

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

In re the Matter of)
)
DISH Operating L.L.C.) File No. SES-LFS-2014__-__
)
Application for Blanket Earth Station)
License to Operate with Ciel-6i, a)
Canadian-Licensed 17/24 GHz BSS)
Payload at 103° W.L.)

APPLICATION FOR BLANKET EARTH STATION LICENSE

DISH Operating L.L.C. (together with its affiliates, “DISH”), pursuant to Section 25.137 of the Commission’s Rules (47 C.F.R. § 25.137), submits this application to operate up to 50,000 earth stations in the United States for the purpose of receiving service from Ciel-6i, a Canadian-licensed 17/24 GHz Broadcasting-Satellite Service (“BSS”) payload on the in-orbit SES-3 satellite at the 103° W.L. orbital location.¹ Hughes Network Systems Canada ULC (“HNS Canada”) has a contract with Ciel to use the 17/24 GHz capacity on Ciel-6i, and HNS Canada has, in turn, leased this capacity to DISH. Grant of the requested authority will serve the public interest because it will permit DISH to use the Ciel-6i payload to explore the provision of video and data services for the terrestrial wireless broadband network planned by DISH.

¹ See File Nos. SAT-RPL-20121228-00227 & SAT-AMD-20131113-00132. Ciel Satellite Limited Partnership (“Ciel”), an affiliate of SES Americom, Inc. (“SES Americom”), is licensed by Canada to operate the Ciel-6i payload on the SES-3 satellite, which also hosts C- and Ku-band payloads. See Industry Canada Radio License, Account Number 07-150006068, effective Sept. 21, 2012; Letter of Suzanne Lambert, Director, Space Services Operations, Industry Canada, to Bernie Haughian, Managing Director, Ciel Satellite Limited Partnership dated Sept. 21, 2012 (approving Ciel’s plan to use an interim 17 GHz BSS satellite at 103° W.L.). The Canadian administration has submitted filings with the International Telecommunication Union (“ITU”) for the Ciel-6i payload under the designation CAN-BSS19.

I. DESCRIPTION OF SERVICES TO BE PROVIDED

The 17/24 GHz BSS capacity at 103° W.L. may advance DISH's recent initiatives in the United States to meet the growing need of business and residential consumers for advanced wireless two-way broadband communications services. This application seeks authority to access the existing Ciel-6i payload at 103° W.L. in order to validate the use of "reverse band" spectrum to support the provision of video and data services that may play a role in the terrestrial wireless broadband network planned by DISH.

To that end, DISH seeks authority to deploy 17 GHz receive-only antennas at cellular towers in the United States. DISH plans to use the Ciel-6i capacity to begin developing this network component and identify any technical or other deployment issues.

If validated, this network configuration may leverage the benefits of a hybrid satellite and terrestrial network to deliver an array of regional programming to U.S. consumer devices, wherever they may be.

II. DESCRIPTION OF THE PAYLOAD AND GROUND SEGMENT

A. Space Segment

The Ciel-6i payload, along with several different communications payloads, operates on the SES-3 satellite at the 103° W.L. orbital location.² The Ciel-6i payload incorporates simple and flexible engineering to facilitate various service offerings. The payload consists of a single 500 MHz transponder that receives uplink signals in the left-hand-circular polarization

² The SES-3 satellite was launched on July 16, 2011 under Luxembourg authority, and arrived at the nominal 103° W.L. orbital location in September 2012. SES Americom currently is authorized by the Commission to operate the SES-3 telemetry, tracking and command payload at 103° W.L. See *SES Americom, Inc.*, 29 FCC Rcd. 3678 (IB 2014).

(“LHCP”) and transmits downlink signals in both right-hand-circular polarization (“RHCP”) and LHCP.³

The Ciel-6i payload allows use of the full 500 MHz of internationally allocated 17/24 GHz BSS spectrum (17.3-17.8 GHz and 24.75-25.25 GHz). For this blanket earth station application, DISH seeks authority to use the 400 MHz of domestically allocated downlink spectrum (17.3-17.7 GHz). Uplink communications will be received by the satellite from earth stations located in Canada operating under Canadian authority. The downlink signals will be delivered to DISH earth stations at cell towers, using carrier bandwidths of 3.75 to 390 MHz to support various broadcast formats.

DISH has determined that 103° W.L. is an optimal location to utilize a flexible payload like Ciel-6i with minimum channelization. In particular, since the 12/17 GHz networks at 101.2° W.L. and 105.5° W.L. are the closest adjacent Direct Broadcast Satellite (“DBS”) networks, use of the 103° W.L. orbital location provides at least 1.8° of orbital separation and minimizes the risk of any 17 GHz space path interference into those adjacent networks, as demonstrated in the attached Technical Annex. Further, given the priority rights secured by the Canadian administration for operation in this spectrum at the 103° W.L. orbital location, that location provides the most certainty for this service from an international rights perspective.⁴

³ For this reason, the payload does not fully meet Section 25.210(f)’s requirement for full spectrum reuse on the uplink, and DISH requests a waiver as set forth later in this application.

⁴ In view of the Canadian ITU priority at this location, DISH recently filed a Petition to Condition with respect to DIRECTV’s proposed deployment of a 17/24 GHz BSS payload known as “RB-2” at the nominal 103° W.L. orbital location. Specifically, DISH asked that the FCC condition any positive action on DIRECTV’s RB-2 payload modification and milestone extension applications on a requirement that DIRECTV complete coordination with Ciel and modify its RB-2 operational parameters to reflect that coordination, all before commencing operations in the 17/24 GHz BSS band. *See* DISH Operating L.L.C. Petition to Condition, File Nos. SAT-MOD-20140612-00066 & SAT-MOD-20140624-00075 (Sept. 2, 2014).

B. Ground Segment

U.S. Earth Stations: These facilities are described in the attached Technical Annex.

C. Frequency Plan

Depending on the services to be provided, DISH may elect to utilize carrier bandwidths of various sizes for the allocated 400 MHz of downlink in the 17/24 GHz BSS as noted in the Technical Annex link budgets. Carriers ranging from a single 390 MHz high-throughput carrier to multiple lower-throughput narrowband carriers can be utilized based on market and consumer driven demands. This type of flexibility was specifically envisioned and allowed for by the Commission when it authorized the 17/24 GHz service.⁵ Earth stations will operate in the United States and be appropriately licensed for the carriers outlined in the Technical Annex.

III. GRANT OF THIS MARKET ACCESS APPLICATION WILL SERVE THE PUBLIC INTEREST

Grant of this application will serve the public interest by facilitating innovative use of 17/24 GHz spectrum to provide commercial services that may support video and data services offered over a multi-use terrestrial distribution network. Use of this 17/24 GHz spectrum, together with DISH's terrestrial wireless spectrum, may potentially provide additional mobile broadband service content options for U.S. consumers.

This proposed service qualifies as BSS. BSS is defined as “[a] radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public,” where “direct reception” “encompass[es] both individual

⁵ See *The Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd. 8842, 8887 ¶ 109 (2007) (“*RBW Service Order*”) (“we will not mandate a polarization or channelization scheme for 17/24 GHz BSS systems”).

reception and community reception.”⁶ The Commission has given DBS operators in the 12/17 GHz band unlimited flexibility to provide non-DBS services, finding that “allowing non-conforming satellite use of DBS spectrum is consistent with the Commission's spectrum management policies, which favor greater options and choices for consumers.”⁷ Similarly, the Commission recognized that BSS in the 17/24 GHz band may include non-DBS-like services when it limited the scope of some of the 17/24 GHz rules to DBS-like services alone.⁸

This service is also fully consistent with the Commission’s *DISCO II* policies. As mentioned, the Ciel-6i payload will be used to provide downlinked video and data services to cellular towers. The nature of the service triggers the *DISCO II* presumption in favor of market entry.⁹ Specifically, in *DISCO II*, the Commission established a rebuttable presumption in favor of entry by non-U.S. satellites licensed by World Trade Organization (“WTO”) member-states to provide services covered by the U.S. commitments under the WTO Agreement on Basic Telecommunications Services (“WTO Basic Telecom Agreement”). These commitments include the video and data services proposed here. Because the services do not qualify as direct-to-home (“DTH”) or DBS service,¹⁰ the Commission’s effective competitive opportunities test (“ECO-Sat test”) does not apply. In any event, even if the ECO-Sat test applied, the

⁶ See International Telecommunication Union, *Radio Regulations*, Article 1.39 (2012).

⁷ See *Policies and Rules for Direct Broadcast Satellite Service*, Report and Order, 17 FCC Rcd. 11331, 11400, ¶ 148 (2002).

⁸ *RBW Services Order*, 22 FCC Rcd. at 8858 ¶ 40. In this respect, DISH’s proposed service would not be “DBS-like,” and the public interest requirement for DBS-like services would not apply. *Id.*

⁹ *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States*, Report and Order, 12 FCC Rcd. 24094 (1997) (“*DISCO II*”).

¹⁰ As mentioned above, the FCC has recognized that BSS includes non-DBS-like services. See *RBW Services Order*, 22 FCC Rcd. at 8858 ¶ 40.

Commission has consistently found that it is in the public interest to allow DBS and DTH service into the United States from Canadian licensed satellites, despite the lack of effective competitive opportunities for U.S. DTH and DBS providers in Canada. As a result, the Commission has repeatedly waived the ECO-Sat requirement for Canada.¹¹

IV. THIS APPLICATION IS LEGALLY AND TECHNICALLY COMPLETE

DISH is submitting all of the legal and technical information required by Part 25 of the Commission's Rules, including Sections 25.137 and 25.114, in this narrative and the accompanying Technical Annex (Attachment A), Form 312 (Main Form), and Schedule S.

A. Legal Qualifications and Regulatory Requirements

DISH holds numerous satellite licenses, and its legal qualifications are a matter of record before the Commission.¹² Additionally, the attached Form 312 and associated exhibits demonstrate DISH's compliance with the FCC's basic legal qualification requirements.

Further, the Ciel-6i payload is in compliance with applicable FCC requirements or is not subject to certain FCC requirements, as follows:

¹¹ See, e.g., *Digital Broadband Applications Corp. Consolidated Application for Authority to Operate U.S. Earth Stations with a U.S.-Licensed Ku-Band FSS Satellite and Canadian-Licensed Nimiq and Nimiq 2 Satellites to Offer Integrated Two-Way Broadband Video and Data Service Throughout the United States*, Order, 18 FCC Rcd. 9455, 9462 ¶ 16 (IB 2003) (“DBAC”) (finding that allowing DBAC's proposed service would “enhance, rather than distort or harm, competition in the United States for broadband video and data services”). The Commission subsequently relied on the DBAC precedent in authorizing DIRECTV to use satellites operating pursuant to Canadian authority to provide DBS service in the United States. See, e.g., *DIRECTV Enterprises LLC*, Order and Authorization, 19 FCC Rcd. 15529, 15532-35 ¶¶ 8-16 (Sat. Div. 2004) (citing DBAC in support of its decision to authorize DIRECTV to use the Canadian-licensed DIRECTV 5 satellite to provide U.S. DBS services); *DIRECTV Enterprises LLC*, Order and Authorization, 20 FCC Rcd. 11772, 11776-77 ¶¶ 14-15 (Sat. Div. 2005) (authorizing use of the Canadian-licensed DIRECTV 1 spacecraft to provide follow-on DBS capacity for DIRECTV 5).

¹² See *DBSD North America, Inc., Debtor-in-Possession*, Order, 27 FCC Rcd. 2250, 2255 n.45 (IB 2012).

- (1) Since the Ciel-6i payload on the SES-3 satellite is already launched and operational, no milestone schedule under Section 25.164(a) or bond under Section 25.165(a) is required.¹³
- (2) DISH will ensure compliance with FCC service rules applicable to the Ciel-6i payload.
- (3) DISH is in compliance with Section 25.137(d)(5)'s limits on the number of pending applications for U.S. market access and the number of unbuilt satellites granted U.S. market access per frequency band. DISH currently has no licensed-but-unlaunched satellite or market access authorizations and no pending satellite or market access applications before the Commission in the 17/24 GHz BSS band.

B. Technical Qualifications

A complete Technical Annex (Attachment A) and Schedule S for the Ciel-6i payload to be accessed by the requested earth station facilities are provided as part of this application. The Technical Annex includes the orbital debris mitigation showing required under Section 25.114(d)(14) of the Commission's Rules.¹⁴ DISH's proposal complies with the Commission's Rules except as set forth in the requests below.¹⁵ Planned operations will not cause harmful interference to any other lawful spectrum user that is entitled to interference protection.¹⁶

¹³ See 47 C.F.R. §§ 25.164(a), 25.165(a).

¹⁴ See Technical Annex, § A.11 (incorporating by reference the orbital debris mitigation plan submitted with the SES-3 Application); see also 47 C.F.R. §§ 25.114(d)(14) & 25.283.

¹⁵ See also Technical Annex, §§ A.2, A.12.

¹⁶ DIRECTV currently holds FCC authority to launch and operate a 17/24 GHz BSS payload, RB-2, at the 102.825° W.L. orbital location. See *Application for Authorization to Launch and Operate DIRECTV RB-2*, Order and Authorization, 24 FCC Rcd. 9393 (IB 2009). The underlying ITU filing for the RB-2 satellite, however, enjoys lower ITU priority than the Canadian ITU filing pursuant to which Ciel-6i is operating, and is therefore not entitled to interference protection until coordination is completed. Moreover, DIRECTV has asked to modify that authorization and to extend or waive the launch and operation milestone. See IBFS File No. SAT-MOD-20140612-00066 (filed Jun. 12, 2014); IBFS File No. SAT-MOD-20140624-00075 (filed Jun. 24, 2014). As discussed above, DISH has filed a petition to condition any grant of those applications on DIRECTV successfully completing coordination with Ciel for the 17/24 GHz frequencies prior to commencing operations. That condition is necessary to give effect to Canada's priority rights.

Technical Rule Waivers Requested. The operation of the Ciel-6i satellite is consistent with the technical requirements of the Part 25 the rules in all but two respects.

First, DISH requests any necessary waiver of Section 25.210(f), which requires full frequency reuse. Ciel-6i is compliant with Section 25.210(f)'s dual orthogonal polarization requirement for the space-to-Earth segment that will be used by U.S. receive-only earth stations, but only LHC polarization will be used for uplinks from Canadian earth stations to the Ciel-6i payload. Commission rules may be waived if there is good cause to do so.¹⁷ In this case, DISH proposes to utilize the spectrum in new and innovative ways that potentially will introduce video and data services for the public benefit.

Second, DISH seeks a limited waiver of Subsections 25.264(c) and (d), to the extent required. The Ciel-6i payload was launched in July 2011 prior to issuance of the FCC's service rules for the 17/24 GHz BSS in September 2011, thus leaving no possibility to perform additional measurements required by Subsections 25.264(c) and (d). DISH has provided all available information regarding compliance with the obligations of Subsections 25.264(c) and (d). DISH also notes in the attached Technical Annex that: (i) there is no operational, adjacent 12/17 GHz BSS satellite less than 1.8° away from the 103.0° W.L. orbit location; (ii) emission levels of the Ciel-6i payload are low; and (iii) calculations show that the Ciel-6i payload raises no potential harmful interference issue with respect to any U.S.-licensed DBS satellite.¹⁸ Thus, waiver of the requirements will not undermine the purpose of Subsections 25.264(c) and (d).

¹⁷ See 47 C.F.R. § 1.3; *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

¹⁸ See Technical Annex, § A.12.

Finally, DISH's network will comply fully with all other applicable Part 25 technical and operational requirements, including power flux-density requirements¹⁹ and geographic service rules,²⁰ as outlined in the Technical Annex. Specific showings as to the applicable elements are contained in this application and the included exhibits and attachments.

V. CONCLUSION

For the foregoing reasons, DISH respectfully requests Commission grant of this application.

Respectfully submitted,

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¹⁹ See Technical Annex, § A.8.

²⁰ See 47 C.F.R. § 25.225.

LIST OF ATTACHMENTS AND EXHIBITS TO APPLICATION

Attachment A – Technical Annex to Supplement Schedule S (including Link Budgets)

Exhibits to FCC Form 312 and Schedule B

Exhibit A – Response to Question 36

Exhibit B – Response to Question 40