Request for Special Temporary Authority

Booz Allen Hamilton, requests an FCC-issued Special Temporary Authority (STA) in order to conduct technical development, testing, and demonstration of LTE communications for special facility security operations.

Booz Allen Hamilton is actively engaged in the development of LTE technology for Public Safety and FirstNet applications and is extending this technology into a number of defense- and government-related applications.

The proposed operations will be conducted from April 1 through April 30, 2017 on and around the United States Marine Corps Red Beach facility located on Camp Pendleton, California. Operations will be itinerant and temporary in nature and will involve setting up a temporary LTE network to provide network communications in a maritime and port environment. The goal of the LTE demonstration is to provide a validated, credible, and repeatable demonstration of how LTE technology can be used to provide advanced communications to a variety of security and public safety operations. .

This environment is directly analogous to operating environments that will be faced by FirstNet in terms of providing advanced communications for public safety users operating in rural and industrial areas. As such, supporting this demonstration will provide useful information to FirstNet, Industry, and US Government agencies involved in emergency and disaster response such as the US Coast Guard, National Guard, FEMA, and other US military branches.

The proposed operations would consist of up to two temporary deployable single-sector 700 MHz Band 14 LTE macrocells.

The vendor providing the macrocell and user equipment is General Dynamics. Booz Allen Hamilton, will be providing system integration and testing services and will be responsible for the over the air operation of the system.

Band 14 is desired for conducting this testing for the following reasons:

- 700 MHz provides optimal propagation characteristics for maximum coverage range.
- Band 14 is currently awaiting deployment in areas outside the BTOP test sites and thus presents a low probability of causing or receiving interference during testing.

Benefits to FirstNet in providing this STA concurrence include:

- Formal testing under rigorous test conditions will provide useful information on LTE user experience and system operation under real-world conditions

- Operational testing of vendor LTE devices will provide useful feedback for further product development.
- Firsthand demonstration to the US Government of the benefits of LTE technology that may inform future relationships between the Government and FirstNet.
- A detailed technical report will be provided to FirstNet upon completion of testing that will contain information on the performance of the LTE system infrastructure, user devices, coverage, and throughput.

The technical parameters of the proposed system include:

- 10 MHz Bandwidth, 2 x 2 MIMO
- 2 x 20W
- Downlink frequency band 758 – 768 MHz
- Uplink frequency band 788 – 798 MHz
- Single-sector omnidirectional temporary base station operation
- Antenna height above ground of no more than 6 meters
- User devices to include integrated modems, USB dongles, and LTE routers for use with laptop computing devices and video sources and displays
- Operation of mobile devices within 5km of base station location

The proposed operation is not expected to cause any harmful interference since the FCC ULS database does not show any co-channel licensed users of the 758-768 and 788-798 MHz Band 14 spectrum within 70 kilometers of the proposed operational location in Oceanside, CA. None of these locations are close to any of the current Band 14 BTOP early adopter test sites.

As with all STA operations, Booz Allen Hamilton understands that operations are secondary to those of licensed users such as FirstNet, and that demonstration operations must cease in the event that FirstNet or other licensed users experience interference. Booz Allen Hamilton will retain the ability to shut the system off in the event that interference is reported. The single point of contact for this STA operation is:

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