REQUEST FOR EXPERIMENTAL AUTHORITY

BlackSky, Global LLC ("BlackSky") herein requests experimental authority to demonstrate and test earth station facilities in connection with the launch of two microsatellites – Pathfinder-1 and Pathfinder-2[1] – in the manner described below. BlackSky seeks authority for a period of eighteen (18) months, beginning no sooner than August 1, 2015.

BlackSky notes that the OET has already issued it experimental authority, by way of Special Temporary Authority ("STA"), to demonstrate and test the subject satellites.[2] Additionally, BlackSky has on file in connection with that satellite STA a still-pending request for STA to test and operate earth station facilities.[3] For reasons also discussed in its new experimental application for authority for Pathfinder-1 and Pathfinder-2, BlackSky is submitting the instant request for new authority, rather than further amendment of its pending STA, at the request of the staff to account for various changes to the proposed earth station locations and to seek a new license term.

Purpose of Special Temporary Authority.

BlackSky seeks to test, develop, and demonstrate the efficacy and design of newly configured microsatellites, including associated software applications, relative to their ability to provide high-resolution remote sensing in the Earth Exploration Satellite Service ("EESS").

To this end, BlackSky has submitted an application for experimental authority to launch, test, and demonstrate the Pathfinder-1 and Pathfinder-2 prototype satellites anticipated to be launched and ready for testing as soon as August 1, 2015.[4]

BlackSky submits herein an associated request for experimental authority to use earth station facilities at five U.S. locations to communicate with the satellites. As with its associated space station application, BlackSky herein seeks authority for eighteen (18) months, beginning on August 1, 2015.

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[1] In its original application, BlackSky's satellites were referred to as Scout 1 and Scout 2. BlackSky refers to them now internally as Pathfinder-1 and Pathfinder-2, which is reflected in the instant request.
[2] FCC Call Sign WH9XCA (File No. 1004-EX-ST-2013).
[3] *See* FCC File No. 1136-EX-ST-2013. BlackSky is concurrently withdrawing its pending earth station STA request, as the instant request for experimental authority replaces it.
[4] Because BlackSky's current launch window is between August 1, 2015, and September 30, 2015, it is requesting a start date of August 1, 2015, with the possibility that the microsatellites may be ready for testing later than, but not earlier than, that date.

The grant of the instant request will permit BlackSky to communicate and control the satellites and thereby to assemble critical feedback as to the performance of the microsatellites themselves and the overall architecture of the proposed imaging and communications system.

Operational Description.

BlackSky is developing plans to deploy two satellites intended to demonstrate the technology and to experiment with configurations and processes.

Once in orbit, the demonstration and testing will focus on each satellite's subsystems and their collective interaction, as well as the ability to communicate with and control the satellites, test the imaging capability of the satellites, and ascertain the actual throughput of imaging data from the satellite to the ground stations identified below and the BlackSky network operations center.

The technical details of the ground segment are as follows:

Ground station locations[5]:

(1) Tukwila
(47° 29' 55.44'' N , 122° 17' 23.64'' W)
3415 S 116th St, Ste 123
Tukwila, WA 9816
Site elevation = 15.9 m AMSL

(2) Redmond
(47° 40' 00.88" N 122° 05' 34.02" W)
6742 185th Ave, NE
Redmond, WA 98052
Site elevation = 33 m AMSL

(3) Prudhoe Bay Tract
(70° 13' 28.42" N 148° 25' 38.02" W)
Tract 11, North Slope Lease Tracts
Umiat Meridian, AK
Site elevation = 9.1 m AMSL

[5] BlackSky herein notes that it proposes that an earth station in Greenhills, New Zealand (coordinates 46° 31.730' S, 168° 22.870' E) also communicate with its satellites. The planned technical parameters of that facility are identical to those identified in this section. BlackSky is seeking authority for the operation of that earth station facility through the Administration of New Zealand.

(4) Alaska Satellite Facility
(64° 47' 37.0" N 147° 32' 10.8" W)
903 N Koyukuk Dr.
Fairbanks, AK 99775
Site elevation = 144 m AMSL

(5) Spaceport America
(32° 59' 46.08" N 106° 59' 03.09" W)
234 Aleman Rd.
Truth or Consequences, NM 87901
Site elevation = 1415 m AMSL

Antenna details:

S-band & X-band:	Manufacturer:	ORBIT CS
(Tx and Rx)	Model:	GAIA-100-3.7-S/X
	Diameter size:	3.7 m
S-band & X-band:	Manufacturer:	ViaSat
(Tx and Rx)	Model:	9.1 m tracking antenna
(Fairbanks location only)	Diameter size:	9.1 m
UHF Tx:	Manufacturer:	M2 Antenna Systems
	Model:	450CP34 (yagi antenna)
	Boom length:	304.8 cm
UHF Rx:	Manufacturer:	M2 Antenna Systems
	Model:	400CP30 (yagi antenna)
	Boom length:	337.9 cm

Frequencies:

UHF Tx (uplink):	**449.75-451.25 MHz**
UHF Rx (downlink)[6]:	401-402 MHz
S-band Tx (uplink):	**2071.875 MHz ± 44kHz**
X-band Rx (downlink):	8080 MHz ± 55 MHz

[6] BlackSky is providing in this exhibit the proposed satellite downlink frequencies only as informational. These frequencies are the subject of a separate application for experimental satellite authority.

Antenna gain:

UHF Tx:	16.0 dBi @ 435-455 MHz
UHF Rx:	16.2 dBi @ 395-405 MHz
S-band Tx:	33.5 dBi @ 2025-2110 MHz (All locations except Fairbanks)
	42.6 dBi @ 2025-2110 MHz (Fairbanks location only)
X-band Rx:	45.9 dBi @ 8025-8400 MHz (All locations except Fairbanks)
	56.0 dBi @ 8025-8400 MHz (Fairbanks locations only)

Power, EIRP, Polarization:

UHF:	5 W, Total ERP 63 W, RHCP/LHCP (All locations)
S-band:	25 W, Total ERP 21.56 kW, RHCP (All locations except Fairbanks)
	15 W, Total ERP 184 kW (Fairbanks locations only)

24-hour contact details:

BlackSky maintains a 24-hour, 7-day-per-week hotline at its Mission Control Center, which can be reached at the following telephone number for any interference issues: (206) 351-5165.