

Exhibit B

Research Description & Modulation Information

Research Description:

This application for a new station is being requested as part of a research being conducted with Cornell University. The research project consists of a high altitude balloon with a payload and a set of ground stations. This radio station is required to enable communications between the multiple ground stations that track and control the balloon. The method of communications is the commercially available Iridium satellite network. This application is only requesting that one antenna be mounted in a fixed location as part of the ground station network.

The Iridium satellite communications are necessary for the project because the balloon may land in a heavily wooded area or valleys where other means of communications can not operate.

Modulation:

QPSK modulation is used. Each timeslot is 8.28 ms long and sits in a 90 ms frame. Within each channel FDMA channels there are four TDMA channels in each direction. Channels are spaced 41.666 kHz and each channel occupies a bandwidth of 31.5 kHz.

QPSK – Quadrature Phase shift Keying.

FDMA – Frequency Division Multiple Access.

TDMA – Time Division Multiple Access