

Application for Special Temporary Authority
Airspan Networks
June 2018
File No. 1155 -EX-ST-2018

**NARRATIVE EXPLANATION OF OPERATION
AND FREQUENCY COORDINATION**

This application seeks a grant of Special Temporary Authority for research and development and testing of a direct air-to-ground broadband system. The applicant is Airspan Networks, a supplier of broadband wireless equipment for various broadband network protocols. Airspan is in the process of development of an LTE-based direct air-to-ground system (DA2G) that will provide broadband connectivity and internet service to aircraft during flights.

The proposal is to install and operate, for a limited period of time for testing, three terrestrial test sites in Florida (i.e. in Melbourne, Stuart and Boca Raton along the East Coast of Florida) and to have one aircraft test platform used in conjunction with the three terrestrial sites. Each site will consist of three sectors with antennas connected to the LTE eNBs. Each sector will have its antenna system configured with mechanical uptilt above the horizon of between 6 and 8 degrees to mitigate any potential terrestrial interference. All three sectors will transmit during scheduled testing periods and will have their transmitters disabled during non-test periods. Testing will be conducted utilizing an approved and certified aircraft test platform installed with LTE user equipment and measuring equipment inside the fuselage. This test bed will be used to collect data during flights between the test locations to assist in the development of the DA2G system.

Test flights will consist of (1) aircraft flying arcs at various heights and distances away from each test site at a constant speed; (2) flights inbound and outbound of the test locations at various different altitudes and speeds; and (3) continuous trips following a flight plan that will have the test aircraft travel to all three terrestrial locations.

The frequency band for testing will be the 2390-2400 MHz band. The emission will be 10M0G7W, and a maximum transmitted power of 30 dBm, and an EIRP of up to 36 dBi. The frequency band is allocated on a primary basis to the Amateur Radio Service. Though the 2390-2395 MHz segment is also allocated on a co-primary basis to Flight Test Telemetry, that band is not being used for that purpose presently. The Commission has repeatedly granted STAs for testing by the Goodyear Blimp for air to ground communications and for fixed wing aircraft for video production purposes. Coordination will be conducted with ARRL, the national association for Amateur Radio, but no interference is expected given the limited testing plan of the applicant.

“Stop Buzzer” contacts for the three terrestrial sites are as follows: At Melbourne FL., Mr. Ed Johnson, at +1-561-466-1315; At Witham Field, Stuart, FL., the Atlantic FBO, at +1-772-781-4720; and at Boca Raton, FL., Mr. Brian Roberts at +1-561-843-2732.

Other information can be obtained from communications counsel for the Applicant, as follows:

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