

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

In the Matter of

Application of SpeedCast Communications) Call Sign E060157
Inc. to Modify its Existing Ku-band Earth)
Stations Onboard Vessel (“ESV”) Blanket) File No. _____
License)

APPLICATION TO MODIFY ESV BLANKET LICENSE

By this application, SpeedCast Communications Inc. (“SpeedCast”) seeks Commission authority to modify its existing earth stations onboard vessel (“ESV”) blanket license, Call Sign E060157,¹ by adding authority to operate up to 1,000 new ESV terminals – the Kymeta Corporation (“Kymeta”) KyWay-1 mobile terminal – in the 14.0-14.5 GHz (Earth-to-space), 10.95-11.2 GHz (space-to-Earth), 11.45-11.7 GHz (space-to-Earth) and 11.7-12.2 GHz bands (space-to-Earth). The KyWay-1 terminal will enhance SpeedCast’s authorized ESV network and improve its ability to provide essential satellite communications services to vessels in motion unable to obtain other forms of broadband connectivity.

The KyWay-1 terminal has been licensed by the Commission for similar ESV and vehicle-mounted earth station (“VMES”) operations² and SpeedCast will operate the terminal consistent with the operating parameters and power levels previously approved by the Commission. Moreover, SpeedCast will operate the KyWay-1 terminal in accordance with the terms of its *ESV Blanket License* and Section 25.222 of the Commission’s Rules, 47 C.F.R. § 25.222, governing Ku-band ESV operations. As discussed herein, grant of this modification

¹ See SpeedCast Communications Inc., File No. SES-MFS-20161006-00829, Call Sign E060157 (“*ESV Blanket License*”).

² See Kymeta Corporation, File Nos. SES-LIC-20170223-00195, SES-AMD-20170330-00345 & SES-AMD-20170614-00647, Call Sign E170070 (“*Kymeta ESV/VMES Blanket License*”).

application is consistent with Commission precedent and will serve the public interest.

I. DISCUSSION

SpeedCast is a global provider of satellite-based communication services that delivers critical satellite connectivity solutions for customers engaged in diverse operations throughout the world, including maritime operations in and around the United States. In addition to the subject *ESV Blanket License*, which includes authority to operate numerous ESV terminal types in the C-band, Ku-band and Ka-band, SpeedCast holds several other earth station licenses to support its ongoing operations.³

Consistent with Section 25.117 of the Commission's rules, 47 C.F.R. § 25.117, SpeedCast provides the FCC Form 312 Schedule B for relevant information relating to the operating parameters of the KyWay-1 terminal. SpeedCast incorporates by reference the information previously provided Kymeta Corporation in support of *Kymeta ESV/VMES Blanket License*, which provides a detailed description of the KyWay-1 terminal, off-axis EIRP spectral density ("ESD") plots at various frequencies and skew angles, and a radiation hazard analysis.⁴

The KyWay-1 is an electronically steered, flat-panel antenna that is lighter, more efficient, and less expensive as compared to traditional satellite antenna technologies. In ESV applications, the antenna will typically be mounted on a platform or surface at or near the highest point of the vessel. SpeedCast will operate the KyWay-1 terminal consistent with the requirements set forth in Section 25.222 of the Commission's rules, 47 C.F.R. § 25.222, including compliance with the Commission's two-degree spacing levels embodied in the off-axis ESD masks in Section

³ See, e.g., SpeedCast Communications Inc., File No. SES-LIC-20100920-01196, Call Sign E100026; File No. SES-MOD-20151210-00928, Call Sign E090176.

⁴ *Supra* n.2, Technical Appendix.

25.222(a)(1)(i). SpeedCast seeks authority to communicate with any U.S.-licensed or non-U.S. licensed satellite on the Commission's Permitted Space Station List.⁵

Interference will be avoided principally by controlling off-axis ESD of emissions along the GSO arc to protect adjacent satellite operations. Off-axis ESD is managed on an individual terminal basis and management of aggregate emissions is not required because terminals only transmit in individual time slots and frequencies. Moreover, in addition to complying with the Commission's two-degree spacing policies, the KyWay-1 terminal has a pointing accuracy of 0.2° or greater and will automatically cease transmissions if point offset exceeds 0.5° or greater. Thus, grant of this modification application to operate the KyWay-1 terminal will not increase the potential for interference from SpeedCast's authorized ESV operations in the United States.

SpeedCast will not operate the KyWay-1 terminal: (i) in the 14.0-14.2 GHz band within 125 km of the NASA TDRSS facilities in Guam, White Sands, New Mexico and Blossom Point, Maryland; or (ii) in the 14.47-14.5 GHz band within 45 km of the radio observatory in St. Croix, Virgin Islands or Mauna Kea, Hawaii or within 90 km of the Arecibo Observatory in Puerto Rico, without first coordinating with the National Telecommunications Information Administration ("NTIA") through NASA and the National Science Foundation, respectively.⁶

II. PUBLIC INTEREST STATEMENT

Grant of this application will serve the public interest by allowing SpeedCast to introduce a next-generation ESV terminal alternative for its customers using SpeedCast's network throughout U.S. and international waterways. Addition of the new ESV terminal will also help SpeedCast deliver more expansive broadband satellite services to a wide array of users in

⁵ See 47 C.F.R. § 25.222(b)(7).

⁶ See 47 C.F.R. §§ 25.222(c) & (d); *see also* Public Notice, DA 14-992 (July 11, 2014).

offshore locations, including commercial vessels, private yachts and other in-motion maritime users, that may be unable to obtain communications services through alternative facilities. SpeedCast's customers will be able to utilize high-speed Internet access, e-mail, voice and data services, including important emergency communications. Moreover, because the KyWay-1 terminal is lighter-weight and lower-cost, it will strengthen the demand for maritime connectivity services in the United States and enhance prospects for long-term success of commercial ESV operations.

III. CONCLUSION

Based on the foregoing, SpeedCast respectfully requests that the Commission modify its *ESV Blanket License*, Call Sign E060157, by adding the KyWay-1 terminal for Ku-band operations with Permitted List satellites.