

EXHIBIT A

DESCRIPTION

Company:	Kepler Communications Inc.
Applicant:	Simon Molgat Laurin
Address:	196 Spadina Avenue, Unit 400, Toronto, ON, M5T 2C2, Canada
Phone:	+1 437-867-5054
Email:	regulatory@keplercommunications.com smolgatlaurin@keplercommunications.com

Pursuant to Section 5.61 of the Rules and Regulations of the Federal Communications Commission (“FCC” or “Commission”), Kepler Communications Inc. (“Kepler”) hereby requests a Special Temporary Authorization (“STA”) for operation of experimental radio services for a period of six months (beginning May 1, 2021 and continuing 180 days thereafter). Kepler currently provides fixed-satellite service (“FSS”) to terrestrial stations in the United States per the conditions of Kepler’s market access authorization granted by the Commission.¹ Building upon Kepler’s current operations, this STA is requested to authorize Kepler’s non-geostationary orbit (“NGSO”) satellite constellation to communicate with Earth Stations on Vessels (“ESV”) near the coastline of the northwestern United States. In particular, this STA is necessary to enable Kepler to conduct preparatory testing and proof-of-concept demonstrations of communications between Kepler’s satellites and the United States Research Vessel Sikuliaq (“RV Sikuliaq”, IMO: 957894). In support of the RV Sikuliaq’s mission, Kepler will demonstrate the functionality of

¹ See Kepler Communications Inc., *Petition for Declaratory Ruling to Grant Access to the U.S. Market for Kepler’s NGSO FSS System*, Order and Declaratory Ruling, FCC 18-162 (Nov. 19, 2018) (“Kepler Grant” or “Market Access Grant”).

communications with ships in motion and compatibility with Kepler’s constellation ahead of a deployment of satellite services for maritime assets in the United States.

1 DESCRIPTION OF TESTING AND EQUIPMENT

The RV Sikuliaq is an oceanographic research ship owned by the United States National Science Foundation (“NSF”). Operated by the University of Alaska Fairbanks (“UAF”), the RV Sikuliaq undertakes scientific expeditions in the coastal and open water regions of the North Pacific and Arctic Oceans. For its current expedition, the RV Sikuliaq will be travelling north to the Chuchki Sea, passing through the coastal waters of the northwestern contiguous United States and Alaska. The vessel will commence the expedition from Newport, Oregon, where it is currently at port.

Table 1 – RV Sikuliaq Location at Port

Date of Arrival	Location	Coordinates
2021.03.18	Newport, OR, USA	44.6154N, 124.0676W

Kepler will conduct preliminary communication tests between its NGSO satellites and the RV Sikuliaq while it remains stationary at port in Oregon. Kepler will subsequently support the RV Sikuliaq’s mission at sea by conducting proof-of-concept communications demonstrations with the ship in motion. Upon grant of the requested STA, Kepler’s support will substantially increase the value which can be extracted from the expedition. In particular, Kepler’s satellite communications will enable the researchers aboard the RV Sikuliaq to consistently offload large amounts of scientific data to their home institutions for data processing and receive the results of data analyses throughout the entirety of the expedition.

Communications will be operated within the 11.7-12.7 GHz and 14.0-14.5 GHz bands for downlink and uplink respectively, in alignment with the terms Kepler's Market Access Grant.² The technical characteristics of the radio-frequency links and the antenna aboard the RV Sikuliaq are provided in greater detail in *Exhibit B* to this application.

2 REGULATORY COMPLIANCE

All transmissions in the aforementioned bands will conform to the applicable power flux density and equivalent power flux density levels specified by Article 21, Article 22, and Resolution 76 of the ITU Radio Regulations. A detailed discussion of this compliance is provided in *Exhibit C* to this application. Furthermore, Kepler will conduct its communications with RV Sikuliaq on a non-interference basis, and will cease operations upon notification of harmful interference from another U.S.-licensed operator.

In accordance with 47 C.F.R. § 17.7, a notification to the FAA is *not* required for the purposes of this STA application. Kepler hereby certifies that antenna structures aboard the RV Sikuliaq will not be constructed or altered for the purposes of testing under this STA.

3 PUBLIC INTEREST STATEMENT

Kepler is currently under contract with the University of Alaska Fairbanks to assist with building further communications capabilities for the UAF. Part of this contract includes testing and demonstration of Kepler's current capabilities in conjunction with NSF-owned assets. We believe the testing enabled by this STA serves the public interest in the furtherance of U.S. national

² See Kepler Grant at 25.



Kepler Communications Inc.

196 Spadina Avenue, Suite 400

Toronto, ON Canada

M5T 2C2

scientific research objectives. Furthermore, this testing allows Kepler to refine the maturity of its network and further develop its capabilities in communicating with maritime terminals, thereby increasing the breadth of potential critical services which could be provided to the U.S. public in the future.

Respectfully submitted,

/s/ Nickolas G. Spina

Nick G. Spina

Director of Regulatory Affairs