

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of

Application of Speedcast LATAM, Inc. to	)	Call Sign: E050018
Modify its Fixed Earth Station License by	)	
Adding Extended Ku-band Frequencies	)	File No. SES-MOD-_____
	)	

**APPLICATION TO MODIFY FIXED EARTH STATION LICENSE**

Pursuant to Section 25.117 of the rules of the Federal Communications Commission (the “FCC” or “Commission”),<sup>1</sup> Speedcast LATAM, Inc. (“Speedcast”) respectfully files this application to modify its existing fixed earth station license, Call Sign E050018, to add the 11.45-11.70 GHz (space-to-Earth) and 13.75-14.0 GHz (Earth-to-Space) frequency bands (together, the “extended Ku-band”) to its licensed ASC Signal 5.6m antenna to communicate with the Eutelsat 117 West B satellite.<sup>2</sup> Speedcast does not seek to modify any other technical or carrier parameters related to its operations under Call Sign E050018. Expedient grant of this modification will accelerate Speedcast’s initiative to improve the quality of service for diverse U.S. customers and commercial activities and is therefore consistent with the public interest.

**I. DISCUSSION**

**A. Operational Parameters**

This proposed modification seeks to add the extended Ku-band to those frequencies already licensed for the ASC Signal 5.6m antenna. Speedcast affirms that operations of the ASC Signal 5.6m antenna in the 11.45-11.7 GHz band are limited to communications with earth

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<sup>1</sup> 47 C.F.R. § 25.117.

<sup>2</sup> See Speedcast LATAM, Inc., Radio Station Authorization, File No. SES-MOD-20210628-00993, Call Sign E050018 (granted August 9, 2021) (“Miami Teleport License”).

stations outside of the United States.<sup>3</sup> Planned service for this link is in South America, with future operations with earth stations in the Gulf of Mexico, among other international locations. Accordingly, the proposed earth station receive operations in the 11.45-11.7 GHz band are for an international system, consistent with the Commission's rules and precedent.<sup>4</sup>

Under Speedcast's current license, operations in the 13.75-14.0 GHz band are already authorized at its Miami teleport facility.<sup>5</sup> As discussed below, Speedcast will operate well below the previously authorized power levels. Speedcast's operations are also consistent with Commission rules applicable to the band<sup>6</sup> and prior licensing precedent.<sup>7</sup> In addition, the antenna input power is more than 10 dB below the -14 dBW/4 kHz level specified in the Commission's rules for routine licensing of Ku-band earth stations.<sup>8</sup>

#### **B. No Potential Interference Impact to Co-Frequency Operations**

Speedcast's proposed operations are compatible with U.S. Navy and NASA systems and co-frequency terrestrial microwave operations. Speedcast previously provided an analysis for the 13.75-14.0 GHz band at the Miami teleport facility in compliance with FCC Report and Order (FCC 96-377) which demonstrated no impact to NASA's Tracking and Data Relay

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<sup>3</sup> See 47 C.F.R. § 2.106, n. NG52 (restricting the use of the 11.45-11.7 GHz bands by the non-federal fixed satellite service in the geostationary orbit to international systems only).

<sup>4</sup> See, e.g., NBC Telemundo License LLC, File No. SES-LIC-20180601-01012, Call Sign E180569 (grant July 30, 2018) ("*NBC License*") (granting authorization for a Miami, FL earth station to receive in the 11.45-11.7 GHz bands among others from space stations on the permitted list and conditioning such grant consistent with 47 C.F.R. § 2.106, n. NG52).

<sup>5</sup> See Speedcast LATAM, Inc., File No. SES-MFS-20100430-00497, Call Sign E050018 (granted February 4, 2011) ("*Extended Ku-band Modification*") (authorizing use of extended Ku-band frequencies).

<sup>6</sup> See 47 C.F.R. § 25.204(e)(2) ("[a]n FSS earth station transmitting to a geostationary space station in the 13.77-13.78 GHz band must not generate more than 71 dBW EIRP in any 6 MHz band").

<sup>7</sup> See, e.g., Globecom License Sub LLC, File No. SES-MOD-20101014-01388, Call Sign E020288 (granted April 14, 2011) (authorizing operations from a 5.6m antenna in the 13.75-14.0 GHz band).

<sup>8</sup> 47 C.F.R. § 25.212(c).

Satellite System (“TDRSS”) and the U.S. Navy radar operations.<sup>9</sup> No cases of interference have been reported since Speedcast commenced operations in the 13.75-14.0 GHz band a decade ago.

With respect to Navy radars, the maximum EIRP density towards the horizon in this modification is approximately 22 dB *lower* than what was already authorized by the Commission.<sup>10</sup> In addition, higher-power communications in the band were with the Amazonas-2 satellite at the 61° W.L. orbit location (eastward over the Atlantic) but are proposed with the Eutelsat 117 West B satellite at 117° W.L., resulting in a westward azimuth away from the coastline that further diminishes the potential impact on Navy radars. And, of course, Navy radar transmissions will be significantly higher power than the proposed earth station transmissions, which mitigates the risk of interference even further.

With respect to TDRSS, the geographic location of the of the Miami teleport facility is well outside the 390 km radius coordination contour surrounding NASA’s White Sands, New Mexico ground station complex mitigating any impact from the proposed operations.<sup>11</sup> In addition, because the transmit power levels are approximately 22 dB *lower* than what was already authorized by the Commission, the proposed earth station uplinks will have no interference impact on TDRSS operations.

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<sup>9</sup> See *Extended Ku-band Modification*, Exhibit B (13.75 - 14.0 GHz Band Analysis and Calculations). Speedcast hereby incorporates this analysis by reference to the extent necessary to grant this modification.

<sup>10</sup> See Form 312, Schedule B (max EIRP density towards the horizon of -32.61 dBW/4kHz); *see also* *Extended Ku-band Modification* (max EIRP density towards the horizon of -10.47 dBW/4kHz).

<sup>11</sup> The TDRSS space-to-space link in the 13.772 to 13.778 GHz band is assumed to be protected if an earth station produces an EIRP less than 71 dBW/6 MHz in this band. The maximum EIRP for the 36 MHz carriers is 71.93 dBW, and the equivalent EIRP per 6 MHz segment for a 36 MHz carrier is 64.1 dBW/6 MHz. The maximum EIRP for the 9 MHz carriers will be 64.04 dBW. Therefore, those 9 MHz carriers will also meet the 71 dBW/6 MHz criteria.

Finally, Speedcast's receive-only operations in the 11.45-11.7 GHz band are consistent with similar operations that have been authorized in close proximity to the Miami teleport facility.<sup>12</sup> Accordingly, there is no potential for interference from the proposed earth station receive operations in the 11.45-11.70 GHz frequency band.

### **C. Waiver Request**

Speedcast respectfully requests a limited waiver of Section 25.204(f) which requires earth stations in the fixed-satellite service transmitting in the 13.75-14 GHz band to have a minimum antenna diameter of 4.5 m, and the EIRP of any emission in that band should be at least 68 dBW and should not exceed 85 dBW.<sup>13</sup> Speedcast seeks to transmit emissions with EIRP levels below 68 dBW and therefore seeks a waiver of the rule to the extent necessary to permit its proposed operations.

Speedcast understands that the minimum power provision in Section 25.204(f) (and current ITU Radio Regulation 5.502) are a vestige of a prior version of 5.502 that addressed potential constraints on radar systems.<sup>14</sup> Removal of such language from applicable regulations, as well as prior waivers of the rule, confirm that no such constraints have materialized and the minimum power provision need not be strictly enforced.

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<sup>12</sup> See, e.g., *NBC License* (authorizing extended Ku-band operations at an earth station located approximately 1 km away from the Miami teleport facility).

<sup>13</sup> See 47 C.F.R. § 25.204(f).

<sup>14</sup> See prior version of ITU Radio Regulation, n. 5.502 ("In the band 13.75-14 GHz, an earth station in the fixed-satellite service shall have a minimum antenna diameter of 4.5 m and the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. In addition the e.i.r.p., averaged over one second, radiated by a station in the radiolocation or radionavigation services shall not exceed 59 dBW. *The protection of assignments to receiving space stations in the fixed-satellite service operating with earth stations that individually have an e.i.r.p. of less than 68 dBW shall not impose constraints on the operation of the radiolocation and radionavigation stations operating in accordance with the Radio Regulations....*") (emphasis added).

The Commission previously granted Speedcast a waiver of this rule under analogous circumstances and Speedcast hereby incorporates its prior request by reference.<sup>15</sup> Accordingly, good cause exists to waive the rule and grant a license modification to enable Speedcast to transmit in the 13.75-14.0 GHz band using a second earth station at the Miami teleport facility with EIRP levels below 68 dBW.

## **II. PUBLIC INTEREST CONSIDERATIONS**

The additional frequencies requested in this modification will serve the public interest by allowing Speedcast to more efficiently restructure its ground station operations by upgrading certain facilities, which will improve the overall quality of service provided to its diverse customer base. This, in turn, will further facilitate improved satellite services to companies and personnel that rely on satellite connectivity for critical operational and employee support at remote locations that may be unable to obtain communications services through alternative means.

## **III. CONCLUSION**

Based on the foregoing, Speedcast respectfully requests that the Commission grant this modification application to add extended Ku-band frequencies to the ASC Signal 5.6m antenna to communicate with the Eutelsat 117 West B satellite.

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<sup>15</sup> See *Extended Ku-band Modification*, Exhibit C (requesting a waiver of Section 25.204(f)); See also *id.*, grant at 6 (“operations in the 13.75-14.0 GHz band below 68 dBW (Footnote US356 of the Table of Frequency Allocations) are permitted on an unprotected basis”).