellites. VOOM is the first television service to offer a comprehensive array of high-definition television (“HDTV”) programming to customers throughout the continental United States.<sup>3/</sup> The VOOM offering is limited by Rainbow DBS’s limited spectrum authorization.<sup>4/</sup> Consequently, Rainbow DBS is encouraged by any proposal that would provide additional spectral capacity for the U.S. DBS service by doubling the available full-CONUS slots and increasing competitive opportunities for new DBS entrants like VOOM.

On the other hand, the current nine-degree spacing environment has been a cornerstone of the United State’s DBS industry since its beginning and continues to set the interference parameters for new earth stations, satellites, services and technologies yet to come. Reduced orbital spacings may produce an unacceptable interference risk to existing DBS and, more significantly, may have unintended and unpredictable consequences on the array of space and earth stations yet to be deployed.<sup>5/</sup> Because of these important competing concerns Rainbow DBS urges the Commission to proceed in manner that is comprehensive, accessible, and cautious in its consideration of relevant factors that could bear on whether the reduced spacing proposals serve the public interest generally, rather than on a case-by-case or *ad hoc* basis as some have proposed.

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Kingdom (“Ofcom”), Pegasus Development Corporation (“Pegasus”), SES Americom, Inc. (“SES”), and Telesat Canada (“Telesat”) filed comments or submitted letters in lieu of comments.

<sup>3/</sup> VOOM offers consumers far more HDTV programming than any other satellite or cable service, including a package of 21 original, commercial-free, 1080i channels created expressly to meet the demand of today’s rapidly growing but currently underserved HDTV audience.

<sup>4/</sup> Rainbow DBS holds a license for 11 DBS channels at 61.5° W.L. and uses another two DBS channels at 61.5° W.L. under Special Temporary Authorization (“STA”). In contrast, the two dominant DBS providers have access to far greater spectrum resources with EchoStar using 102 DBS channels and DIRECTV holding licenses for 46 DBS channels.

<sup>5/</sup> DIRECTV Comments at 5-7.

## II. CONSIDERATIONS FOR THE COMMISSION TO ADDRESS

The technical analyses that were provided in the comments indicate that reduced spacing for U.S. DBS satellites may be technically feasible,<sup>6/</sup> but even the proponents of reduced spacing concede that interference mitigation measures will be necessary at some level.<sup>7/</sup> Furthermore, it is broadly accepted that existing DBS services must be protected during the implementation of any reduced spacing environment.<sup>8/</sup> Consequently, in framing any technical rules for new, short-spaced DBS satellites, the Commission should be cognizant of the potential risk to existing services that were deployed in reasonable reliance on a continuing nine-degree spacing environment. Rainbow DBS submits that there are two areas that merit careful attention: (i) protecting existing consumer DBS earth stations, and (ii) allowing for the implementation of enhanced DBS services by existing providers.

### A. Existing Earth Stations Must Be Protected from Interference

The analysis of short-spaced DBS satellites must take into account the effect of such reduced spacing on the more than 21 million DBS consumer earth stations that are currently deployed. At worst, reduced spacing could cause the obsolescence of these consumer earth stations and undermine a multi-billion dollar investment in consumer devices.<sup>9/</sup> At best, many of the installations may have to be adjusted to take into account the much higher calibration demands at 4.5° spacing.

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<sup>6/</sup> Technical analyses were submitted by Boeing, EchoStar and Pegasus.

<sup>7/</sup> Pegasus Comments at 4 (mitigation could be accomplished “by restricting the power flux density of the new short-spaced satellites.”); EchoStar Comments at 5 (“operation of a properly-designed 4.5-degree spaced DBS satellite can be conducted so as not to cause harmful interference to adjacent satellite networks serving the same geographic areas, *subject of course to necessary safeguards.*”)(emphasis added).

<sup>8/</sup> See, e.g., Pegasus Comments at 4; EchoStar Comments at 5; DIRECTV Comments at 4-7.

<sup>9/</sup> DIRECTV Petition for Rulemaking at 11-15.

The Commission recognized this potential on a much smaller scale more than 20 years ago when it implemented reduced spacing for the C- and Ku-band fixed satellite service (“FSS”) satellites. In order to mitigate the financial impacts of upgrading and replacing the installed base of C-band reception equipment that did not conform to the new FSS orbital spacing standards, the Commission provided a transition period to allow for fuller amortization of the then-existing earth station facilities.<sup>10/</sup> The difference in scale between 1983 (6,000 C-band stations) and today (21 million DBS antennas) suggests a similar impact on the installed base could not be tolerated. Moreover, unlike the commercial C-band earth stations involved in the 1983 *Reduced Spacings Order*, DBS earth stations are owned by consumers, and their replacement or modification has a totally different set of economic realities.<sup>11/</sup> Thus, in considering short-spaced DBS satellites, the Commission must be certain that consumers will not have to replace or drastically modify, or increase the maintenance of, their current equipment in order to receive the same level of service that they currently enjoy.

## **B. Enhanced DBS Services**

In the DIRECTV Petition for Rulemaking attached to the Public Notice, DIRECTV states that it has developed advanced technologies and services in reliance on the nine-degree spacing environment and that “these technologies may not be able to operate in a 4.5 degree spacing

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<sup>10/</sup> Licensing of Space Stations in the Domestic Fixed-Satellite Service and Related Revisions of Part 25 of the Rules and Regulations, CC Docket No. 81-704, *Report and Order*, FCC 83-184 ¶ 30 (rel. Aug. 16, 1983) (“*Reduced Spacings Order*”).

<sup>11/</sup> There are technical distinctions as well. The ability of commercially-owned earth stations to withstand interference from closer-spaced satellites most likely is better than consumer units since the incidence of such factors as pointing errors should be far less for earth stations that are operated and maintained for commercial applications. Consumer units rarely have their pointing re-aligned or adjusted to maintain peak performance.

environment.”<sup>12/</sup> Rainbow DBS agrees with DIRECTV’s assertion that “[a]ny attempt to accommodate tweener satellite systems ... must not be permitted to stifle the important public interest benefits ... U.S. DBS operators currently are pursuing and plan to pursue, such as, the continued expansion of satellite-delivered local broadcast channels, the continued rollout of HDTV programming and the continued development and introduction of innovative new satellites and services by operating DBS systems.”<sup>13/</sup>

Interactive service offerings are the type of advanced services that will help provide consumers with increased choices and reduced costs.<sup>14/</sup> Rainbow DBS believes it may be possible to provide such innovative interactive service offerings within the current nine-degree spacing environment. Any technical evaluation regarding reduced orbital spacings must take into account the ability of DBS operators to provide these types of services in order to maintain their competitive posture in the marketplace.

### **III. CONCLUSION**

This proceeding has the potential to increase spectral capacity for the U.S. DBS service, creating an environment where all providers and potential new entrants would have sufficient capacity for vibrant and comprehensive consumer offerings. But before final decisions can be made, there are technical and regulatory issues that must be addressed and resolved satisfactorily through a rulemaking. Rainbow DBS looks forward to participating in this process.

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<sup>12/</sup> DIRECTV Comments at 5.

<sup>13/</sup> *Id.* at 2.

<sup>14/</sup> Public Notice at 2.

Respectfully submitted,

**RAINBOW DBS COMPANY, LLC**

Michael E. Olsen  
Vice President – Legal Regulatory Affairs  
Cablevision Systems Corp.  
1111 Stewart Avenue  
Bethpage, NY 11714

By: \_\_\_\_\_  
Benjamin J. Griffin  
Christopher R. Bjornson  
Mintz, Levin, Cohn, Ferris, Glovsky  
and Popeo, P.C.  
701 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004  
(202) 434-7300

February 13, 2004

Its Counsel

**CERTIFICATE OF SERVICE**

I, Christopher R. Bjornson, hereby certify that on this 13th day of February 2004, I caused copies of the foregoing "Comments of Rainbow DBS Company LLC" to be sent to the following by electronic mail or by hand delivery.

Selina Khan  
Federal Communications Commission  
[skhan@fcc.gov](mailto:skhan@fcc.gov)

Chip Fleming  
Federal Communications Commission  
[Chip.Fleming@fcc.gov](mailto:Chip.Fleming@fcc.gov)

Kathryn Medley  
Federal Communications Commission  
[Kathryn.Medley@fcc.gov](mailto:Kathryn.Medley@fcc.gov)

JoAnn Lucanik  
Federal Communications Commission  
[JoAnn.Lucanik@fcc.gov](mailto:JoAnn.Lucanik@fcc.gov)

Qualex International  
[Qualexint@aol.com](mailto:Qualexint@aol.com)

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Christopher R. Bjornson