



APRIZE

Smart Data for the Long Haul

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February 11, 2004

Mr. Anthony Serafini
Office of Engineering and Technology
Federal Communications Commission
445 12TH ST SW
Washington DC 20554

Re: Aprize Satellite Experimental License Application
File Number: 0209-EX-PL-2003

Dear Mr. Serafini:

In response to the e-mail of Bob Nelson to you of January 28, 2004, Aprize Satellite herewith submits the following supplementary information regarding Aprize's application to the FCC for an Experimental Space Station License.

Aprize Satellite Inc. ("Aprize") is a small business concern, which is independently owned and financed by its two founders. The overall goal of Aprize is to develop, deploy and operate a constellation of low-Earth orbit satellites to provide fixed and mobile data services at affordable prices to satisfy critical remote monitoring requirements for homeland security and in-transit visibility. Experimental work to date has shown significant promise that an affordable space network can be built and operated with a modest investment of capital and expanded as necessary to meet customer demand for satellite services.

Aprize would like to construct and launch at its own risk two experimental satellites with a mass of 10 kg each. The purpose of the two satellites, which would be launched sometime during the 3rd quarter of 2004, is to validate its spacecraft technology and to develop commercial satellite data communications applications. The experimental tests and demonstrations will be conducted in the United States by SpaceQuest, Ltd. on behalf of Aprize using SpaceQuest's UHF experimental ground station license. Following the successful completion of orbital testing, Aprize plans to seek a commercial Little LEO license from the FCC to construct, deploy and operate an international satellite data network.

1. Provide information on orbital debris and contamination for the Aprize satellites:

After considering the possibility of orbital debris and contamination, Aprize is able to provide the following information. At an altitude of 700 km, the Aprize experimental satellites are expected to re-enter the Earth's atmosphere and burn up completely in 35 to 37 years, depending on the intensity of solar activity. The Aprize satellites have no on-board fuels, explosives, pressure vessels, deployables or moving parts. The only stored energy on board the satellites is contained in the six nickel-cadmium batteries, which are non-explosive and will be fully discharged at end-of-life. Similar nickel-cadmium cells have been used successfully on many small satellite programs without incident. Aprize is investigating the

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possibility of using passive techniques, such as a deployable drag chute, to accelerate the de-orbiting of microsattellites that are too small to carry a propulsion system.

2. Clarification on whether the life time estimate includes the effects of the antennas on the spacecraft area, or if the estimate is based on the cube. We also request additional information as to whether the 700km orbit is the maximum orbital altitude, and if an altitude that would result in a disposal life time of less than 25 years is possible:

The circular altitude of 700 km is the maximum orbital altitude for the Aprize satellites. Because the satellites will be launched into a sun-synchronous orbit as secondary payload, Aprize is not able to lower the planned orbital altitude that was specified by the prime payload. Our life time estimate is based on a solid cube and does not include the effects of the antennas or other irregular shapes on the spacecraft area. These appendages would reduce the lifetime estimate somewhat but the actual amount is difficult to calculate.

3. Clarification as to whether Aprize has done an analysis of the probability of collision with other spacecraft during the time frame that the spacecraft is in orbit, (including systems at the operational altitude):

Aprize has not analyzed the probability of collision with other spacecraft that may be in the same or similar orbit.

4. Further clarification of the statement in D.1. that the United States would be the notifying administration for the satellites, is the Aprize's plan to submit to the FCC ITU notification materials for submittal to the ITU?

Aprize will prepare and submit all ITU notification materials to the FCC as may be required.

Sincerely,



Dino A. Lorenzini
President