

Sources Sought Threat Waveform Emulator

DESCRIPTION: The Army Contracting Command (ACC), Aberdeen Proving Ground (APG), on behalf of The United States Army, Intelligence Center of Excellence (USAICOE), is seeking information on capable business sources that can provide a threat waveform emulator in support of testing and training.

SCOPE: This is a new requirement and is a procurement/buy for a threat waveform emulator in support of testing and training on the Fort Huachuca First Lieutenant (1LT) John R. Fox Multi-Domain Operations (MDO) Non-Kinetic Range. This buy includes user/operator training, a solar power solution, and a manufacturer warrantee.

A variety of threat waveform emulators are required to create the signals of interest seen in a modern, diverse, congested, and complex radio frequency environment. Radars that operate in various bands are necessary to create a variety of emissions for analysis and complexity on the 1LT John R. Fox MDO Range. The following emulator types are required to support the Army's testing and training modernization efforts at Fort Huachuca.

The first emulator type shall broadcast across a large swath of the radio frequency spectrum, 20 Megahertz (MHz) to 18 Gigahertz (GHz), and can operate for extended periods of time on battery power. These emulators are intended to broadcast in areas that other systems can't reach and shall compliment other, overlapping systems allowing for a substantial quantity of systems.

The second emulator type sought must serve a distinct function; broadcasting an x-band maritime radar signature that is unique and identifiable by US collection assets. The signature should be detected by national technical means and could populate in an Electronic Intelligence (ELINT) definition library.

The maritime signatures of these two emulator types are essential to creating targets "on the sea" between "land based" targets on the 1LT John R. Fox MDO Range and surrounding areas.

The third emulator type will need to be capable of emitting a signal which can be intercepted and registered as an actual s-band maritime radar system. It shall also be capable of being detected by national technical means. Many other systems, due to antenna type, are not able to be detected by national technical means.

USAICOE is also looking for an assortment of emulators capable of emitting signals at three differing range levels, between 20 MHz to 18 GHz at anywhere between 16 Watts (W) to 50W. Each of these emulators, and their respective ranges, will serve a different function broadcasting in different areas of the spectrum. They must meet the pertinent security requirements for US Intelligence Center to procure those items to achieve the needed congestion and complexity required by the MDO range.

In tandem with any one of the distinctive features previously cited, the Salient Features for each emulator are as follows - **Emulator Capabilities:** (DoD Fort Huachuca **must have**):

- Must be able to operate on military installations without interfering with range operations, emergency services, aviation operations, and off-post civilian communications.
 - Must be capable of closely replicating current adversary threats and be scalable to include future adversary systems in frequency, waveform, and power.
 - Must have a hardened, weather-proof case.
 - Must be able to be networked for remote operability.
 - Must be man portable (1-2 man lift).
 - Must be able to work off of battery, solar power, or 120 Volts/Alternating Current (VAC) for a duration of no less than 8 hours
 - Must be able to operate in a temperature range of -10 degrees F to 125 degrees F.
 - Must be able to broadcast from 30 MHz to 4 GHz, or above, with power amplification.
 - Must transmit at no less than 10W and support expansion up to 50W or above.
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This is a market survey for information only. **THIS IS NOT A REQUEST FOR QUOTES AND NO CONTRACT WILL BE AWARDED FROM THIS SOURCES SOUGHT SYNOPSIS.** The purpose of this synopsis is to gain knowledge of interest, capabilities, and qualification of vendors who can support this requirement. The anticipated contract will be issued on a firm fixed price, lowest price technically acceptable, all or none basis. The NAICS Code is 334511 and the size standard is 1350.

INSTRUCTIONS FOR SUBMISSION: If you believe your firm qualifies under the fore-mentioned criteria and has qualified personnel, relevant past performance experience, and the technical capability to provide the equipment that meets or exceeds the Salient Features stated within the Scope of this document, please submit a response.

No reimbursement will be made for any costs associated with providing information in response to this RFI or any follow-up information requests. Submit responses via e-mail to the Point of Contact, Neil Mendiola (neil.s.mendiola.civ@army.mil) by 10:00 a.m. ET, 30 August 2023.