

Explanation of Need for STA and Explanation of Experiment

Raytheon Missile Systems (Raytheon) is a US defense contractor that builds missile systems and a variety of radio systems that are necessary for the navigation, target detection, command and control, and communications required when a missile is in flight.

Raytheon has embarked on a recently launched project that intends to examine how to adapt commercial, off the shelf marine radar technology into a new product. The challenge is to work with this well-developed technology in a new way that could produce advances in missile system performance.

Need for an STA

Raytheon is seeking an STA because the research program has been put onto a short timeframe to start delivering results.

Increasingly, the Department of Defense has been requiring its contractors to initiate research and development of new products in shorter time frames and to start delivering results quickly. This leaves a defense contractor such as Raytheon in a position where it needs to start work in the laboratory almost immediately after a project arises.

If the initial results of the testing are fruitful, Raytheon will be able to determine whether it needs an experimental license, allowing continued operations.

Synopsis

- Spectrum to be used: 154.585, 159.480, 160.725, 160.785, 454.00, and 459.00 MHz; 2450-2500 MHz, 2900-3100 MHz, 5470-5650 MHz, 9300-9500 MHz [
- Locations: Tucson, Arizona, operations at the Raytheon facility indoors in Bldg 9020
Latitude: 32° 5'41.37"N, Longitude: 110°48'29.79"W , and later, testing will be outdoors at Point Loma, CA Latitude: 32°40'1.18"N, Longitude: 117°14'22.94"W
- Power levels: .03 watts, with an ERP of 3 watts; these are low power transmissions

Explanation of Experimentation:

Raytheon will be using Raymarine marine commercial off the shelf radar systems to enhance the performance of its surface detection technologies. The planned testing will try use the Raymarine technology to improve performance of radar detection at or just below the level of the radar. If the testing proves fruitful, there are a number of advanced applications for the technology.

The testing will be during the work day, with sporadic use of the radar systems. Testing and data collection will be followed by periods of data evaluation. So, the spectrum use will be discontinuous.

Stop Buzzer:

Thomas J. Fagan, Spectrum Manager
Raytheon Missile Systems
tjfagan@raytheon.com
(520) 794-0227 (office)
(520) 465-7087 (cell)

Conclusion:

Raytheon is initiating a research program to advance the surface detection radar capabilities of some of its missile systems. The planned testing requests the use of commercial off the shelf Raymarine marine radar systems. An experimental license is needed because the radar system will not be used in a marine environment. There is no other license available for this testing, and the testing is specifically focused on development of radar technologies, so it is properly the subject of an experimental license. The short time frame for starting to deliver results requires Raytheon to begin testing as soon as possible, which is why it is necessary to seek a special temporary authorization. If the results of early testing prove productive, Raytheon will seek an experimental license to continue this research program.

For additional information about this program or if there are questions on the application, please contact Tom Fagan, see above, or Anne Linton Cortez, WFS, Counsel to Raytheon, 520-360-0925, or alc@conspecinternational.com.