Raytheon Building Barracuda Expendable Mine Neutralizer

BACKGROUND
Barracuda is a semi-autonomous, expendable mine neutralizer vehicle. It is designed to address a current capability gap for shallow-water neutralization. It will be deployed by the Mine Countermeasures (MCM) Unmanned Surface Vehicle and from the MH-60 helicopter, both modules of the Mine Countermeasures Mission Package of both variants of the littoral combat ship.

SCOPE
The initial value of the engineering and manufacturing development contract was $83 million, with options that, if exercised, would bring the potential total contract value to $363 million.

TIMELINE
The development contract was awarded in April. Program performance requirements are being established as well as early software and hardware design. Barracuda is currently preparing for a system requirements review, with the preliminary design review planned for the second quarter of fiscal 2019. Barracuda is able to maintain an accelerated schedule as a result of efforts undertaken as part of the Office of Naval Research Single Sortied Detect-to-Engage (SSDTE) MCM operations.

WHO’S WHO
David Chapman is Raytheon’s deputy program manager for Barracuda.

“The Barracuda was designed to autonomously reacquire bottom, volume and near-surface sea mines using a purpose-built sonar and electro-optical sensor for homing and target tracking. Barracuda will ultimately and autonomously perform mine destruction, once authorized by the operator using both sonar and optical sensors to position the vehicle to perform final mine destruction.

The Barracuda can be launched from any platform able to deploy A-Size sonobuoys. The Barracuda neutralizer comprises a unique and extremely mobile vehicle propulsion system, allowing for operation in harsh near-surface environments. The communications buoy provides a bridge between the vehicle operating below the surface and the deploying surface platform, and aids in precise navigation for the vehicle while operating underwater.

The Barracuda also features a modular battery and a modular warhead payload, which offers a significant increase in magazine capacity. When coupled with Raytheon’s AQS-20C mine-hunting sonar, Barracuda offers to enable a significant reduction in the time required to perform mine-clearance operations over current operational capabilities, as well as fulfill the Navy’s vision of full SSDTE MCM operations.

The Barracuda supports the Navy’s vision of in–stride mine clearance. Barracuda reduces the cost asymmetry between the threat and that of the capability needed to defeat it, making the minefield-clearing process more efficient and significantly less costly.”