



Blue Origin

EXHIBIT #1:

Blue Origin, LLC

DATE: 31 May 2007

FRN: 0014079669

RELEVANT APPLICATIONS: 0265-EX-PL-2007, 0266-EX-PL-2007

Application for New Experimental Radio Station Authorization (FCC Form 442)

(6) DESCRIPTION OF RESEARCH PROJECT

SUMMARY

(a) Blue Origin is an aerospace research and development company developing commercial space launch vehicle technology. Blue Origin conducts flight testing of these vehicles at its private test facility in Culberson County, Texas. This test facility is in the sparsely-populated desert of Western Texas, approximately 25 miles north of the small town of Van Horn.

(b) The desired FCC license applies to telemetry and command communications between ground stations and aerial vehicles that are being built by Blue Origin. A telemetry and command radio link is required to send instructions to and receive data from the aerial vehicles in real time while they are on the ground and in flight undergoing testing.

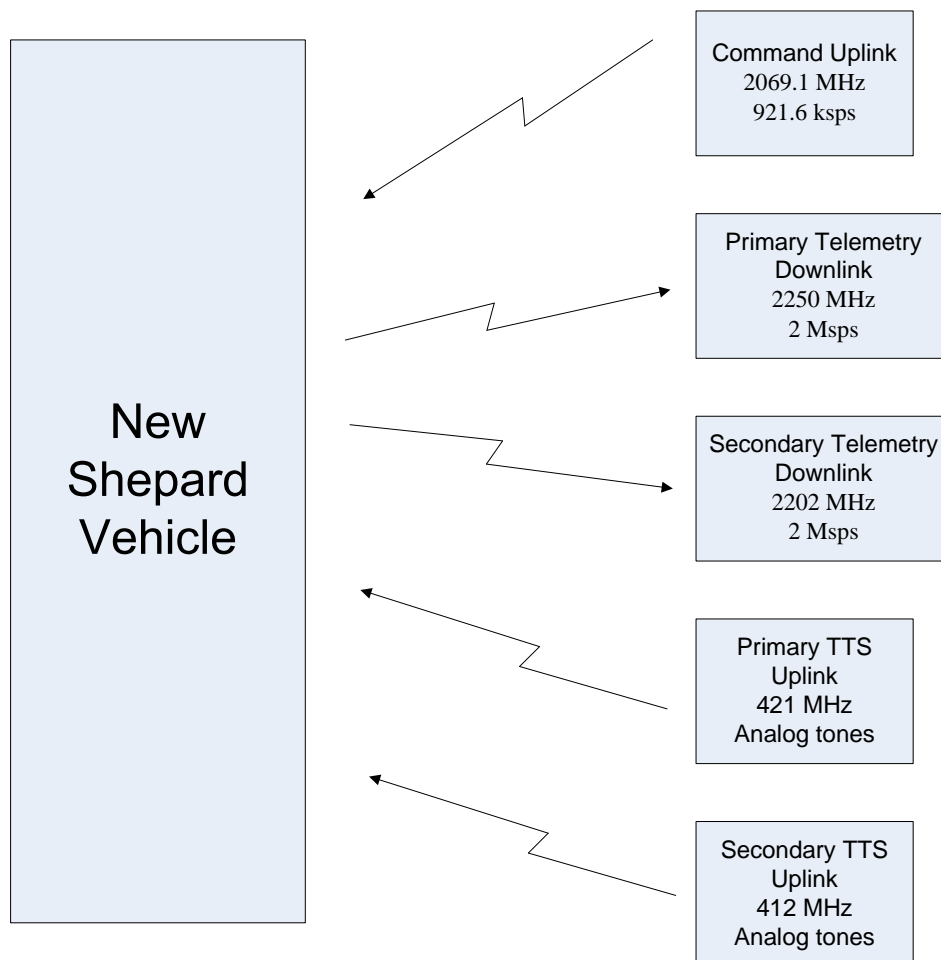
ADDITIONAL INFORMATION

The aerial vehicles take off from a launch stand and fly a vertical trajectory before returning to land at the launch site. During the flight, the vehicle lateral position will vary from directly over the landing pad up to a 5-mile radius. In addition, the vehicle attitude will vary from pure vertical by approximately +/- 30 degrees and will vary around the vertical axis by approximately +/- 60 degrees. The OCC (Operations Control Center) for the New Shepard vehicle is located two miles south of the launch stand / landing pad. An additional GS (Ground Station) site will

be used during flight testing. Blue Origin will experiment with the location of the GS antenna, within a 24 mile radius of the launch site in the Texas desert.

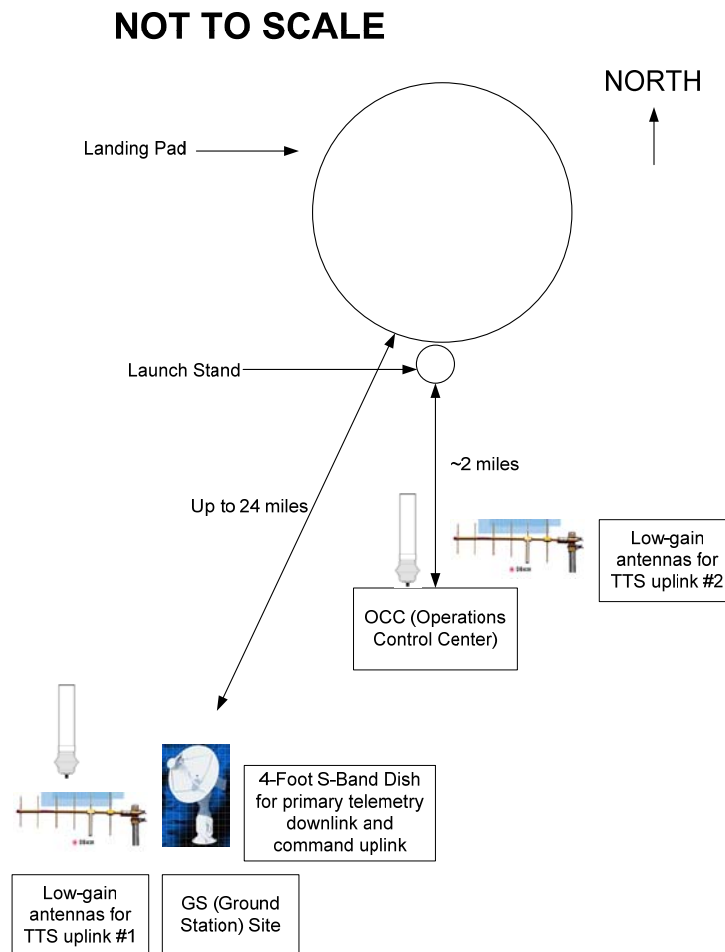
The vehicles will employ real-time communications systems in order to provide telemetry and commanding functions to the launch operations team. Telemetry data is used to analyze the flight of the vehicle, while commands are used in order to control the flight sequence and to terminate thrust.

The two referenced FCC license applications cover the telemetry and command links described above. In total, there are five real-time links between the ground and the vehicle as shown in the following diagram:

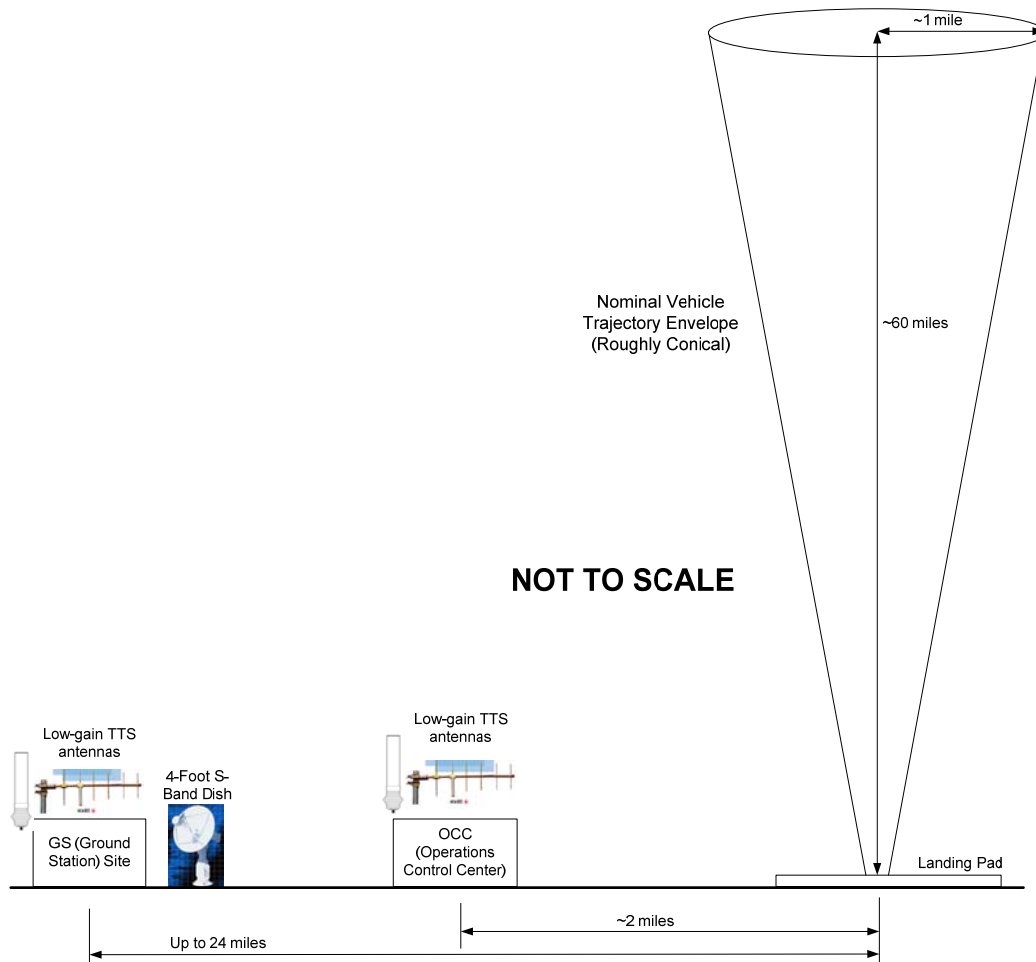


The first application (0265-EX-PL-2007) covers the S-Band telemetry and command channels, while the second application (0266-EX-PL-2007) covers the primary and secondary UHF TTS (Thrust Termination System) uplink channels.

The following diagram shows a top-down view of the ground antennas located at the launch site:



The following diagram shows a side view of the antennas located at the launch site:



The transmitters for the primary and secondary telemetry downlink channels are located on the launch vehicle. Each of these two telemetry downlink systems has the following characteristics:

- 1) Digital data source
 - a) 1.0 Mbps (Mega Bits Per Second) data stream
 - b) Manchester data encoding → 2.0 Msps (Mega Symbols Per Second)
- 2) RF Transmitter
 - a) 2250 MHz (primary) or 2202 MHz (secondary) carrier frequency
 - b) 5W RF output
 - c) FSK (Frequency-Shift-Key) modulation
 - d) 2 MHz bandwidth (+/- 1 MHz)

3) Antennas

- a) Two antennas per downlink, one on each side of the vehicle
- b) Omni-directional gain pattern
- c) Either RHCP (Right-Hand Circular Polarization) or linear polarization (TBD)

The command uplink transmitter is located at the launch site. The command uplink system has the following characteristics:

1) Digital data source

- a) 460.8 kbps (Kilo Bits Per Second) data stream
- b) Manchester data encoding → 921.6 ksps (Kilo Symbols Per Second)

2) RF Transmitter

- a) 2069.1 MHz carrier frequency
- b) 5W RF output
- c) FSK (Frequency-Shift-Key) modulation
- d) 1 MHz bandwidth (+/- 500 kHz)

3) Four-foot tracking parabolic dish antenna

- a) This antenna slews to follow the vehicle during flight
- b) The parabolic dish will be located at the GS site, which will be established within a 24-mile radius of the launch pad
- c) Antenna gain: 25 dBi
- d) RHCP (Right-Hand Circular Polarization)

The thrust termination uplink transmitters are located at the launch site. Each thrust termination uplink system has the following characteristics:

1) Analog data source

- a) Subcarrier tones enabled or disabled by a human operator

2) RF Transmitter

- a) 421 MHz (primary) or 412 MHz (secondary) carrier frequency
- b) 5W RF output
- c) FM (Frequency Modulation)
- d) 360 kHz bandwidth (+/- 180 kHz)

3) Power amplifier

- a) 100W output

4) Antennas

- a) Two sets of antennas – one set located at the OCC site and one set located at the GS site, within a 24-mile radius of the launch pad
- b) Two antennas in each set:
 - i) Low-gain directional antenna (9 dB)
 - ii) Omni-directional antenna
- c) All antennas use linear polarization

(c) There are no existing communications facilities that are adequate for exchanging telemetry with aerial vehicles at this test site

(8) LENGTH OF TIME THAT WILL BE REQUIRED TO COMPLETE THE PROGRAM OF EXPERIMENTATION:

Blue Origin is developing a series of launch vehicles. Extensive flight testing is planned for multiple vehicles for more than a 5-year period (see #6, above). Blue Origin plans to use the telemetry and command equipment on multiple test vehicles over the course of a 5-year period following receipt of the license sought in this application.

(12) TYPE OF APPLICANT:

Blue Origin, LLC is a limited liability company formed under the laws of the State of Washington.