

Navy Unveils 'Game-Changer' Dive Helmet: 5 Things To Know

(PANAMA CITY (FL) NEWS-HERALD 09 JUN 16) ... Collin Breaux

NAVAL SUPPORT ACTIVITY PANAMA CITY — When Navy divers go underwater, conditions can be murky. Visibility can be low, sediment can be thick and light can be dim — or absent. All can be obstacles to salvage missions and other tasks.

But new technology being developed at the Naval Surface Warfare Center Panama City Division (NSWC PCD) — described as similar to the interface used by the superhero Iron Man or the video game “Call of Duty” — might be the answer to those challenges.

For several years, NSWC PCD scientists have been working to incorporate new technology into diving helmets. The result, displayed Wednesday at the base, is the Divers Augmented Vision Display (DAVD), described by base spokeswoman Katherine Mapp as a “high-resolution, see-through head-up display embedded directly inside of a diving helmet.”

The News Herald dropped by Naval Support Activity Panama City and found out five things you need to know about these new helmets:

1. Divers can get info as they need it.

Project engineer Dennis Gallagher said before the DAVD prototype, divers had told NSWC PCD engineers that if they had a display screen with real-time information or pictures, it would be a “game-changer.”

DAVD is that game-changer, giving divers real-time displays of text messages, diagrams, photographs and videos on a head-up display, technology that also is being used in smartglasses. If a diver forgets a few mission steps or how to do something, the team above the surface can send relevant pictures or information, Gallagher said.

That information details oxygen depth, tracks where divers are going on a map and gives sonar data while crews are underwater.

Optical engineer Richard Manley said the helmet also helps resolve the loss of communication with the surface when a diver is underwater. With the display, the above-ground team can let the diver know to return to land or to abort a dive if there’s an emergency.

The display is a change from relying only on pre-dive briefings, allowing for changes of plans. Mapp said divers can turn the display on and off and direct the above-water team to re-position data to different locations.

2. Helmets are produced locally.

While financial figures for the work weren’t immediately available Wednesday, the engineering team that has worked on the helmets said they have saved money whenever possible.

For example, instead of coming up with a new helmet for the technology, they updated current models to incorporate the display, Gallagher said. Features of the system also have been made right on base through a 3D printer.

“That really turns the timetable up,” he said. “We can make them right here on base literally in a day. It has been fantastic for the diving application.”

3. It’s still a prototype.

The DAVD system still is being tested. Navy divers so far have been testing the system in a lab, but Manley said he expects underwater testing to begin by the end of the year. If changes need to be made, they can be done swiftly and right at the base.

“Divers have loved it,” Manley said. “Any information we can give them underwater makes their job safer and more efficient.”

4. It’s gaining attention.

The DAVD helmet has been written about by national news outlets such as Fox News and TechCrunch. Gallagher said he has received plenty of good-natured teasing from his engineer friends for the widespread attention.

“It’s a little overwhelming,” he said. “It’s exciting. Typically what we do doesn’t blow up like this.”

5. This might only be the beginning.

Gallagher said he can see DAVD moving into the commercial diving world. Initial work by the engineering team was geared toward the Navy’s special operations, but there are opportunities for expansion.

The Navy counts about 1,200 divers among its ranks, according to Navy.mil. However, about 10,000 people in the U.S. alone are employed as professional divers, according to the U.S. Department of Labor, greatly expanding the potential use for NSWC PCD’s technology.

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