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

In the Matter of		
Application of Harris CapRock Communications, Inc. for Modification to Operate a Fixed Earth Station in the 11.45-11.7 (space-to-Earth) and 13.75-14.0 GHz (Earth-to-space) Frequency Bands	)	File No: SES-MOD-20140606-00440 Call Sign: E030253

Earth Station License Modification Application

By this application, Harris CapRock Communications, Inc. ("Harris CapRock") seeks Commission authority to modify its existing fixed earth station license, Call Sign E030253, by adding authority to operate its previously licensed 6.3m Model VertexRSI Ku-band gateway earth station ("Vertex 6.3m") in the 11.45-11.7 GHz (space-to-Earth) band and the 13.75-14.50 GHz (Earth-to-space) band (the "extended Ku-band") while communicating with the Telstar 14R satellite. The gateway earth station is located at a facility in Houston, Texas and is used to support U.S. and international earth station on board vessel ("ESV") and remote fixed station operations. The requested modification will afford Harris CapRock additional operational flexibility and enhance its satellite communication network supporting critical maritime and offshore commercial operations.

I. Background

Presently under the license, the Vertex 6.3m is authorized to communicate with satellites on the Commission's Permitted Space Station List ("Permitted List") in the 11.7-12.2 GHz and 14.0-14.5 GHz bands. Telstar 14R (formerly Estrela do Sul 2), a Brazilian-licensed satellite located at the 63° W.L. orbital location, has previously been granted U.S. market access and is included on the Commission's Permitted Space Station List ("Permitted List").[1] Accordingly, the Vertex 6.3m can communicate with Telstar

[1] *See* Telesat Brasil, Grant of U.S. Market Access, File. No. SAT-PPL-20110112-00012 (Call Sign S2821) (granted on January 12, 2011).

14R as a point of communication in the conventional Ku-band pursuant to its Permitted List authority in the license. Harris CapRock now seeks to add the Telstar 14R as an authorized point of communication for the Vertex 6.3m gateway for extended Ku-band operations in the 11.45-11.7 GHz and 13.75-14.0 GHz bands.

Consistent with Section 25.117 of the Commission's rules, Harris CapRock provides the attached FCC Form 312 and Schedule B and associated exhibits for relevant information relating to the gateway earth station's operational characteristics in the 11.45-11.7 GHz and 13.75-14.0 GHz bands. The remaining technical information in Harris CapRock's earth station license and associated application remains unchanged.[2] Furthermore, as discussed below, Harris CapRock will comply with the Commission's rules and policies governing spectrum use of extended Ku-band frequencies for geostationary satellite orbit ("GSO") fixed-satellite service ("FSS") operations. The requested modification will serve the public interest by enhancing Harris CapRock's Ku-band satellite communication capabilities, thereby improving the critical services its provides to a wide array of users in the maritime, oil and gas industries.

II. Discussion

The United States Table of Frequency Allocations ("Table of Allocations"), Section 2.106 of the Commission's Rules, 47 C.F.R. § 2.106, identifies conditions for spectrum use by FSS in the extended Ku-band. In the 11.45-11.7 GHz downlink band, GSO FSS operations are limited to international systems, *i.e.*, other than U.S. domestic services. In the 13.75-14.0 GHz uplink band, GSO FSS operations are co-primary with U.S. government shipboard radar radiolocation and National Aeronautics and Space Administration ("NASA") Tracking and Data Relay Satellite Systems ("TDRSS") operations. As discussed below, Harris CapRock will operate the Vertex 6.3m consistent with the Table of Allocations and the Commission's policies governing use of the extended Ku-band.

a. 11.45-11.7 GHz Downlink Band

In the 11.45-11.7 GHz band, operations are co-primary with terrestrial FS and Harris CapRock's operations and use of this band by GSO FSS systems is limited to

[2] *Id.*

international systems. Harris CapRock is currently authorized to operate a gateway earth station at the same location in the extended band.[3]

Harris CapRock's proposed operations in the 11.45-11.7 GHz band are consistent with the Table of Allocations and similarly approved gateway earth station operations.[4] Harris CapRock acknowledges that this downlink frequency band is shared co-equally with terrestrial systems and coordination with fixed service ("FS") licensees is required. The 11.45-11.7 GHz band was previously coordinated at this facility by Comsearch for a similar Vertex 9.3m gateway earth station and the Comsearch database already includes full arc (21° W.L. to 143 W.L.), full extended band (11.45 GHz-12.2 GHz) coordination for this site.

No FS operations that might be potentially affected by the proposed operations with T-14R could be authorized without first coordinating with Harris CapRock's licensed extended band operations. No such coordination requests have been received. Because the proposed operations of the Vertex 6.3m will be within the site's presently coordinated parameters, the Commission may grant the requested modification application without "re-coordination" of extended downlink band operations of the Vertex 6.3m.

In addition, there is no potential for the proposed operations to cause interference to other spectrum users because they are earth station receive operations and would be the victim of interference from terrestrial transmit operations. Harris CapRock expressly accepts the potential risk of relying on the prior coordination report and future coordination with its co-located Vertex 9.3m gateway to "protect" the proposed Vertex 6.3m receive operations in this band.

Finally, Harris CapRock notes that footnote NG52 in the U.S. Table of Allocations provides that use of the 11.45-11.7 GHz band "by geostationary satellites in the fixed-satellite service (FSS) shall be limited to international systems, *i.e.*, other than

---

[3] *See* Harris CapRock, File No. SES-LIC-20031028-01500 (Call Sign E030253) (granted on January 13th, 2004).

[4] *See, e.g.*, Intelsat License LLC, File No. SES-LIC-20120106-00020, Call Sign E120009 (FCC granted Intelsat authority to operate a fixed gateway earth station in the 11.45-11.7 GHz band in Riverside, California).

domestic systems."[5] The proposed operations, which are limited to supporting gateway links for ESV terminals on foreign-flagged vessels transiting U.S. and international waters and offshore oil rigs, are consistent with the policies underlying this provision. Indeed, previously granted authority to operate at this site in this frequency band strongly supports this conclusion.

To the extent necessary, Harris CapRock requests a waiver of footnote NG52 to grant this modification application. The policies underlying the rule would not be undermined because extended Ku-band receive operations are already conducted at this site, so there would be no expansion of such operations into new areas. Furthermore, the public interest would be served by granting such a waiver, which would enable Harris CapRock to conduct limited but important gateway operations with T-14R to support the maritime and oil and gas industries.

b. 13.75-14.0 GHz Uplink Band

Harris CapRock accepts that the 13.75-14.0 GHz band is allocated to FSS Earth-to-space uplink transmissions on a co-primary basis with U.S. government shipboard radiolocation services and NASA TDRSS operations. As demonstrated in Exhibit A, Harris CapRock will operate the Vertex 6.3m earth station in the 13.75-14.0 GHz band in accordance with the Table of Allocations and FCC Report and Order 96-377[6] in order to protect U.S. government operations from harmful interference. The Commission has previously granted authority for fixed earth stations to operate in the extended 13.75-14.0 GHz transmit Ku-band and Harris CapRock proposed use of the Vertex 6.3m will be consistent with similarly approved operations.[7] Finally, Harris CapRock certifies that its proposed operations of the Vertex 6.3m are consistent with antenna size and power level

---

[5] *See* United States Table of Allocations, 47 C.F.R. § 2.106, footnote NG52.

[6] *See Amendment of Parts 2, 25 and 90 of the Commission's Rules to Allocate 13.75-14.0 GHz Band to the Fixed-Satellite Service,* Report and Order, FCC 96-377 (Rel. September 26, 1996).

[7] *See* Intelsat License LLC, File No. SES-MFS-20131111-00952 (Call Sign E000063); Globecomm License Sub LLC, File No. SES-MOD-20101014-01388 (Call Sign E020288).

requirements in footnote US356 of the Table of Allocations.[8]

Grant of the requested authority will serve the public interest by allowing the near-term use of the extended Ku-band band and ensure uninterrupted satellite communication services, thereby improving the critical services its provides to a wide array of users in the maritime, oil and gas industries.

III. Conclusion

Based on the foregoing, Harris CapRock respectfully requests that the Commission grant its application to modify its existing fixed earth station license, Call Sign E030253, by adding Telstar 14R as an authorized point of communications for the Vertex 6.3m in the 11.45-11.7 GHz band and 13.75-14.0 GHz band.

[8] United States Table of Allocations, 47 C.F.R. § 2.106, footnote US356.