

Space & Science Team  
Ofcom  
Riverside House  
2a Southwark Bridge Road  
London SE1 9HA

February 20<sup>th</sup>, 2024

**Re: Kepler Communications Earth Station Network License: Further Information**

Kepler Communications Inc. (“Kepler”) has submitted an application for an Earth Station Network Radio License with Ofcom. Herein, Kepler outlines further information as requested by Ofcom to support the processing and approval of its application.

**Competitive Impact of Kepler’s Operations<sup>1</sup>**

There are no risks associated with competition in the UK. In fact, Kepler’s ability to coexist with other systems will ensure that Kepler’s operations in the UK will foster competition among satellite communication service providers, encouraging constant innovation which impacts areas such as service quality improvement and cost reduction, ultimately benefiting both consumers and businesses. Kepler has successfully obtained such licenses in other countries and has proved its ability to coordinate and coexist with some established operators.<sup>2</sup> Allowing Kepler to operate in the specified frequency bands will optimize the use of spectrum by necessarily increasing capacity for the provision of FSS services across multiple providers. Facilitating such competition by permitting Kepler to operate in these bands will position the UK to support this growing market.

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<sup>1</sup> In accordance with D3 of Ofcom’s application form.

<sup>2</sup> Kepler does note that some coordination discussions are ongoing, in particular with [REDACTED].

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## **Protection of Other Services<sup>3</sup>**

Kepler's system can operate in the requested bands without causing harmful interference to or requiring additional protection from any other higher priority service duly licensed in these bands. Hereunder, Kepler identifies its ability and methods to protect particular services in cofrequency or adjacent bands.

### *I. Radioastronomy in the 10.6-10.7 GHz band*

Kepler will also protect other services operating in or adjacent to these bands including adjacent band radio astronomy (in the 10.6-10.7 GHz band). Kepler will take all practicable steps to protect radio astronomy stations from harmful interference by conducting its operations in compliance with the requirements set out by Ofcom as well as by working cooperatively with the radio astronomy community to resolve any potential interference concerns.

### *II. Geostationary satellite systems*

Kepler will protect existing Geostationary Orbit (GSO) systems. The process of protecting GSO from interference also has the effect of protecting Kepler from interference from GSO, as the method is based on avoidance of inline and near-inline events. Protection of GSO is achieved by avoiding transmissions from the Kepler satellites in predetermined NGSO-centric azimuth ( $\alpha$ ) and

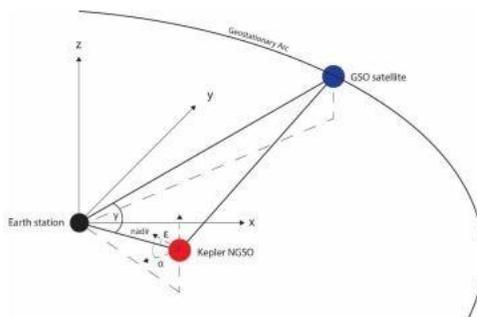
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<sup>3</sup> In accordance with D4 of Ofcom's application form.

elevations ( $\epsilon$ ) as a function of sub-satellite latitudes in order to avoid inline event with the victim GSO earth stations, depicted in Figure 1. An inline event is defined as: when the minimum angle ( $\gamma$ ) between a line connecting the NGSO, at some azimuth and elevation, and a point on the geostationary arc is below a set exclusion angle. Latitude- dependent exclusion angles will be set so as to avoid inline events that result in exceeding the EPFD limits. The use of electrically steerable antennas on the satellite means simply that the transmitting beam will not steer to these

exclusion zones during operations. Moreover, Kepler confirms that it will coordinate with GSO FSS earth stations in the applicable bands where the threshold conditions are met.

*Figure 1: Depiction of angles between Kepler Satellites and GSO satellites.*



### *III. Fixed links in the 17.7-19.7GHz band*

Kepler is not currently seeking to provide services in the Ka bands. However, where applicable, Kepler will ensure co-existence and carry out coordination discussions with the objective of reaching agreements with all applicable operators.

Please direct any questions or requests for information to the undersigned.

Respectfully submitted,

