

**REQUEST FOR EXTENSION OF EXPERIMENTAL AUTHORITY**

Lockheed Martin Corporation (“Lockheed Martin”) holds experimental STA’s under Call Sign WN9XAX (File No. 1226-EX-ST-2018) and Call Sign WN9XAZ (File No. 1186-EX-ST-2018) to operate on the frequencies that are the subject of this request. Under its STA, Lockheed Martin conducted preliminary testing to determine the feasibility of a developmental system that Lockheed Martin is testing in connection with a Defense Advanced Research Projects Agency (DARPA) program.

Based on the positive results of its preliminary testing at the locations, Lockheed Martin has determined that it will implement a longer-term test program with the objective of completing demonstrations necessary to satisfy internal work authorized in support of fully securing a DARPA contract.

Lockheed Martin wishes to continue operations on the subject frequencies in the area identified on the related Form 442. Primarily the operations will permit Lockheed Martin to test 1) proof of concept and system verification to support anticipated future operational needs and 2) channel characterization.

Accordingly, pursuant to 5.61(c) of the Commission’s Rules, Lockheed Martin respectfully requests continued authority under the terms of its STA’s, the parameters of which it is herein combining and for which it seeks a conventional license for a period of 12 months.<sup>1</sup>

**Nature of operations.**

As noted in its initial STA request, Lockheed Martin has made every effort to limit both the area of operation as well as the frequencies required to satisfy the proposed testing.

Testing is designed to occur during two testing periods of up to 4 hours a day for 3-5 days within a week. We expect several weeks of total testing to validate the proof of concept and system functionality. An individual test consists of transmissions of up to 30 minutes.

Within an individual test, DARPA testing requirements call for capability to switch among bands (UHF, S, and X) multiple times a minute to understand channel performance characteristics. The frequencies requested in the current application cover the frequencies that DARPA would require for post-production use of the system.

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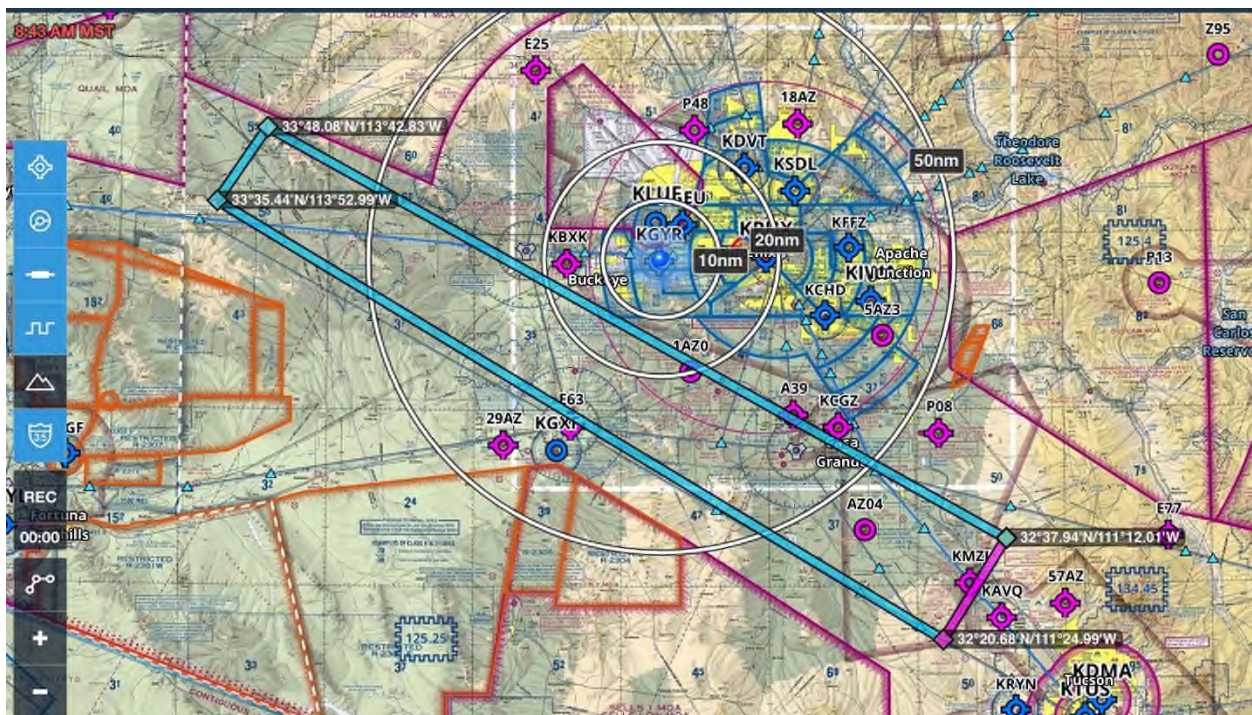
<sup>1</sup> Lockheed Martin is submitting the instant request at the first opportunity that it has since the Federal Communications Commission has resumed licensing operations following the temporary shutdown of operations. Under all other circumstances, Lockheed Martin would have submitted this request more than 15 days prior to the expiration of the subject Special Temporary Authority.

### Areas of Operation.

Lockheed Martin has identified two areas of operation.

(1) Ground (fixed) operations will be conducted at the Lockheed Martin facility in Goodyear, AZ, to conduct initial testing of the data link between transmitter and receiver.

(2) Ground-to-air operations will be conducted between a fixed transmitter and an airborne receiver, in the area identified by the following coordinate points. Bi-directional radio communications will be conducted only within this area of operation:



Coordinates: 33° 48.08 N / 113° 42.83 W

33° 35.44 N / 113° 52.99 W

32° 37.94 N / 111° 12.01 W

32° 20.68 N / 111° 24.99 W

Flights will be conducted at up to 18,000 ft AGL.