

January 29, 2019

Mr. Jose P. Albuquerque
Chief, Satellite Division, International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20010

Re: *Hiber, Inc., Petition for Declaratory Ruling Access U.S. Market Using the Hiberband Low-Earth Orbit System; Call Sign S3038, IBFS File No. SAT-PDR-20180910-00069*

Dear Mr. Albuquerque:

Hiber, Inc. (“Hiber”) hereby responds to the letter dated November 20, 2018,¹ from the Satellite Division (“Division”) of the International Bureau requesting additional information regarding Hiber’s Petition for Declaratory Ruling (“PDR”) seeking U.S. market access for a non-voice, non-geostationary (“NVNG”) mobile-satellite service (“MSS”) system in the 399.9-400.05 MHz and 400.15-401 MHz frequency bands (“Hiberband® System”).² Specifically, Hiber responds below to Question Seven of the Division Letter regarding coordination of the 400.15-401 MHz band with ORBCOMM and federal government (“Federal”) satellite operations.³ Additionally, Hiber requests a further extension of time to reply to the remaining questions raised in the Division Letter regarding its orbital debris assessment.⁴

¹ See Letter from Jose P. Albuquerque, Chief, Satellite Div., Int’l Bur., FCC, to Lynne Montgomery, Wilkinson Barker Knauer, LLP, Counsel to Hiber, Inc., IBFS File No. SAT-PDR-20180910-00069, Call Sign S3038 (Nov. 20, 2018) (“Division Letter”).

² See Hiber, Inc., Petition for Declaratory Ruling to Access U.S. Market Using the Hiberband Low-Earth Orbit System, IBFS File No. SAT-PDR-20180910-00069 (Call Sign S2979) (filed Sept. 10, 2018) (“PDR”).

³ Division Letter at 2.

⁴ The reply deadline extension was granted pursuant to the Satellite Division’s grant of Hiber’s initial extension request. See Chief, Satellite Policy Branch, Satellite Division, International Bureau, *Grant Stamp*, IBFS File No. SAT-PDR-20180910-00069 (Call Sign S3038) (granted Dec. 20, 2018) (“Division

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Response to Question 7. Question 7 as posed in the Division Letter and Hiber's response are provided below.

Question 7: *Hiber notes that regarding its proposed use of the 400.15-401 MHz band, ORBCOMM, Inc. is authorized to use certain portions of this band on a primary basis. Hiber states that it "believes" it will be able to successfully coordinate with ORBCOMM. Please state what steps Hiber has taken to complete this coordination. In addition, Hiber states it is capable of coordinating with Federal satellite operations in the 400.15-401 MHz band. Please submit detailed information supporting this statement, including any steps taken to commence coordination.*

Response: Hiber has taken affirmative steps to commence coordination with both ORBCOMM and Federal satellite operators. Specifically, with respect to ORBCOMM, Hiber has contacted ORBCOMM's Vice President, Regulatory Affairs to commence coordination of Hiber's proposed spectrum utilization, including use of the 400.15-401 MHz space-to-Earth band. To date, Hiber has had several conversations with ORBCOMM, and the two parties have signed a Nondisclosure Agreement. ORBCOMM has indicated that in addition to the 400.15-401 MHz band, coordination will also be required with Hiber regarding Hiber's proposed operations in the 148-149 MHz band – which are only planned for outside of the United States. This band is extensively used worldwide by ORBCOMM for both user links and feeder links. ORBCOMM has requested that Hiber provide additional technical information, and both parties continue to work cooperatively towards completing coordination.

Hiber has commenced discussions with NTIA to ensure that its operations are fully coordinated with the relevant Federal operations including those of NASA, the Air Force Spectrum Management Office and the National Oceanic and Atmospheric Administration in the 400.15-401 MHz space-to-Earth band. As Hiber originally noted in its PDR, it believes it is capable of coordinating with Federal satellite operations in the 400.15-401 MHz band.⁵ There are several means by which Hiber can avoid interference with Federal users through coordination in this band, as illustrated below:

- The 400.15-401 MHz downlink band in the Hiberband system (which is a simplex system) is not used for customer data links; rather, it is used exclusively for network management, transmitting firmware updates and updated network maps from the satellite to the ground nodes as needed. As such, there is tremendous flexibility within the network to adjusting the timing and the frequency used for such transmissions, which

Grant Stamp"). The deadline was further extended as a result of the government shutdown. *See Impact of Potential Lapse in Funding on Commission Operations, Public Notice, DA 19-10, at 2-3 (Jan. 2, 2019).*

⁵ PDR, Technical Narrative at 8-9.

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permits a great deal of flexibility for the system to be able to coordinate with other users in this band.

- Hiber's downlink channel is approximately 100 kHz, meaning that it will require only a small sliver of the available 850 kHz in the band. Furthermore, Hiber can dynamically adjust the center frequency of transmissions as needed to select the optimal frequency within the band. This will allow Hiber to work with Federal users to ensure that Hiber's spectrum usage is, to the extent feasible, separated from Federal uses in the band.
- Hiber's satellites transmit beacons to the earth in very short (maximum 100 millisecond) bursts and only when the satellite is visible to the ground node. This short transmission time makes the chance of interference with other operators in this band exceedingly unlikely.⁶
- This flexibility of Hiber's network with respect to frequency usage and the time of transmission will easily permit Hiber to coordinate its network downlinks with Federal users such as the Department of Defense and the National Weather Service ("NWS"). For example, the NWS and other federal and military agencies operate radiosonde equipment from a number of known locations around the country.⁷ Because these systems operate on a fairly predictable schedule and from specific known locations, Hiber will be able to adjust its network management downloads by frequency and time to successfully coordinate with such users.

Request for Extension. Pursuant to 47 C.F.R. § 1.46,⁸ Hiber requests an additional thirty day extension of time to respond to the Division's remaining questions, which require an orbital debris assessment using a current version of NASA's Debris Assessment Software ("DAS"). As noted in its initial request for a 30-day extension to reply to the Division Letter,⁹ in response to Hiber's efforts to obtain the current version of the DAS, NASA informed Hiber that the clearance process to obtain the new software may take several weeks, which would prevent Hiber from meeting the original reply deadline.

⁶ The space-to-earth band may also be used on rare occasions for user-terminal firmware updates. These instances will occur very infrequently and will always be schedulable well in advance to allow for all necessary coordination with other users in the band.

⁷ Federal Government Spectrum Compendium, Federal Government Spectrum Use Reports 400.15-401 MHz, National Telecommunications and Information Association, at 5 (Dec. 1, 2015), https://www.ntia.doc.gov/files/ntia/publications/compendium/0400.15-0401.00_01DEC15.pdf.

⁸ 47 C.F.R. § 1.46.

⁹ See Letter from Lynne Montgomery, Wilkinson Barker Knauer, LLP, Counsel to Hiber, Inc., to Jose P. Albuquerque, Chief, Satellite Div., Int'l Bur., FCC, IBFS File No. SAT-PDR-20180910-00069 (Call Sign S3038) (Dec. 12, 2018); see also Division Grant Stamp.

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The circumstances here justify a further extension of time.¹⁰ Unfortunately, due to the Federal government shutdown which has impacted the operations of both the Federal Communications Commission and NASA, Hiber has not yet received the DAS and remains unable to fully respond to the Division's request. Consequently, Hiber respectfully requests that the Commission extend the deadline for Hiber's reply for thirty days, to February 28, 2019. This brief extension is expected to provide Hiber with sufficient time to conduct the necessary analyses so that it may provide a comprehensive response to the Division's questions regarding Hiber's orbital debris plan.

Conclusion. In sum, Hiber believes that it can coordinate its Hiberband operations with Federal satellite operations in the 400.15-401 MHz band. Hiber remains committed to pursuing coordination with both ORBCOMM and the Federal satellite operators. Additionally, the Satellite Division should grant Hiber's request for a further extension, until February 28, 2019, to respond to the Division's remaining questions.

Sincerely,

/s/ Lynne M. Montgomery
Lynne M. Montgomery
Counsel to Hiber, Inc.

Cc: Jose Albuquerque
Karl Kensinger
Stephen Duall
Walter Sonnenfeldt, Vice President, Regulatory Affairs, ORBCOMM

¹⁰ Hiber was unable to file this extension request at least seven days prior to the filing deadline because of the government shutdown and the unavailability of the International Bureau Filing System. Therefore, as required under Section 1.46(c) of the Commission's rules International Bureau staff has been orally notified of this extension request. 47 C.F.R. § 1.46(c).