

MIT Lincoln Laboratory
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Exhibit 1 System Description

MIT Lincoln Laboratory is developing a communications capability for the Department of Defense. In order to have a successful transition to the warfighter, we need to thoroughly test and evaluate our developed technologies including over-the-air flight testing. The test system includes an airborne transmitter and several ground-based receivers. The airborne transmitter payload is carried on a high altitude balloon that has a float altitude of 75,000 ft to 95,000 ft. Balloon flight operations follow the protocols in FAA Part 101 Unmanned Free Balloon Flights. The transmitter consists of an Ettus Research B210 software-defined radio, a Mini-Circuits power amplifier and bandpass filter, and an L-com antenna.

