

SeaRobotics to Develop Crawling Amphibious Breacher for U.S. Navy



An Assault Breacher Vehicle drives through a lane in a berm during breaching exercises aboard Marine Corps Base Camp Lejeune, North Carolina, 2014. The Navy is seeking an amphibious robotic breacher capable of neutralizing explosives. *U.S. MARINE CORPS*

STUART, Fla. – SeaRobotics Corp. has been awarded a U.S. Navy Small Business Innovation Research (SBIR) Phase I contract to develop a Crawling Amphibious Breacher (CRAB), an amphibious robotic crawler capable of proofing shoreline assault lanes and neutralizing explosive and non-explosive obstacles to ensure clear landing zones for armed forces personnel, the company said in a Sept. 15 release.

Phase I of the process (Navy SBIR 20.3) is to further develop an innovative but cost-effective means of demonstrating how SeaRobotics' proposed CRAB concept could operate in swarm formation to specifically disarm various mine types – buried and submerged – in surf and beach zones. As such, CRABs are required to be rapidly deployable from a surface or subsurface marine asset in coastal waters (up to 400 meters from shore) in depths up 12 meters (or approximately 40 feet.)

One of the other defined Key Performance Parameters is the capacity to drop GPS markers to accurately identify optimal assault lanes, made visible via a shared operating system that plots landing paths on a driver display aboard a command Amphibious Combat Vehicle (ACV).

“We are delighted to have been awarded this important SBIR Phase I contract,” said SeaRobotics president Don Darling. “Current advances in marine robotics are redefining what’s

possible in terms of tactical explosive ordnance disposal, and the challenge of developing an amphibious crawler capable of operating eight-hour missions above and below the waterline in sand, mud, and shell soil sea floor conditions is a natural extension of our R&D efforts at SeaRobotics to engineer the next generation of autonomous, uncrewed systems for a range of defense applications.”

Phase II of the Navy SBIR 20.3 process is to manufacture a scaled prototype to demonstrate system performance and test the required range of operational parameters. Results will inform the necessary refinements for a Phase III development plan and ultimately transition the proposed technology to Marine Corps use.