

December 14, 2020

BY ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: *Ex Parte* Notification for IBFS File No. SAT-LOA-20200914-00108

Dear Ms. Dortch:

During the period between December 1 and December 11, 2020, Dan Connors of Capella Space Corp. communicated with Merissa Velez and/or Jay Whaley of the Commission's International Bureau, Satellite Division by email or telephone to inquire regarding the procedural status of Capella's pending application to authorize a constellation of satellites under its small-satellite rules offering space-based imagery using Synthetic Aperture Radar ("SAR") technology and to provide updates regarding Capella's upcoming integration and launch schedule. On Friday, December 11, Mr. Connors and Ms. Velez also discussed the December 3, 2020 filing submitted by Dr. Brian Kopp¹ regarding Capella's pending application.²

In his letter, Dr. Kopp encourages the Commission to consider certain hypothetical interference scenarios that could arise from Capella's use of the L Band for satellite-to-satellite communications. We agree with Dr. Kopp about the importance of protecting existing systems, including Global Navigation Satellite System ("GNSS") and NOAA GOES operations in the L Band. In this case, the record and the FCC's interagency review process ensure that other spectrum users—including those Dr. Kopp identifies—will be protected from interference.³

¹ See Letter from Brian Kopp, Ph.D., to the FCC International Bureau, File No. SAT-LOA-20200914-00108 (filed Dec. 3, 2020) ("Kopp Letter").

² See *Application of Capella Space Corp. for Authority to Launch and Operate a Non-Geostationary Orbit Satellite System in the Earth Exploration Satellite Service*, File No. SAT-LOA-20200914-00108 (filed Sep. 14, 2020) ("Capella Application").

³ The FCC's licensing process already ensures that Capella's application is reviewed by the federal operators of the services that Dr. Kopp highlights, including the NOAA GOES service, as well as the U.S. Air Force and other federal GNSS users. Indeed, Capella has been engaged in active coordination with these and other federal agencies from the very beginning of the licensing process for the Capella system.

It is important to emphasize that Dr. Kopp’s argument does not present a concrete analysis that identifies any actual risk of interference. Rather, Dr. Kopp simply identifies certain theoretical scenarios that interested parties should consider. The only party to have performed a concrete analysis of the interference risk to its systems, Iridium, has concluded that Capella “would not cause harmful interference to Iridium’s service links.”⁴ Notably, Capella generally will have significant spectral separation from the systems Dr. Kopp identifies in his letter. For example, as Dr. Kopp acknowledges, “the lower end of the frequency band used by [NOAA GOES] applications is 1679.7 MHz,”⁵ which is nearly 20 MHz higher than the highest L Band frequency Capella proposes to use. Likewise, the upper end of the frequency range used by L Band GNSS operations is 1610 MHz, 16.5 MHz below the lowest frequency at which Capella proposes to transmit.⁶ Moreover, Capella already engages in satellite-to-satellite communications identical to those proposed in its license application pursuant to an experimental license—an important factor that Dr. Kopp’s letter does not appear to acknowledge. Like the pending application, Capella’s experimental license was reviewed by and coordinated with all potentially affected federal agencies. These operations have not resulted in any reports of harmful interference.⁷

Finally, Dr. Kopp suggests that the Commission must address the potential for interference from the “hundreds or perhaps thousands of satellites that may follow if [Capella’s requested] waiver is approved.”⁸ But there is no need to address this hypothetical situation in the context of Capella’s application, because granting Capella’s requested waiver would not open the floodgates to the hundreds or thousands of satellites that Dr. Kopp describes. To be clear, Capella requests authority to operate a small number of micro-satellites. Thus, in addition to the technical considerations described above, Capella anticipates that any grant of Capella’s waiver will reflect the fact that Capella’s proposed operations are very limited. Indeed, the Commission’s Small Satellite Order explicitly recognizes this factor in permitting small-satellite applicants to seek waivers of the FCC’s Table of Allocations while prohibiting such requests for larger systems.⁹ Thus, a grant of Capella’s requested waiver would in no way form Commission precedent requiring authorization of thousands of L Band inter-satellite links. On the contrary, an application for hundreds or thousands of satellites with L Band inter-satellite links would appear to be flatly precluded by the Commission’s current interpretation of the ITU Table of Frequency

⁴ Comments of Iridium Constellation LLC at 2, File No. SAT-LOA-20200914-00108 (filed Nov. 9, 2020).

⁵ Kopp Letter at 1.

⁶ See 47 C.F.R. § 2.106 (listing the 1559-1610 MHz band as the highest L Band frequency range with U.S. and international allocations for the radionavigation-satellite service).

⁷ See Capella Space Corp. Experimental Authorization, Call Sign WL2XAD (granted June 26, 2020).

⁸ Kopp Letter at 1.

⁹ *Streamlining Licensing Procedures for Small Satellites*, 34 FCC Rcd. 13077, ¶ 115 (2019). See also 47 C.F.R. § 25.112(a)(3) (requiring dismissal of applications, other than those filed under the FCC’s small satellite or small spacecraft rules, that “requests authority to operate a space station in a frequency band that is not allocated internationally for such operations under the Radio Regulations of the International Telecommunication Union”).

Allocations and its licensing rules.¹⁰ And, in any event, the Commission's review of future waiver requests could—and should—consider the number of satellites at issue in determining whether such a waiver would be in the public interest.

Sincerely,

A handwritten signature in black ink that reads "Paul Caritj". The signature is written in a cursive, flowing style with a large initial "P" and "C".

Paul Caritj
Counsel for Capella Space Corp.

¹⁰ *See id.*