

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

In the Matter of)	
)	
ECHOSTAR SATELLITE L.L.C.)	
)	
Application for Authority to Construct, Launch)	File No. _____
And Operate a Geostationary Ka-band Satellite)	
in the Fixed-Satellite Service at the 113° W.L.)	
Orbital Location)	
)	

APPLICATION

Pursuant to Section 308, 309 and 319 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 308, 309 and 319, Part 25 of the Commission’s rules, 47 C.F.R. Part 25, and the Commission’s *First-Come-First-Served Report and Order* (“*FCFS Order*”),¹ EchoStar Satellite L.L.C. (“EchoStar”) hereby files an application for authority to construct, launch and operate a geostationary (“GSO”) satellite in the Fixed-Satellite Service (“FSS”) using the Ka-band frequencies (18.3-18.8 GHz and 19.7-20.2 GHz from space-to-Earth, 28.35-28.6 GHz and 29.25-30.0 GHz from Earth-to-space) at the 113° W.L. orbital location, which has recently become available for reassignment.² In accordance with the *FCFS Order*, the addition of this

¹ *In the Matter of Amendment of the Commission’s Space Station Licensing Rules and Policies*, IB Docket No. 02-34, First Report and Order and Further Notice of Proposed Rulemaking, FCC 03-102 (rel. May 19, 2003) (“*FCFS Order*”).

² *See VisionStar, Inc., Application for Modification of Authority to Construct, Launch and Operate a Ka-Band Satellite System in the Fixed Satellite Service*, Memorandum Opinion and Order, DA 04-2449 (rel. Aug. 3, 2004).

pending application will *not* cause EchoStar to exceed the five-satellite limit for licensed-but-unbuilt and pending applications in Ka-band frequencies designated for primary GSO FSS use.³

As the Commission is well aware, EchoStar is a leading provider of Direct Broadcast Satellite (“DBS”) services in the multichannel video programming distribution (“MVPD”) market with over 10 million subscribers. EchoStar and other EchoStar affiliates own and operate eight DBS satellites at the 61.5° W.L., 110° W.L., 119° W.L., 148° W.L. and 157° W.L. orbital locations, as well as a hybrid Ka-/Ku-band FSS satellite at the 121° W.L. orbital location. The proposed satellite will supplement and support EchoStar’s existing MVPD offerings and will allow EchoStar to provide various kinds of two-way broadband services. These types of bundled offerings are needed in order for EchoStar to better compete in the MVPD marketplace.

This satellite application satisfies the requirements for first-come-first-served processing under the *FCFS Order*, and EchoStar requests that it be placed in the appropriate position in the first-come, first-serve (“FCFS”) queue based on its filing date and time.

I. GENERAL DESCRIPTION

The proposed Ka-band payload will consist of 64 active transponders using eight 115 MHz channels across 1000 MHz of the GSO portion of the Ka-band spectrum in each direction (18.3-18.8 GHz and 19.7-20.2 GHz from space-to-Earth, and 28.35-28.6 GHz and 29.25-30 GHz from Earth-to-space).

The attached Technical Annex contains a detailed description of the technical specifications of the proposed satellite at the 113° W.L. orbital location and is incorporated into this narrative by reference.

³ See *FCFS Order* at ¶¶ 230-231. In this regard, EchoStar notes that EchoStar 9, which includes a Ka-band payload, is now in operation.

II. SERVICES TO BE PROVIDED

EchoStar will use the proposed satellite to provide primarily three types of services:

- Direct-to-Home services, including bandwidth-intensive “local-into-local” and High Definition services, to supplement the services provided today by EchoStar’s DBS satellites and alleviate many of the spectrum constraints that have hampered its DBS offerings.
- Two-way broadband services, including interactive television and high-speed Internet access, to help EchoStar compete more effectively with its dominant competitors, cable operators, which increasingly bundle their traditional MVPD services with interactive offerings and high-speed Internet access.
- Transport of programming to EchoStar’s DBS uplink centers, to serve its increasing needs for feeding programming to these centers.
- International Direct-to-Home, broadband and programming transport services.

EchoStar proposes to offer Direct-to-Home services, two-way broadband services, interactive services and HD content to consumers using transactions modeled on the current relationship between EchoStar and its DBS subscribers, which (as the Commission is aware) is a non-common carrier relationship, or other non-common carrier transactions.

III. FINANCIAL QUALIFICATIONS – COST OF CONSTRUCTION, LAUNCH AND OPERATION

The *FCFS Order* abolished the requirement of submitting an estimate of the proposed system’s cost, as well as the financial qualification requirements.⁴ Nonetheless, EchoStar is amply qualified to finance the construction, launch and operation of the proposed satellite.

IV. LEGAL QUALIFICATIONS

EchoStar’s legal qualifications are a matter of record and are also set forth in the Form 312 submitted today for this satellite.

V. MILESTONES

EchoStar will submit itself to the milestones contemplated by the Commission’s new rules for satellite licensees as set forth in the *FCFS Order*.⁵

VI. PUBLIC INTEREST CONSIDERATIONS

The grant of this application clearly serves the public interest by allowing the provision of additional DTH services (including more local-into-local and High Definition (“HD”) channels), two-way broadband, programming transport, and international services.

DTH services. The proposed satellite will help EchoStar become more competitive with cable operators in the MVPD market. Specifically, EchoStar has been laboring under the twin handicap of finite DBS spectrum and the lack of a “return” link that could enable truly interactive satellite services. The DBS spectrum (up to 32 channels at each of a finite number of orbital locations) provides EchoStar with significantly less programming capacity

⁴ *FCFS Order* at ¶ 164, app.B §§ 6 and 13 (deleting §§ 25.114(c)(13), 25.140(b)(3)-(4) and 25.140(c)-(d)).

⁵ See *FCFS Order* at ¶ 174 (contract execution within 1 year; Critical Design Review within 2 years; Commence Construction within 3 years; and Launch and Operate within 5 years).

than is available to digital cable systems. This limited spectrum must be used to provide local broadcast channels, national programming, HD content and interactive services across the entire United States. This spectrum constraint is exacerbated by the need to provide local broadcast channels by satellite to as many cities as possible and by the must-carry rules, as well as by consumer demand for more HD channels. In contrast, most cable systems can devote a full 750 MHz or more in each MSA to provide local, national and HD programming, as well as interactive and data services.⁶ Even with spot beam satellites, the use of a DBS channel to provide local stations in one city generally reduces the spectrum available for DBS services elsewhere in the nation. Indeed, the need for more spectrum alternatives appears to grow more acute by the day as EchoStar attempts to provide local channels to an increasing number of MSA's and as more HD channels become available.

While the proposed satellite certainly will not be enough to cure this spectrum shortage problem, it is imperative for EchoStar to deploy additional spectrum resources at orbital locations that can "view" the entire United States in order to lessen this widening competitive handicap.

Broadband. The proposed satellite will also help address spectrum and capacity constraints that have hampered the deployment of residential broadband services by satellite. The provision of satellite broadband service to a critical mass of consumers requires substantial satellite and spectrum resources. Unlike Direct-to-Home video, where some of the same spectrum can be used to provide services to many subscribers, broadband services require the dedication of bandwidth to each consumer receiving the service, meaning that a broadband

⁶ *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, Tenth Annual Report, MB 03-172, FCC 04-5, at ¶ 25 tbl.3 (2004).

satellite can only serve a limited number of users. As explained in the EchoStar/Hughes merger proceeding:

[e]ach kilobit of service used by a satellite broadband customer consumes a corresponding portion of frequencies on the transponder (typically 1.115 bits/Hertz), and therefore (in the case of a CONUS beam) prevents those same uplink and downlink frequencies from being simultaneously reused on the spacecraft anywhere else in CONUS. Thus, there are limits on the number of broadband users that can simultaneously receive broadband service on the same transponder.⁷

The combination of EchoStar's and Hughes' satellite resources would have alleviated this problem. But, now that the merger has been terminated, EchoStar must obtain authorizations for additional satellites with more transponders and frequencies if nationwide satellite broadband to residential consumers is to have any chance of becoming a reality. It is true that other obstacles, such as the lack of economies of scale needed to allow ubiquitous deployment of residential broadband services, must still be overcome. While there cannot be assurances in this regard, EchoStar believes that the additional capacity provided by the proposed satellite may be an important first step towards overcoming this obstacle as well.

The facilitation of broadband satellite service to consumers will have a two-fold public benefit. *First*, it will help extend the benefits of broadband service, increasingly a staple in urban areas, to all parts of the United States, including rural Americans that are today not reached by any terrestrial broadband offering. *Second*, the grant of this application will enable EchoStar to better compete with the bundled services offered over digital cable television systems. The importance of being able to offer a seamless bundle of video and broadband

⁷ EchoStar Communications Corporation et al.'s Opposition to Petitions to Deny and Reply Comments at attach.C ¶ 12 (Declaration of Mr. Arnold Friedman), *filed in Application of EchoStar Communications Corp., et al. for Authority to Transfer Control*, CS Docket No. 01-348 (filed Feb. 25, 2002) ("EchoStar/Hughes Opposition and Reply").

services cannot be overemphasized in considering what tools will be necessary to become and remain competitive with cable companies capable of leveraging their tremendous power in the MVPD marketplace into the broadband market. The Commission recognized years ago that “[m]ulti-service offerings and bundling services for sale seems to enhance subscription to alternative services offered by cable companies. . . . Indications are that consumers value receiving those services through ‘one-stop-shopping.’”⁸ Present-day, spectrum-constrained, satellite providers simply cannot offer a bundled video, broadband and interactive service comparable to that being rolled out by those cable companies offering digital cable service.⁹

Programming Transport. Grant of this application will help better serve EchoStar’s increasing need for the efficient transport of programming to its uplink centers, to the ultimate benefit of DBS consumers.

International Services. EchoStar proposes to use the proposed satellite for various types of international services. In particular, EchoStar’s DBS business plan is increasingly focused on international programming.¹⁰ The proposed satellite will help EchoStar provide to its customers many channels of international programming, including Latin American programming that is especially popular to U.S. consumers of Hispanic origin. Subject to the satellite’s coverage capabilities and the licensing requirements in a number of large Latin American countries, as well as the applicable regulations regarding the size of earth stations in certain frequency bands, EchoStar is also interested in developing business plans for

⁸ Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket 98-102, FCC 98-335, at ¶ 60 (1998) (“Fifth MVPD Competition Report”).

⁹ See also EchoStar/Hughes Opposition and Reply at 82-83.

¹⁰ See EchoStar Communications Corp., Press Release, *EchoStar’s Dish Network to Launch up to 100 New International Satellite TV Channels This Summer* (Apr. 4, 2003).

international DTH and broadband services to consumers in those countries, starting with countries that have reached DTH/FSS bilateral agreements with the U.S.

VII. COMPLIANCE WITH COMMISSION RULES

The proposed satellite is compatible with the Commission's two-degree spacing rules and will not cause harmful interference to any authorized user of the spectrum. It also complies with all technical and non-technical requirements of Part 25 of the Rules, as amended by the *FCFS Order*. Specifically, EchoStar will comply with all applicable power flux density limits¹¹ and with the Commission's full frequency reuse requirements.¹² EchoStar also commits to comply with all of the Commission Rules applicable to GSO FSS satellites operating in the Ka-band.¹³ To the extent that certain information relating to specific TT&C frequencies and satellite spacecraft design are not now known to EchoStar because it has yet to pick a satellite manufacturer, EchoStar hereby requests a limited waiver of the rules, to the extent one is deemed necessary, in order to submit this Application without the requested information. EchoStar will supplement this Application or request a modification to its license when this information becomes available.

VIII. ORBITAL DEBRIS MITIGATION

Pursuant to 47 C.F.R. § 25.217(d), applicants requesting a satellite authorization must submit a narrative statement describing the debris mitigation design and operational strategies, if any, that they will use.

¹¹ See 47 C.F.R. §§ 25.208(c)-(d).

¹² See 47 C.F.R. § 25.210(g).

¹³ See 47 C.F.R. § 25.145.

To control orbital debris, EchoStar will use a design for its satellite and launch vehicle that minimizes the amount of debris released during normal operations. To ensure that its satellite does not become a source of orbital debris, EchoStar will conduct an analysis to ensure that the probability of collision with any known space borne objects during its normal operational lifetime is minimal. EchoStar will also conduct an analysis that demonstrates that no realistic failure modes exist or can lead to an accidental explosion during normal operations or before completion of post operations disposal. At the end of the operational life of the satellite, EchoStar will maneuver its spacecraft to a storage orbit with a perigee altitude above its normal operational orbit. EchoStar will use a maneuver strategy that reduces the risk of leaving any of its spacecraft near an operational orbit. After the spacecraft reaches its final disposal orbit, all on-board sources of stored energy will be depleted or safely secured.

The Technical Annex to this Application, contains a discussion of orbital collision avoidance as it applies to the proposed satellite. Since EchoStar will move the satellite into a storage orbit upon the end of its useful life, it is not required to provide a risk assessment study associated with deorbiting the satellite into the Earth's atmosphere.¹⁴

IX. ITU COST RECOVERY

EchoStar is aware that as a result of the actions taken at the 1998 Plenipotentiary Conference, as modified by the International Telecommunication Union ("ITU") Council in June 2001, processing fees will now be charged by the ITU for satellite network filings. As a consequence, Commission applicants are responsible for any and all fees charged by the ITU. EchoStar hereby states that it is aware of and unconditionally accepts this requirement and its

¹⁴ While the Commission recently adopted new rules for the mitigation of orbital debris, those rules are not yet in effect. *See* Mitigation of Orbital Debris, Second Report and Order, IB Docket No. 02-54, FCC 04-130 (released June 21, 2004). Once these rules are in effect, EchoStar will supplement its showing as required by the new rules.

