

REQUEST FOR LIMITED WAIVER OF THE COMMISSION'S REQUIREMENTS

O3b Limited (“O3b”) hereby requests a limited waiver of the Commission’s requirements, to the extent needed and on the terms described below, to conduct tests and demonstrations with earth stations on vessels (“ESVs”) on two foreign-flagged ships operated by Royal Caribbean – the Allure of the Seas and the Oasis of the Seas – before commercial operations begin. O3b asks that the waiver cover the six-month period commencing on December 1, 2013; expedited processing of this filing is respectfully requested.

O3b has filed an application requesting a license to operate up to one hundred 2.2m and one hundred 1.2m ESVs on U.S.-flagged ships.¹ The ESVs will communicate with O3b’s non-geostationary orbit (“NGSO”) Fixed-Satellite Service (“FSS”) system.²

For statutory reasons, the Commission does not license ESVs that transmit from foreign-flagged ships.³ The Commission requires, however, that ESVs on foreign-flagged ships not cause harmful interference to FCC-licensed radio stations when the foreign-flagged ships are located in US waters.⁴ In keeping with this requirement, O3b demonstrated in the O3b ESV License Application that its ESVs on foreign-flagged ships, like its ESVs on U.S.-flagged ships, will protect other FCC-licensed stations.⁵

Prior to initiating commercial ESV service, O3b intends to engage in tests and demonstrations of its ESVs (the “Tests”) on the Allure of the Seas and the Oasis of the Seas, which are foreign-flagged; each ship will have three ESVs. O3b holds licenses from the Utilities Regulation and Competition Authority of the Bahamas to operate the ESVs on these two ships.

For a portion of the time that the Tests are conducted, the Allure of the Seas and the Oasis of the Seas will be located in U.S. waters. O3b is not seeking an FCC license or special temporary authorization for the Tests because, as discussed above, the Commission does not issue such authorizations for ESVs that are located on foreign-

¹ See File No. SES-LIC-20130528-00455 (the “O3b ESV License Application”). As used in this filing, the term “ships” includes all types of vessels that ESVs are permitted to serve.

² In September 2012, the Commission granted O3b a license to operate one of the gateways for this system in Haleiwa, Hawaii. See FCC File No. SES-LIC-20100723-00952 (granted September 25, 2012). In June 2013, the Commission granted O3b a license to operate a second gateway, which is located in Vernon, Texas. See FCC File No. SES-LIC-20130124-00089 (granted June 20, 2013).

³ “Section 306 of the Communications Act provides that the Commission does not have the authority to license radio stations, such as ESVs, on vessels registered by foreign administrations (foreign-registered vessels).” *In the Matter of Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in the 5925-6425 MHz/3700-4200 MHz Bands and 14.0-14.5 GHz/11.7-12.2 GHz Bands*, 20 FCC Rcd 674, ¶ 122 (2004) (footnote omitted)(“*ESV R&O*”).

⁴ *Id.*, ¶¶ 122-126.

⁵ O3b ESV License Application, Narrative, Sections II.E and II.F.

flagged ships. O3b, however, arguably requires a waiver of certain Commission requirements in order to conduct the Tests in U.S. territorial waters. Out of an abundance of caution, O3b hereby requests these waivers.

The waivers concern the Commission's allocation for the frequencies on which O3b's Tests will be conducted. During the Tests, O3b's ESVs will transmit on frequencies in the 28.6-29.1 GHz band and will receive on frequencies in the 18.8-19.3 GHz band. The Commission's Table of Allocations and Ka-band frequency plan provide that the 28.6-29.1 and 18.8-19.3 GHz bands may be used by NGSO FSS systems such as O3b's system on a primary basis.⁶ The Table of Allocations and Ka-band frequency plan, however, make no provision for using NGSO FSS systems to communicate with earth stations on mobile platforms such as ships. To the extent necessary, therefore, O3b requests a waiver of the Table of Allocations and the Ka-band frequency plan so that O3b's NGSO FSS system may communicate with its ESVs on the Allure of the Seas and the Oasis of the Seas during the Tests. O3b acknowledges that grant of this waiver will be without prejudice to Commission action on the O3b ESV License Application.⁷

O3b's waiver request is supported by good cause. The Commission has recognized the many benefits associated with ESVs. Making ESVs available, it has found, "advances the Commission's goals and objectives for market-driven deployment of broadband technologies," which "are becoming a fundamental component of modern communications."⁸ The Commission also determined that the "maritime market for broadband via satellite-based communications continues to expand," and that ESVs make it possible to "deploy increasingly innovative broadband services ... to businesses and consumers on the high seas, coastlines, and inland waterways."⁹

Grant of O3b's waiver request will advance these important objectives by facilitating Tests that will enable O3b to evaluate equipment performance and customer acceptability and that, if successful, will lead to an expansion of the supply of maritime broadband services. The Tests are a precursor to commercial ESV operations in which O3b will offer faster connectivity at lower cost and with reduced latency. O3b's maritime services will also increase downward pressure on prices and foster innovation,

⁶ *In the Matter of Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 11 FCC Rcd. 19005, ¶¶59-62 and 79 (1996). See also *In the Matter of Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use*, 15 FCC Rcd 13430, ¶ 28 (2000).

⁷ This waiver request has been associated in IBFS with the file number for the O3b ESV License Application so that there would be a mechanism for submitting the waiver request electronically. The waiver request, however, is independent of the O3b ESV License Application, and O3b respectfully requests that the two filings be processed separately.

⁸ *ESV R&O*, 20 FCC Rcd 674, ¶ 4 (2004).

⁹ *Id.*

all of which will redound to the benefit of maritime consumers and shipboard crew welfare. By any reasonable measure, therefore, grant of O3b's waiver request is in the public interest.

O3b's waiver request, moreover, presents no interference concerns. The technical characteristics of O3b's ESV operations will be identical to the technical characteristics, which O3b hereby incorporates by reference,¹⁰ of the operations proposed in the O3b ESV License Application. O3b demonstrated in the O3b ESV License Application that these technical characteristics protect satellite and terrestrial services. Satellite and terrestrial services, therefore, will be protected during the Tests.

Avoidance of interference to GSO FSS systems.¹¹ As shown in the O3b ESV License Application, there always will be an off-axis discrimination of more than 2.6° between GSO orbits and O3b's NGSO orbit as viewed from O3b's ESV terminals. In addition, the uplink and downlink power density levels of O3b's ESVs will be within the limits specified in Section 25.138 of the rules for blanket licensing of GSO FSS earth stations. These factors ensure that GSO FSS systems will be adequately protected.

Avoidance of interference to or from Fixed Service (*i.e.*, terrestrial) stations.¹²

28 GHz band (ESV uplink frequencies). There is no allocation in the Commission's Ka-band Band Plan for Fixed Service stations operating in the 28.6-29.1 GHz band in the United States.¹³

18 GHz band (ESV downlink frequencies). Fixed Service stations in the United States operating in the 18.8-19.3 GHz band are no longer co-primary with FSS users in this band.¹⁴ Nevertheless, O3b agrees to accept any interference that its ESVs, during the Tests, may receive from U.S.-based 18.8-19.3 GHz band Fixed Service stations, and O3b will protect the 18.8-19.3 GHz band fixed service stations by complying with the space station PFD limits specified in Section 25.208 of the rules.¹⁵

¹⁰ See generally O3b ESV License Application, FCC Form 312 (Schedule B) and Narrative, Attachment A.

¹¹ See O3b ESV License Application, Narrative, Section II.F.1.

¹² See O3b ESV License Application, Narrative, Section II.F.2.

¹³ See *In the Matter of Verizon Washington D.C., Application for Renewal of License for Common Carrier Fixed Point to Point Microwave Station KGC79*, 26 FCC Rcd 13511, 13516 (WTB 2011).

¹⁴ See 47 C.F.R. § 101.85(b)(2).

¹⁵ During the Tests, O3b also will abide by the commitments it made in the O3b ESV License Application that: (i) there will be a pointing error of less than 0.2° between the orbital location of the target satellite and the axis of the main lobe of each ESV antenna; and (ii) emissions from each ESV will cease automatically within 100 milliseconds if the angle between the orbital location of the target satellite and the axis of the main lobe of the ESV antenna exceeds 0.5°, and transmissions will not resume until the angle is less than 0.2°. See O3b ESV License Application, Narrative, Section II.H. These commitments give the Commission added assurance that O3b's ESV operations can co-exist with other services during the Tests.

CONCLUSION

Accordingly, and for good cause shown, O3b's request for a limited waiver of the Commission's requirements, to the extent required, during the six-month period commencing on December 1, 2013, should be granted.

Respectfully submitted,

O3b Limited

By: /s/Joslyn Read
Joslyn Read
Vice President, Regulatory Affairs
for O3b Limited
900 17th Street NW, Suite 300
Washington DC 20006

November 1, 2013

OF COUNSEL:

Joseph A. Godles
GOLDBERG, GODLES, WIENER
& WRIGHT, LLP
1229 Nineteenth Street, N.W.
Washington, DC 20036
(202) 429-4900