

## NEWS RELEASE

For Immediate Release

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### **Makai Selected for DARPA contract for Tactical Undersea Networks Architecture (TUNA) Project**

Makai Ocean Engineering, Inc. has won a competitive bid for a contract awarded by the Defense Advanced Research Projects Agency (DARPA) as part of a large effort in the area of undersea fiber optic-based communications networks, called the Tactical Undersea Network Architectures (TUNA). The TUNA program seeks to develop and demonstrate novel technology to restore temporary connectivity for existing tactical data networks in a contested environment using small diameter optical fiber and buoy relay nodes. The success criteria for the award was that, “Proposed research investigates innovative approaches that enable revolutionary advances in science, devices, or systems.”

Makai has been selected for a DARPA Phase 1 contract [as part of DARPA-BAA-14-32] that is focused on developing cable related components of the buoy node; a subsystem of the overall TUNA program. The buoy nodes interconnect the tactical data network and manage the undersea fiber optic network. They function as relays and energy sources, and should be rapidly deployable from existing platforms and have “plug, play and operate” functionality with tactical data and undersea fiber optic networks.

Makai expects to begin work on Phase 1 in early 2015, which is a fifteen month phase to develop the enabling technologies for the buoy node portion of an undersea fiber optic-based network. Initially, Makai’s work will be focused on modelling the hydro-mechanics of the small diameter fiber optic cable and buoy relay nodes under realistic dynamic, time varying, 3D environmental scenarios. Based on the modelling results, Makai will design and develop the hardware for an innovative inter-buoy cable management system to minimize tensile loads on the inter buoy cables as well as potential entanglement issues. Makai expects to complete the design in a follow-on Phase 2 effort, which will be solicited with a separate BAA following Phase 1.

ABOUT MAKAI: Makai Ocean Engineering, Inc. is an innovative ocean technology firm based in Hawaii, USA since 1973. Makai’s expertise includes submarine cable software and services, marine pipelines,

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Seawater Air Conditioning (SWAC), Ocean Thermal Energy Conversion (OTEC), underwater vehicles, and general marine engineering and R&D. Visit [www.makai.com](http://www.makai.com) for more.

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