Hiber Inc.
Experimental Authorization Application
File No. 0704-EX-CN-2018

Description of Experimental Application: Hiber Inc., a wholly owned subsidiary of Magnitude Space B.V., a corporation registered in the Netherlands ("Hiber") requests experimental authority to operate its experimental user terminals ("earth stations") for test purposes in the 399.9-400.05 MHz (Earth to-space) MHz frequency band. Hiber's earth stations consist of of highly integrated, low-power communications modems. These modem devices are designed as compact, solderable surface-mount technology modules, which can be easily integrated into Internet of Things and other devices for global delivery of sensor data. Hiber proposes to connect up to 200 earth stations in the United States to trucks, rail cars and rain sensors. The user earth stations are designed to be dormant 99 percent of the time, operating only when a satellite is overhead. At that time, the earth stations may transmit messages of up to 1400 bits in size to the satellite. The duration of each message will last no longer than approximately 400 milliseconds. This data includes the information the modem receives from sensors, the modem ID, the GPS-based location, and a timestamp.

Orbital Parameters of Hiber constellation: Hiber's earth stations will be communicating with its low-earth orbit constellation which were authorized by the Agentschap Telecom/ Radiocommunications Agency Netherlands on April 24, 2018.[1] The first two satellites in the constellation are currently slated for launch in the fourth quarter of 2018, with the first scheduled for an October launch by the Indian Space Research Organisation and the second for a November launch by SpaceX. The satellites will operate at an altitude of approximately 600 km.

Non-Interference Basis: Hiber is aware that its operations pursuant to an experimental license must be conducted on a non-interference basis.[2] Hiber will accept any harmful interference received from the operations of authorized stations and will ensure that authorized stations do not receive harmful interference from Hiber's operations. Should any harmful interference occur, Hiber recognizes that it is responsible for mitigating the interference, including ceasing operations if necessary.

[1] Hiber's space station authorization is attached to this application. The constellation will transmit to U.S. earth stations in the 400.15-401 MHz downlink band. On September 10, 2018, Hiber filed a Petition for Declaratory Ruling to access the U.S. Market with its Netherland's authorized constellation. *See* Hiber Inc., Petition for Declaratory Ruling, IBFS File No. SAT-LOI-20180910-00069, Call Sign S3038 (filed Sept. 10, 2018). The September 10 application provides the relevant technical information on Hiber's 400.15-401 MHz (space-to-Earth) operations.

[2] 47 C.F.R. § 5.84.