

MessageFrom: Robert Nelson
Sent: Wednesday, January 28, 2004 3:48 PM
To: Anthony Serafini
Cc: Karl Kensinger; Shahnaz Ghavami
Subject: FW: Experimental License

Anthony;

Please find attached information received concerning the experimental license application from Aprize satellite. The Satellite Division has the following comments.

Aprize should file the attached email as a letter to officially put these comments on the record.

In addition to the information contained below, we request additional 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.

We also request 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).

We also request 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?

We note that under the International Radio Regulations that an experimental station may enter communications with another country only if authorized to do so by its administration.

We also note that Aprize's Earth station facility license will need to be modified to add as a point of communication these satellites.

Upon satisfactory response on the record from Aprize, several conditions on the license will be necessary. We will get these to you after review of their response.

Bob

-----Original Message-----

From: Dino [mailto:dino@spacequest.com]
Sent: Tuesday, January 20, 2004 7:49 AM
To: Robert Nelson
Cc: Shahnaz Ghavami
Subject: Experimental License

Dear Bob,

During our telephone conversation last week, you had several questions related to Aprize's application for an experimental space station license. In response, I would like to submit the information provided below. Please let me know if

you need anything else to complete the processing and coordination of Aprize's experimental license application.

Best regards,

Dino

Supplementary information regarding Aprize's application to the FCC for an Experimental Space Station License.

January 20, 2004

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.

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 possibility of using passive techniques, such as a deployable

drag chute, to accelerate the de-orbiting of microsatellites that are too small to carry a propulsion system.

Dr. Dino A. Lorenzini

CEO, Aprize Satellite Inc.