Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Application of RiteNet Corp. for a	)	Call Sign: _____
Ku-band Earth Station Aboard Aircraft	)	File No. SES-LIC-_____
("ESAA") Blanket License	)	

ESAA BLANKET LICENSE APPLICATION

RiteNet Corp. ("RiteNet"), pursuant to Sections 25.115 and 25.227 of the Commission's rules,[1] respectfully seeks an earth station aboard aircraft ("ESAA") blanket license to operate up to 50 Ku-band ESAA terminals to provide intelligence, surveillance, and reconnaissance ("ISR") services supporting United States Government ("USG") security operations. RiteNet seeks to operate the subject terminals – the Skytech Model BB45 ("BB45") – in the 14.0-14.5 GHz (Earth-to-space)[2] and 10.95-11.2 GHz, 11.45-11.7 GHz and 11.7-12.2 GHz (space-to-Earth) bands to deliver immediate, mission-critical ISR support for USG customers. Grant of the requested authority is consistent with Commission rules governing ESAA operations,[3] will serve the public interest by enhancing competition in the in-flight connectivity market, and will further enhance U.S. leadership in satellite-based, mobile broadband services.

---

[1] 47 C.F.R. §§ 25.115 and 25.227

[2] RiteNet will coordinate operations in the 14.0-14.2 GHz bands with potentially affected NASA TDRSS facilities, as well as operations in the 14.47-14.5 GHz band with potentially affected radioastronomy operations, before operating in these bands within the exclusion zones specified in the Commission rules. *See* 47 C.F.R. § 25.227(c) and (d).

[3] 47 C.F.R. § 25.227.

I. BACKGROUND

RiteNet provides diverse satellite communications services for USG customers[4] and seeks a blanket license to operate the BB45 Ku-band ESAA terminal with U.S.-licensed and foreign-licensed geostationary satellite orbit ("GSO") fixed-satellite service ("FSS") satellites authorized by the Commission. The Commission recently licensed use of the BB45 terminals, and RiteNet's proposed operations will be consistent with the technical parameters authorized in the recently granted ESAA license.[5]

RiteNet is concurrently filing a request for a 60-day special temporary authorization ("STA") enabling operation of the BB45 terminal on the RiteNet network to provide immediate mission support to its USG customers in advance of potential grant of this ESAA blanket license application. This narrative and the technical information included with the present application, establish compliance with the Commission's ESAA rules and the pressing need for both short-term STA and long-term commercial operating authority. As discussed herein, grant of this application and the associated STA request will allow RiteNet to provide immediate and long-term support for important national security missions, including Department of Homeland Security - U.S. Customs and Border Protection ("CBP") operations.

II. DISCUSSION

RiteNet's ESAA system will consist of three segments: (i) ESAA Segment, (ii) Space Segment, and (iii) Ground Segment. The ESAA Segment consists of BB45 ESAA terminals mounted on USG customer aircraft. The Space Segment consists of U.S.-licensed satellites and

[4] Additional information about RiteNet and its services, including current USG contract vehicles, can be found at www.ritenet.com.

[5] *See UltiSat Inc.*, File No. SES-LIC-20180726-02089 (granted Nov. 21, 2018).

non-U.S. licensed satellites on the Commission's Permitted Space Station List ("Permitted List"). The Ground Segment consists of third-party teleport antennas which provide uplink and downlink connectivity (currently via iDirect hubs). The ESAA network is controlled through RiteNet's Network Operations Center in Herndon, Virginia. The following sections describe RiteNet's proposed ESAA operations in detail.

A. ESAA Segment

The BB45 terminal is a Ku-band stabilized antenna system that provides broadband satellite communications for aeronautical applications. The antenna is mechanically steerable and is intended for tail or fuselage-mounting. RiteNet seeks to operate the BB45 ESAA terminal on certain CBP aircraft for mission-critical ISR applications in U.S. and international airspace, and in foreign airspace subject to compliance with the regulations of any overflown nations. This blanket license will allow RiteNet to fully integrate the terminal into the RiteNet network and support long-term satellite connectivity for CBP operations.

At all times, RiteNet will operate the BB45 terminal within the off-axis EIRP spectral density ("ESD") limits set forth in Section 25.227 of the Commission's rules. Because RiteNet will operate the BB45 terminal at off-axis ESD levels that are compliant with the Commission's two-degree spacing policy, it will protect adjacent satellite operations from harmful interference.[6] In addition, the BB45 terminal fully meets the pointing accuracy requirements of Section 25.227(a)(1)(ii)(A) with a pointing accuracy of less than or equal to 0.2° between the orbital location of the target satellite and the axis of the main lobe of the ESAA antenna. In accordance with Section 25.227(a)(1)(iii)(A), the BB45 terminal design ensures that all emissions from the ESAA automatically cease within 100 milliseconds if the angle between the

[6] *See* Technical Appendix at § III (demonstrating compliance with the Commission's ESD mask).

orbital location of the target satellite and the axis of the main lobe of the ESAA antenna exceeds 0.5°, and transmission will not resume until such angle is less than or equal to 0.2°.

In Form 312 Schedule B and additional exhibits, RiteNet provides information documenting the operational characteristics of the BB45 terminal and demonstrating that it will operate in compliance with the Commission's ESAA rules and policies. The BB45 terminal has operated in the United States pursuant to Commission authority without any reported interference. Thus, operation of the BB45 terminal under the proposed ESAA blanket license will not increase the potential for interference to other lawfully operating spectrum users.

B. Space Segment

RiteNet seeks authority to operate the BB45 terminal with any U.S.-licensed satellite and non-U.S. licensed satellite on the Permitted List.[7] Permitted List authority is appropriate here because RiteNet will operate the ESAA terminal at all times within the relevant off-axis ESD limits in Section 25.227(a)(1) of the Commission's rules, which are consistent with two-degree spacing levels. Accordingly, there is no potential for interference into adjacent GSO FSS satellite operations.[8]

The operating parameters of Permitted List satellites have been previously reviewed and approved by the Commission, and will support RiteNet's operations throughout U.S., foreign, and international airspace for USG national security projects. The frequencies requested in this

[7] RiteNet respectfully reserves the right to supplement this ESAA application with specific satellite and frequency information, to the extent available, if deemed necessary by the Commission.

[8] *See* 47 C.F.R. § 25.227(a)(12). To the extent RiteNet seeks to operate with any particular satellite at power levels above two-degree spacing levels, it will apply to add that satellite as an individual satellite point of communication with supporting information relating to the coordination status of such higher-power operations.

application are available for Permitted List operations.[9] Notional coverage maps for RiteNet's ESAA system are included herein.[10]

C. Ground Segment

RiteNet will use only approved gateway earth stations to communicate with the Ku-band FSS satellites that support its ESAA system. Because RiteNet seeks Permitted List authority and a range of gateways may be utilized to communicate with each of these satellites, RiteNet is not including a definitive gateway-satellite list in this application.[11] At this time, however, RiteNet only seeks to utilize gateway earth stations located in the United States.

RiteNet will maintain control of all transmissions and will cease transmissions immediately upon request of the satellite operator or other notice of potential interference. The RiteNet point of contact with control over the proposed ESAA operations is:

RiteNet Network Operations Center
13665 Dulles Technology Drive, Suite 300
Herndon, VA 20171
Tel: 1-866-830-7610 and +1-703-391-9970
E-Mail: noc@artelllc.com

24/7 Emergency Contact:
XT Vuong
Tel: +1-703-371-5386
E-Mail: xvuong@artelllc.com

RiteNet's U.S.-based network control facility is consistent with Commission requirements for control of Ku-band mobility operations.[12]

---

[9] *See* 47 C.F.R. § 25.115(k)(1).

[10] *See* Technical Appendix at § I.

[11] RiteNet respectfully reserves the right to supplement this ESAA application with specific gateway information, to the extent available, if deemed necessary by the Commission.

[12] *See, e.g.*, 47 C.F.R. §25.227(a)(5).

D. Public Interest Considerations

RiteNet requests an ESAA blanket license to support critical USG national security and border protection operations. In this application – including this narrative, FCC Form 312 and Schedule B, the Technical Appendix, and related information – RiteNet has demonstrated compliance with Section 25.227 of the Commission's rules governing ESAA operations. RiteNet will further demonstrate compliance through interference-free operations under the concurrently filed *60-Day STA* authority. The compliant operational characteristics of the BB45 have also been demonstrated pursuant to authority previously granted by the Commission.

RiteNet's proposed operations will serve the public interest by permitting long-term support for USG national security and border protection missions. In addition, grant of the requested authority will permit RiteNet and its USG partners to fully transition BB45 operations to the RiteNet network, and allow integration of its service and equipment with long-term USG missions. This will serve the public interest by facilitating RiteNet's ability to provide advanced, versatile, and easily deployable ESAA terminal solutions for USG entities to the benefit of the U.S. public.

III. CONCLUSION

In view of the foregoing, including compliance with the Commission's ESAA rules, as well as RiteNet's operating under technical parameters identical to those allowed by the Commission in a previous authorization, the public interest would be served by a grant of the requested blanket ESAA license at the earliest practicable time to allow RiteNet to operate the BB45 terminal in support of its USG customers.