Exhibit 1
Purpose of Experimental Special Temporary Authorization

By this application, GeoSat Satélites S.L.U. ("GeoSat") respectfully requests experimental Special Temporary Authorization ("STA") to downlink its Deimos-2 satellite to Microsoft Infrastructure Group, LLC's ("Microsoft") earth station located in Quincy, Washington. This experimental authorization is necessary to allow GeoSat to further test the capabilities of Microsoft's Azure cloud computing network.

Description of Proposed Operation

GeoSat seeks an STA for a period of six months beginning on or before August 29, 2021, to permit uninterrupted communications with Microsoft's earth station in Quincy, Washington. GeoSat's Deimos-2 satellite currently is authorized to downlink to this earth station in Quincy, Washington, and to a separate receive-only earth station located in Brewster, Washington, pursuant to experimental STA Call Sign WQ9XZJ.[1] Consistent with that experimental STA, GeoSat seeks this further STA for the limited purpose of continuing to test Microsoft's Azure cloud computing network. GeoSat does not seek to provide commercial services pursuant to its experimental authorization.

The earth observation ("EO") data provided by satellites like Deimos-2 support a wide range of services, including disaster prediction and tracking and supply chain monitoring. However, efficient use of EO data requires advanced data processing, storage, and analytics solutions. The testing proposed by this application is necessary for Deimos-2 to evaluate a new cloud computing service that provides these solutions and integrates next-generation capabilities, including artificial intelligence and machine learning tools. The advantages presented by this service will allow for greater efficiencies in the processing and distribution of EO data, including for public interest-focused applications such as disaster prediction and tracking.

Requested Frequencies

GeoSat seeks to transmit to Microsoft's Quincy, Washington earth station using the following frequency bands:

[1] *See* ELS File No. 0247-EX-ST-2021.

Deimos-2	Minimum Frequency (MHz)	Maximum Frequency (MHz)	Center Frequency (MHz)	Bandwidth (MHz)	EIRP[2]	Emission Designator
X-Band (Downlink)	8025	8155	8090	130	17 dBW	130MG1D
	8155	8285	8220	130	17 dBW	130MG1D

The Quincy, Washington earth station, which will operate on a receive-only basis with Deimos-2, is located at the following coordinates:

City	State	Zip Code	Latitude	Longitude
Quincy	Washington	98848	N 47° 14' 22"	W 119° 53' 8"

Deimos-2 Operations

Deimos-2 is an EO satellite launched in 2014 that operates in non-geostationary orbit pursuant to authority from Spain's Ministry of Economy and Business Directorate-General for Telecommunications and Information Technologies Sub-Directorate-General for Planning and Management of the Radio Spectrum.[3] Deimos-2 is owned and operated by Deimos Imaging, a Spanish company and subsidiary of GeoSat. The Deimos-2 satellite was co-developed by Spanish company Elecnor Deimos and South Korean company Satrec Initiative.

Deimos-2 does not yet have U.S. market access, and its operations are subject to international coordination pursuant to its filing with the International Telecommunication Union ("ITU").[4] Deimos-2's ITU filing contemplates the satellite downlinking to earth stations in Alaska, but this filing does not cover transmissions to other locations in the United States.[5] Through this application, Deimos-2 seeks experimental authority to transmit to Microsoft's earth station in Quincy, Washington, on a non-protected, non-interference basis.

Deimos-2's operations in the proposed frequencies will be of short duration, as the satellite would transmit only during data downloads conducted while in the view of the earth station in Quincy, Washington. The transmissions would take approximately 10 minutes during Deimos-2's pass and would originate from the satellite's steerable antenna. Deimos-2 would

[2] The transmit power for each frequency band is 2 dBW (ERP 14.85 dBW).

[3] *See* Notificación E/2019/0021, Ministerio de Economia y Empresa Dirección General de Telecomunicaciones y Tecnologías de la Información Subdirección General de Planificación y Gestión del Espectro Radioeléctrico (Sept. 25, 2019) (attached).

[4] *See generally* E2019-23333, Satellite Network Filings, ITU-R, *available at* https://www.itu.int/ITU-R/space/asreceived/Publication/DisplayPublication/16906.

[5] *See id.* Deimos-2 currently does not transmit to any Alaska earth stations.

point its antenna directly at the earth station in Quincy, Washington, during this brief period of data transmission, and the beam directionality would result in very low received power at the earth station itself.

GeoSat also commits to adhere to the power flux density ("PFD") limits established by the ITU radio regulations and all power and emissions limits applicable to frequencies in the 8025–8400 MHz band. Deimos-2's ITU filing contains full details concerning the satellite's compliance with the PFD limits established by the ITU radio regulations.[6] However, for ease of reference, the following table demonstrates compliance with the applicable PFD limits:

DOWNLINK X-BAND

Elevation	El		5	10	20	40	60	83	89	degrees
Nadir	gamma		65,22	63,84	58,92	44,28	27,11	6,38	0,91	degrees
Range	R		2377,08	1977,89	1431,31	910,36	705,64	624,24	620,09	km
Transmitter Power	Pt		2,00	2,00	2,00	2,00	2,00	2,00	2,00	dBW (RMS)
Antenna Gain	Gt		15,00	15,00	15,00	15,00	15,00	15,00	15,00	dBi
Equivalent Isotropic Radiated Power	EIRP	+	17,00	17,00	17,00	17,00	17,00	17,00	17,00	dBW
Propagation										
Free Space Loss	FSL	-	178,12	176,52	173,72	169,78	167,57	166,51	166,45	dB
Atmospheric losses	dB	-	0,61	0,30	0,15	0,08	0,06	0,05	0,05	
Received Power Flux Density	PFDrx		-121,51	-119,92	-117,11	-113,18	-110,96	-109,90	-109,84	dBW/m²
			-166,28	-164,69	-161,88	-157,95	-155,73	-154,67	-154,61	dBW/m²/4kHz

Orbital Debris Mitigation Plan

Consistent with Section 5.64(b) of the Commission's rules,[7] GeoSat has submitted the orbital debris mitigation plan for Deimos-2 as an attachment to this application.[8]

Frequency Coordination

To the extent necessary, GeoSat is prepared to coordinate its proposed operations with any incumbent users operating in or adjacent to the proposed X-band frequencies. GeoSat accordingly commits to provide advance notice of the timing and parameters of its intended downlink transmissions to the earth station in Quincy, Washington, if necessary. As noted above, the short duration of Deimos-2's transmissions greatly reduces the likelihood of any interference issues. However, GeoSat is prepared to operate subject to any conditions necessary to address interference concerns, including the requirement that GeoSat terminate its transmissions to the earth station in Quincy, Washington, if any interference occurs.

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[6] *See id.*

[7] *See* 47 C.F.R. § 5.64(b).

[8] *See* Deimos-2 Non-Geostationary Satellite System Orbital Debris Mitigation (attached as Exhibit 2).

Notificación E/2019/0021

MINISTERIO
DE ECONOMIA
Y EMPRESA

SECRETARÍA DE ESTADO PARA EL AVANCE DIGITAL

DIRECCIÓN GENERAL DE TELECOMUNICACIONES Y TECNOLOGÍAS DE LA INFORMACIÓN

SUBDIRECCION GENERAL DE PLANIFICACIÓN Y GESTIÓN DEL ESPECTRO RADIOELÉCTRICO

E-MAIL:BRMAIL@ITU.INT
A / TO: UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
PLACE DES NATIONS
CH1211 GENEVE 20
SUIZA
FECHA: 25/09/2019 **N / REF: CTSE/2019/2003** **Nº PAG: 1**

ASUNTO: Notificación E/2019/0021. Notificación e inscripción en el Registro de las asignaciones de frecuencias de la red no geoestacionaria DEIMOS-2.

Señor Director:

La Administración española se complace en confirmarle mediante este documento, el envío por e-Submission of Satellite Network Filings del formulario para proceder con la notificación de las asignaciones de frecuencias pertenecientes a la red de satélite no geoestacionario DEIMOS-2 para su inscripción en el Registro Internacional de frecuencias, bajo el Artículo 11 del Reglamento de Radiocomunicaciones. Dicho formulario se envía en formato electrónico compatible con el programa informático de entrada de formularios de notificación de la Oficina. Asimismo, se ha utilizado el software de validación preparado por la Oficina para verificar la información remitida.

Les rogamos que la factura que en su momento sea aplicable a esta red por la recuperación de costes de las notificaciones de las redes de satélite y procedimientos administrativos, sea enviada directamente al operador español a la dirección que se indica a continuación y, adicionalmente, una copia de la factura sea enviada a la Administración española:

DOT IMAGING, S.L.U.

Parque Industrial La Nava III, Calle Francia 9

13500 – PUERTOLLANO (CIUDAD REAL) - SPAIN

CIF: B-13581459

Email: deimos-1.fgs@deimos-imaging.com

Quedando a su disposición para cuantas aclaraciones estime convenientes, aprovecho la ocasión para enviarle un cordial saludo.

Atentamente,

Coordinador de Área
Celestino Menéndez Argüelles