

REGARDING PURPOSE OF DEMONSTRATION

Lockheed Martin Corporation ("Lockheed Martin") hereby seeks experimental Special Temporary Authority for the period of August 8 to August 19, 2016, to operate, demonstrate, and test its ICARUS UAS system at an event being hosted by the United States Marine Corps at Marine Corps Base Quantico in conjunction with the MITRE Corporation. This demonstration has been approved by the Quantico Range Manager.

The current STA request seeks FCC authority only to operate in the 902-928 MHz band. The 900 MHz frequencies will provide essential UAS control and telemetry to the ICARUS system as well as to support video links.

The antenna equipment will be mounted on a 10 foot tripod and will communicate with the ICARUS UAS equipment that is limited to a range of 500 m radius around the center coordinates provided.

Lockheed Martin is eager to utilize the opportunity to demonstrate its ICARUS capability from which it will gain additional performance data and feedback that it will incorporate into further development of the equipment. Our research will benefit the government, industry, and the commercial sector through improvements in the developments of our technology.

Directional antenna.

Applicant provides the following details relating to the directional antenna proposed for use in this experimental program:

- (a) **Width of beam in degrees at the half-power point:** 120 degree horizontal, 60 degree vertical
- (b) **Orientation in horizontal plane:** multiple directional antennas will cover 360 degrees
- (c) **Orientation in vertical plane:** angled upwards such that half-power beam angle is on the horizon