Skycast Services LLC
FCC Form 442—Exhibit 1

NARRATIVE STATEMENT

Pursuant to Section 5.3 and Section 5.63 of the Commission's rules, 47 C.F.R. §§ 5.3, 5.63, Skycast Services LLC ("Skycast") respectfully requests that the Commission grant Skycast experimental authority using high-frequency ("HF") spectrum [redacted].

1. Applicant's Name, Address, and FCC Registration Number ("FRN").

Skycast Services LLC
80 S.W. 8th Street, Suite 2000
Miami, FL 33130

FRN: 0025141839

2. Description of Operations and Purpose of Requested Authority.

[redacted]

3. Public Interest Basis for Requested Experimental Authority.

Grant of the requested experimental authority would enable Skycast to pursue significant advancements in the state of telecommunications technology and therefore would serve the public interest generally and the intent of the Commission's Part 5 framework specifically.

[redacted]

[redacted]

Grant of the requested authority also would be consistent with the Commission's Part 5 framework, including the experimental activities permitted by Section 5.3 of the Commission's rules. Among other things, the requested authorization would be used for: (i) scientific or technical radio research; (ii) technical demonstrations of equipment or techniques; and (iii) the development of radio technique, equipment, operational data, and engineering data. 47 C.F.R. §§ 5.3(a), (e), (j).

For these reasons, expeditious grant of the requested experimental authority would serve the public interest, convenience, and necessity.

4. Dates of Operation.

Skycast requests initial experimental authority for 24 months.

5. Classes of Stations.

Skycast proposes to operate fixed wireless stations in connection with the proposed experiments.

6. Location of Proposed Operations.

[redacted]

The coordinates and other relevant characteristics of the proposed initial transmit site are as follows:

Site ID	Lat (°N)	Long (°W)	Ground Elev. AMSL (m)	Average Radius (km)	City, State
SKY-TX-LIS001	40° 50.528'	73° 2.354'	73.15	2-3	Farmingville, NY

Transmitting antennas would comply with any applicable FAA requirements.

Receive locations would be located outside of the United States in Western Europe. [redacted]

7. Equipment To Be Used.

Initial experimental operations would use commercially available equipment. [redacted]

As Skycast anticipates using two different amplified power levels during the experimental phase (please see "Power Levels"), Skycast would initially use the following antennas in connection with the proposed experiments:

Antenna Manufacturer	Antenna Model	Transmit Power	Ground-to-Tip Height	Half-Power Beam Width	Orientation in Horizontal Plane	Orientation in Vertical Plane
Hy-gain	TH-11DX	4 kW	18.29 m	65°	51.5°	0°
Antenna Products	LPH-1B	4 kW	18.29 m	65°	51.5°	0°
Antenna Products	LPH-30	10 kW	24.38 m	65°	51.5°	0°
Antenna Products	LPH-0511	10 kW	30.48 m	70°	51.5°	0°

8. Frequencies Desired.

[redacted] all authorized frequencies would fall within traditional HF frequency spectrum (3-25 MHz). More specifically, Skycast proposes to conduct experiments in the following frequency bands: (i) 13.87-14.00 MHz; (ii) 14.35-14.99 MHz; (iii) 15.80-16.10 MHz; (iv) 19.80-19.99 MHz; (v) 16.20-16.36 MHz; (vi) 17.41-17.48 MHz; (vii) 18.168-18.78 MHz; (viii) 19.02-19.68 MHz; and (ix) 20.01-21.00 MHz. [redacted]

9. Power Levels.

As described in section 7 above, Skycast would conduct experiments using 2 transmitters at the proposed transmit location. One of the transmitters would have a maximum transmit power of 4kW, while the second would have a maximum transmit power of 10kW. Therefore, the maximum transmit power requested for the experimentation period would be 10kW.

10. Type of Emission, Modulation, and Bandwidth.

In each frequency band examined, Skycast potentially would use DTMF, single-carrier, and OFDM waveforms and OOK, FSK, ASK, QAM4, QAM16, QAM32, and QAM64 modulations. [redacted] More specifically, Skycast would operate with the following emission designators, modulations, and associated bandwidths:

Emission Designator	Modulation	Bandwidth
12K0R7D	OOK, ASK	12 kHz
24K0R7D	OOK, ASK	24 kHz
48K0R7D	OOK, ASK	48 kHz
12K0F7D	FSK	12 kHz
24K0F7D	FSK	24 kHz
48K0F7D	FSK	48 kHz
12K0G7D	PSK	12 kHz
24K0G7D	PSK	24 kHz
48K0G7D	PSK	48 kHz
12K0D7D	QAM4, QAM16, QAM32, QAM64	12 kHz
24K0D7D	QAM4, QAM16, QAM32, QAM64	24 kHz
48K0D7D	QAM4, QAM16, QAM32, QAM64	48 kHz

Skycast has specified the emission designator and calculated the necessary bandwidths in accordance with Sections 2.201 and 2.202 of the Commission's rules. 47 C.F.R. §§ 2.201, 2.202.

11. Other Frequency Requirements/Equipment Specifications.

The Hy-Gain TH-11DX antenna has a gain between 8.1dBi to 8.6dBi in the frequencies identified above, with a front to back ratio of between 22dB and 27dB. It is likely that the TH-11DX would require some tuning to provide an ideal standing wave ratio for some of the requested frequencies to ensure conformance to the specified frequency ranges.

The Antenna Products LPH-30 antenna has a gain of 13dBi and a back and side lobe of 20dB nominal, 14dB minimum in the frequencies identified above

The Antenna Products LPH-0511 antenna has a gain of 12dBi and back and side lobes of 14dB minimum in the frequencies identified above.

The Antenna Products LPH-1B antenna has a gain of 12dBi and back and side lobes of 10dB minimum in the frequencies identified above.

As part of its experimental program, Skycast would evaluate the interference environment and

select transmission channels so as to minimize any potential for harmful interference into the operations of other spectrum users.

12. Contact Information.

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