

U.S. Marine Corps Improvised Explosive Device (IED) Detection Needs Statement

The Department of Defense, Rapid Reaction Technology Office (RRTO) Innovation Outreach Program, will conduct a Solutions Meeting at the Marine Corps Base Quantico, VA in the July/August timeframe. The Solutions Meeting provides selected innovative companies with an opportunity to make short technical presentations to government representatives about their technologies and products. There is a potential that companies may be selected for pilot projects or experimentation if their technology appears to match the needs described below.

The RRTO Innovation Outreach Program is supporting the USMC in looking for technologies to detect IEDs. The operational goal is to significantly reduce the risks and dangers faced by dismounted or mounted Marines.

The USMC IED Detection effort is looking for innovative technologies and capabilities in the following areas:

IED Detection and Identification

- Standoff sensors to detect, identify, and locate potential surface and sub-surface IEDs or anomalies
- Multiple sensing techniques such as forward-looking Ground Penetrating Radar, Passive and Active SWIR/LWIR/UV, hyperspectral, or tomographic methods, etc.
- Trace or bulk explosives, and pre-cursors
- Active interrogation using EM, neutron, UV radiation, etc.
- Novel observables or phenomena and existing sensor optimization

Sensor Platforms and Robotics

- Small UAVs, UGVs, UUVs and other novel platforms
- Autonomous navigation and control including obstacle detection/avoidance
- Optics for depth perception and/or broad field of view
- Modular design, open architecture

Mapping Technologies

- Real-time mapping
- Precision object tagging
- Route planning, replay and real-time alerting
- Multi-modal modeling, visualization and analysis
- Integrated processing and management of current and historical enterprise data

Signal Processing and Analysis

- Point of collection detection, identification, processing, etc.
- Real-time anomaly detection, object identification, processing, etc.
- Visualization of a wide range of sensors/phenomenologies
- Predictive analysis
- Video filtering and stabilization

Tactical Communications

- High data rates for video, telemetry, voice and data
- Novel approaches for bandwidth-restricted environments
- Compression and codecs
- Mesh networking

Biometrics

- Stand-off sensors
- Detect individuals, behavioral characteristics, relationships and anomalies
- Predict behavior/intent
- Multiple modalities (e.g., iris, 2D and 3D facial information, etc.)

Companies interested in participating in the Solutions Meeting should submit an application to RRTO Innovation via e-mail to osd.pentagon.ousd-atl.mbx.rrto-innovation@mail.mil.

The following information is required in the application (Note: Only 1 application is permitted per company):

1. Email subject line “IED Detection Solutions Meeting Application”
2. Company name
3. Website address
4. POC, email, phone number and an alternate POC if desired
5. A succinct description (less than 100 words in length) of the company’s technologies, products and capabilities including a mapping to the topic areas and needs addressed

All applications must be received on or before 5:00 PM EDT, April 29, 2014.

Companies selected are responsible for their travel and all other expenses associated with participation in the USMC Improvised Explosive Device (IED) Detection Solutions Meeting.