Request for Information
N00014-17-RFI-0006
Data Exfiltration Systems for the Forward Deployed Energy and Communications Outpost (FDECO) Innovative Naval Prototype (INP)

I. DISCLAIMER:

This announcement constitutes a Request for Information (RFI) for the purpose of determining market capability of sources or obtaining information. It does not constitute a Request for Proposals (RFP), a Request for Quote (RFQ) or an indication that the Government will contract for any of the items and/or services discussed in this notice. Any formal solicitation that may subsequently be issued will be announced separately through Federal Business Opportunities (FedBizOpps). Information on the specific topics of interest is provided in the following sections of this announcement. Neither ONR nor any other part of the federal government will be responsible for any cost incurred by responders in furnishing this information.

II. BACKGROUND:

Office of Naval Research (ONR), Code 32, is seeking information on data exfiltration systems for the Forward Deployed Energy and Communications Outpost (FDECO) Innovative Naval Prototype (INP). FDECO is defined as an expeditionary infrastructure for undersea energy and communications distribution in support of sustaining Unmanned Undersea Vehicle (UUV) operations. The purpose of the FDECO INP is to show that UUV missions can be supported autonomously by an unmanned undersea outpost with limited operator intervention or labor-intensive logistical support. The FDECO INP will develop a scalable, open-architecture, modular, forward-deployed prototype of coordinated undersea energy, data, and communications infrastructure for undersea vehicles and sensors. The prototype will be a network of modularized outposts that can be deployable by multiple methods and tailored to multiple undersea warfare missions.

Responses should must focus on providing tools, technologies, and/or methodologies to support data exfiltration from an undersea outpost to shore.

We will be having an informational meeting on Thursday October 19th, 2017 in Arlington VA to better describe the various CONOPs in which the Data Exfiltration Systems could be utilized. If you are interested in attending, please contact Mayer Nelson (mayer.nelson@navy.mil) by October 5th, 2017.

III. SPECIFIC INFORMATION OF INTEREST:

Responses to this RFI should provide the FDECO program concepts that will enable the exfiltration of data from an undersea node to a surface or land-based node. Concepts of interest should have the following desired features:

- The data exfiltration system should be modular and easily integrated.

- The systems can be either a permanent/stationary structure or a temporary/portable system or any combination.
- The undersea portions of the system must be survivable at a depth of 600 meters.
- The undersea portions of the system must be able to survive under water for at least six months.
- A system that can be interoperable with an existing Navy system(s) within three years is encouraged.

Responses should provide details regarding the following performance characteristics and attributes:

- Characteristics of the system
    - Communications modalities utilized (i.e. acoustic, optical, RF).
    - One-way vs two-way vs asymmetrical communications.
    - Size, weight and power requirements for the system.
    - Supportable data rate (or range of data rates).
    - Any latencies associated with the system impacting rate of transmission.
    - Expected communication range (distance), including impact of range on supportable data rate. If beyond line-of-sight communications is supported, identify any assumptions associated with range predictions.
    - Any system features that reduce the likelihood of intercept or detection of communications transmissions.
    - Expected vulnerabilities (if known) including likelihood of communication signals being intercepted.
    - Technology Readiness Level.
- Whether or not the system offers persistent connectivity or the degree of persistence (i.e. is system always available, or are there windows of availability).
- Dependence on other external systems (e.g. satellites) for communications (e.g. external dependencies).
- Any considerations for operating in a communications denied or degraded environment where traditional modes of data exfiltration (e.g. SATCOM) are unavailable or undesirable.
- How the data exfiltration method would be influenced and/or affected by external Navy assets, if applicable.
- Level of effort required to integrate into a Navy System.

IV. SUBMISSION INSTRUCTIONS and FORMATTING REQUIREMENTS

a) Responses are requested by October 31st, 2017. Any response received after this date will also be considered but may not be included in initial reporting or assessments.

b) All responses should be in PDF format and emailed to the technical point of contact: **Jose Chavez** email address: **jose.chavez@navy.mil**. The subject line of the email should read as follows "RFI: FDECO Data Exfiltration Systems".

   i. Unclassified/Classified RFI Responses: All responses should be unclassified. If desired, a classified supplement may be submitted separately. Please contact the Technical Point of Contact for directions on submission of any sensitive or classified information. All information received in response to this RFI that is

marked proprietary will be handled accordingly. Responses to this notice will not be returned.

c) Responses should not exceed 5 pages.
d) A suggested submission organization:
   i. Cover Sheet – RFI number and name, address, company, technical point of contact, with printed name, title, email address and date.
   ii. Table of Contents with page number
   iii. Technical data, including Technology Readiness Level
   iv. Rough order of magnitude costs

Additional Requirements:

1. The Government intends to review all responses received and reserves the right to use the responses to refine the requirement and develop a solicitation.
2. Responses will not be shared outside the Government and Government support contractors.
3. If proprietary information is submitted, it must be marked at the paragraph level to indicate those specific paragraphs that contain proprietary information.
4. All information received in response to this RFI that is proprietary will be protected against unauthorized disclosure in accordance with FAR Subpart 15.207, applicable law, and DoD/DoN regulations.

V. QUESTIONS AND POINT OF CONTACT

Questions of a technical nature regarding this RFI may be sent to the following Technical Point of Contact: Jose Chavez, SPAWARSYSCEN-PACIFIC, jose.chavez@navy.mil
Email: jose.chavez@navy.mil

Questions of a business nature should be submitted to: Surlean Darby
Office of Naval Research, Email: surlean.d.darby@navy.mil

All questions shall be submitted in writing by electronic email.