

REQUEST FOR INFORMATION (RFI)
ONR RFI Announcement # 14-RFI-0003
Title: Connector Concepts

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:

In March 2014, the Deputy Commandant for Combat Development and Integration (DC, CD&I) hosted a Connector Summit in Quantico, VA to discuss the roles and capabilities of vertical and surface connectors within the context of Seabasing and the recently approved Expeditionary Force 21 (EF-21) capstone concept. Discussions focused on necessary capabilities, development of courses of action for near-term and long-term connectors, and connector related applications.

ONR, in support of United States Marine Corps (USMC) technology requirements, and Headquarters USMC, Deputy Commandant for Combat Development and Integration (DC CD&I) is interested in obtaining information, concepts, ideas, and currently available and potential technologies that could enhance or enable at-sea transfer and littoral maneuver now and in the future as described in the Expeditionary Force 21 (EF-21) capstone concept. Information on the EF-21 concept is available on the Internet. Visit <http://www.mccdc.marines.mil/ef21> to access the document and related information.

III. SPECIFIC INFORMATION OF INTEREST:

1. Current Connector Capabilities and Potential Enhancements. ONR and DC, CD&I are seeking ideas regarding current and potential interface capabilities between current displacement and non-displacement connectors, to include, but not limited to: the Mobile Landing Platform, Joint High Speed Vessel, Improved Navy Lighterage System, Roll-on Roll-off Discharge Facility, Landing Craft Air-Cushion, Army Watercraft Systems (Logistics Support Vessel, LCU 2000, support craft, etc.), and related Multi-National craft and vessels to enable at-sea transfer of personnel, supplies, vehicles, and equipment between sea based platforms, both amphibious ships and strategic sealift shipping, at standoff distances between 30-100 nautical miles (nm) from shore, along with the capability to maneuver between the sea base and the shore.

2. Connector(s) After Next. ONR and DC, CD&I also desire ideas for new concepts and corresponding areas of research that lead to a “family of systems” designed to enhance

mobility, interoperability, survivability, and independent operational capabilities to enhance Seabasing and littoral maneuver capabilities as characterized in EF-21, with consideration of the following attributes:

- A. Connector Next with Heavy Payload Capability
 - 1. Heavier payloads (3 combat loaded USMC main battle tanks).
 - 2. Modular capabilities that accommodate twenty-foot containers and equivalent units (TEU).
 - 3. Increased range to enable standoff distances up to 65-100 nm from the shore.
 - 4. Desired speed of 18-25 knots fully loaded.
 - 5. Employment of amphibious bulk liquid transfer and off-shore petroleum discharge systems over terrain such as marshes and mud flats.
 - 6. Adequate force protection, e.g., self-defense capability, low radar signature.
 - 7. Ability to operate independently from an amphibious ship well-deck for periods of up to 7-10 days while conducting distributed operations.
 - 8. Support at-sea transfer/interoperability for ship-to-shore movement from current and future amphibious warfare ships, MLP, T-AKE, and INLS/RRDF and other sea-based platforms in order to support distributed operations.
 - 9. Connector should be able to operate fully loaded up to a significant wave height of at least 1.25 meters (4.1 feet) [sea state 3] or higher.

- B. Connector Next High Speed Sled
 - 1. A high speed sled dedicated to transport one Amphibious Combat Vehicle (~40 tons) from ship to shore in the assault wave.
 - 2. Desired speed is maximum possible but no less than 25 knots, fully loaded.
 - 3. Range at least 200 nm (ship to shore and return).
 - 4. Low signature.
 - 5. Inexpensive and lightweight.
 - 6. Ability to transport one twenty-foot ISO container for logistics support after initial assault wave.
 - 7. Provide, as an option, some level of autonomous/unmanned operation during ship to shore and return logistics support missions.
 - 8. Sled should be able to operate fully loaded up to a significant wave height of at least 1.25 meters (4.1 feet) [sea state 3] or higher.
 - 9. Provide a ride stability or motion compensation system for operating in the higher significant wave heights to reduce operator & crew fatigue.
 - 10. Ability to be efficiently stored aboard ship when not in use.

IV. SUBMISSION INSTRUCTIONS and FORMATTING REQUIREMENTS

- 1. Responses are requested by **Friday, August 29, 2014, 12:00 am Eastern Standard Time (EST)**. Any response received after this date will also be considered but may not be included in initial reporting or assessments.

2. All responses should be in PDF format and emailed to the technical points of contact: David Groves at david.groves@usmc.mil and Rob Maline at robert.maline@navy.mil. The subject line of the email should read as follows “RFI: Connector Concepts”.

Files too large for email can be sent via CD, by the same response date to both:

Robert Maline, Project Officer
Office of Naval Research
Applications Division, Code 302
875 N. Randolph St., Suite 1159A
Arlington, VA 22203

and

David B. Groves
HQMC, DC Combat Development and Integration
Seabasing Integration Division
3300 Russell Road Quantico, VA 22314

All responses should be unclassified. If desired, a classified supplement may be submitted separately. Please contact Mr. Robert Maline, 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.

3. Responses should not exceed five (5) pages and should be typed in 12-point Times New Roman font, single spaced, with 1-inch margins.

4. A suggested submission organization:

A. A cover letter (optional).

B. A cover page labeled with the heading “Connector Concepts” including the idea, concept, or product name, the manufacturer, manufacturer’s address, technical point of contact, telephone number and e-mail address, and at least one photograph or a graphic depiction of the item as applicable.

C. No more than three (3) pages including:

1. Narrative describing how the idea, concept, or product would enhance at-sea transfer and littoral maneuver capabilities as described above and espoused in EF-21.

2. Characteristics and, or specifications concerning the concept, idea, or connector as related to the capabilities, interests/focus items above, to include the below as applicable:

- (a) Platform/connector interoperability with other connectors and ships
- (b) Draft, beach access/grade (e.g., 1 – 40)
- (c) Speed, range, maximum operational sea state anticipated
- (d) Cargo deck area dimensions, deck strength, payload capacity (weight, number of personnel)
- (e) External dimensions (length, beam, height)
- (f) Number of people in crew, accommodations, endurance (independent transits/operations)
- (g) Propulsion description
- (h) Rough order of magnitude for unit cost in procurement
- (i) Description of the level of maturity (i.e. Technology Readiness Level)
- (j) Earliest availability for a system or technical demonstrations at no cost (other than travel) or risk to the Government.

5. Small Business Concerns, Historically Underutilized Business Zone (HUBZone) Concerns, Service-Disabled Veteran-Owned Small Business (SDVOSB) Concerns, Small Disadvantaged Business (SDB) Concerns, Women-Owned Small Business (WOSB) Concerns and Veteran-Owned Small Business (VOSB) Concerns are all highly encouraged to respond to this RFI.

V. QUESTIONS AND POINT OF CONTACT

Questions of a technical nature regarding this RFI may be sent to the following Technical Point of Contact:

Robert Maline, Project Officer
Office of Naval Research
Applications Division, Code: 302
875 N. Randolph St., Suite 1159A
Arlington, VA 22203
Email Address: Robert.maline@navy.mil