

**DARPA-SN-10-29**

**DARPA/IPTO**

**Foliage Penetrating Ground Moving Target Indicator Radar Exploitation and Planning  
(FOPEN-GXP)**

**Industry Day – March 10, 2010**

**Arlington, VA**

The Defense Advanced Research Projects Agency (DARPA) will conduct an Industry Day briefing in support of the anticipated Foliage Penetrating Ground Moving Target Indicator Radar Exploitation and Planning (FOPEN-GXP) program Broad Agency Announcement (BAA). When released, the BAA will be found on the FedBizOpps website, <http://www.fedbizopps.gov>. *This Industry Day is classified SECRET and therefore attendance is limited to individuals with US DOD SECRET clearances or higher.*

Attendance at the Industry Day is voluntary and is not required to propose to subsequent Broad Agency Announcements (if any) or research solicitations (if any) on this topic. DARPA will not provide reimbursement for costs incurred to participate in this Industry Day. The Industry Day does not constitute a formal solicitation for proposals or abstracts. Interested parties to this notice are cautioned that nothing herein obligates the Government to issue a solicitation for FOPEN-GXP.

**PROGRAM DESCRIPTION AND OBJECTIVE**

The FOPEN-GXP program is seeking solutions in the area of exploitation and planning technology for foliage penetrating (FOPEN) ground moving target indicator (GMTI) radars. The focus of the program will be on the DARPA-developed FORESTER radar although DARPA is seeking solutions that will be applicable to other emerging foliage penetrating GMTI radars. Solutions should enable revolutionary advances in technology; however, specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

The FOPEN Reconnaissance, Surveillance, Tracking, and Engagement Radar (FORESTER) program is a DARPA/Army program to develop and demonstrate a FOPEN GMTI radar that operates on a helicopter and detects dismounts moving under foliage. In 2007-2008, FORESTER was installed on a Blackhawk helicopter and successfully detected dismounts moving under double-canopy foliage. In 2009, it was successfully tested on the A160 Hummingbird, a high altitude long endurance unmanned helicopter also developed by DARPA and the Army. Data gathered specifically for the anticipated FOPEN-GXP program was collected during these tests, and it is anticipated to be made available to performers after contract award, if any. These data include moving human and animal, ground vehicle and boat radar returns, and other clutter and false targets against which discrimination algorithms can be developed and tested. Future data collections are anticipated, again under double-canopy foliage conditions, and this more challenging data set would become available to the FOPEN-GXP program for system development and testing.

The FOPEN-GXP program is motivated by limitations in operational utility of FOPEN radars in general and the FORESTER system, in particular, that were identified by users during field testing. Key limitations include a lack of tools to:

- a. Discriminate detections due to dismount activity from persistent detections due to wind-blown foliage, moving water (rapids), and other clutter;
- b. Discriminate detections due to human dismount activity from detections due to animal activity;
- c. Estimate dismount group position, size, and direction of travel;
- d. Identify options to modify the platform position and radar mode in response to exploitation results in real-time, and;
- e. Optimize planned platform positions and radar modes as part of pre-mission planning.

The solutions sought for FOPEN-GXP are a set of tools to address these limitations, integrate these tools as modules into an extensible FOPEN-GXP system workstation, and demonstrate them with A160/FORESTER data provided as Government Furnished Information (GFI). Other details associated with the sensor and processing will be discussed at Industry Day.

### **INDUSTRY DAY GOALS**

The purpose of the Industry Day is to outline the FOPEN-GXP program technical goals and challenges and to promote both an understanding of the BAA proposal requirements and discussion of synergistic capabilities among potential program participants. It is DARPA's desire to facilitate the formation of strong teams and business relationships in order to develop comprehensive, quality responses to any potential DARPA BAA for FOPEN-GXP.

Information on the anticipated FOPEN-GXP solicitation will be available at [http://www.darpa.mil/ipto/solicit/solicit\\_open.asp](http://www.darpa.mil/ipto/solicit/solicit_open.asp) following the publication of the BAA in FedBizOpps. It is anticipated that the FOPEN-GXP BAA will be released after Industry Day. If a BAA is released, then unclassified materials presented at the Industry Day may be posted to the IPTO webpage compiling questions and answers from the Industry Day.

### **REGISTRATION INFORMATION**

*The Industry Day will be classified and therefore attendance is limited to individuals US DOD SECRET clearances or higher.* Participants MUST register at <http://www.schafertmd.com/conference/FOPENGXP> no later than 1700 ET on 4 March 2010.

*All registrants must provide the following information:*

Registrant name and phone number

Company Name

Classified mailing address

CAGE Code

Facility Security Officer (FSO) name and phone number

Non-US citizens are required to submit a DARPA Form 60 “Foreign National Visit Request” to DARPA no later than **1700 ET on 4 March 2010** by email to [DARPA-BAA-10-07@darpa.mil](mailto:DARPA-BAA-10-07@darpa.mil) or fax to 703-741-1374.

Attendance will be limited to two individuals per organization until a maximum of 50 individuals have registered.

### **DATE AND LOCATION**

The Industry Day will occur on Wednesday, **10 March 2010 from 0800 ET to 1300 ET** at Schafer, 3811 North Fairfax Drive, 4th floor, Arlington, Virginia.

### **POINTS OF CONTACT**

Administrative Point of Contact: Mr. Philip Sage, [DARPA-BAA-10-07@darpa.mil](mailto:DARPA-BAA-10-07@darpa.mil)

Contracting Point of Contact: Mr. Stephen Davis, DARPA Contracting Officer, [DARPA-BAA-10-07@darpa.mil](mailto:DARPA-BAA-10-07@darpa.mil)