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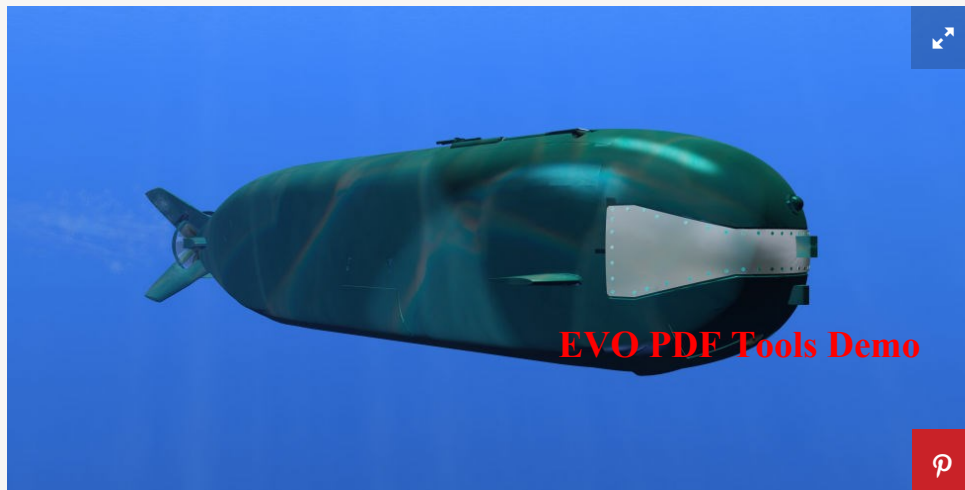
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The old one was actually more capable.



Lockheed Martin

By Eric Tegler Aug 10, 2016

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Ever get the feeling that the new car you just bought might not actually be as good as the previous model?

As we reported in July, Special Operations Command has hired Lockheed Martin to provide a miniature submarine for the Navy SEALs: the Dry Combat Submersible (DCS). Capable of carrying eight SEALs, the DCS would be used to infiltrate hostile areas, carrying soldiers to within reach of accessible coastlines. The submersible will be delivered in 2018, answering what SOCOM calls an "urgent need."

It's been urgent for a while. In fact, SOCOM actually had an operational mini-sub in 2003. The ill-fated Advanced Seal Delivery System (ASDS) was the predecessor to DCS, and while it died on the vine, it was arguably more capable than the new vessel.

KEEP THEM DRY

The key feature of the new DCS is that it will keep SEALs dry. They'll be fully enclosed inside a mini-submarine while in transit, reducing their exposure to cold water and fatigue. Up to now, SEALs have gone ashore from SEAL

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Delivery Vehicles (SDV). These are semi-enclosed submersibles in which the SEALs ride, exposed to the water while breathing from the vehicle's compressed air supply or using their own SCUBA gear.

The same "keep them dry" logic was the basis for the old ASDS. Designed and built by Northrop-Grumman in the 1990s, ASDS was 65 feet long, weighed 60 tons and, using electric propulsion, could travel about 125 nautical miles at a speed of around eight knots at a classified depth. The forthcoming DCS, which is based on Lockheed's S301 commercial submersible, is approximately 31 feet long, weighs about 30 tons, and uses similar electric propulsion. If we were to extrapolate from the S301, we'd say it probably can travel around 60 nautical miles at a depth of 190 feet.



The Nintendo Switch Was Hiding In Plain Sight All Along

THE PROGRAM WAS OFFICIALLY CANCELED IN 2006 AFTER ONLY ONE SUBMERSIBLE (ASDS-1)

WAS BUILT.



John Brandes, senior program manager, for Lockheed Martin, told IHS Jane's in July: "The difference between DCS and ASDS is displacement, length, and the payload capacity. ASDS was close to twice as long; it had a lot more displacement and could carry a lot more things."

But ASDS didn't pan out. The sub was plagued by technical problems, including noisy propellers and batteries that depleted more quickly than expect. There were also your typical cost and schedule overruns. The program was officially canceled in 2006 after only one submersible (ASDS-1) was built. The final straw came in November 2008 when ASDS-1 literally went up in flames while its lithium-ion batteries were being recharged at its Pearl Harbor base, exploding into a fire that burned for six hours.

A LESSER SUB?

That failure led to SOCOM 's present effort to buy a dry submersible off the shelf. Lockheed Martin's DCS program director, Erika Marshall, says SOCOM has essentially used the S301 as a technology demonstrator, evaluating various propulsion, battery, and other technologies before combining them in the new mini-sub. The contract with Lockheed Martin is for just one DCS for now. If SOCOM has the desire and funding to acquire more, there are options for two additional submersibles.

The DCS will have two topside hatches through which SEALs can exit upon reaching shore and enter when being picked up following a mission. It will also have a lock-in lock-out lower hatch through which gear or other payload items might pass. Whether it has active or passive stealth features or weapons capability is strictly classified.

One thing it does *not* have is the ability to be launched from a full-size submarine. The old ASDS was designed to be deployed from the Navy's SSGN *Ohio*-class guided missile submarines. In fact, the Navy converted four

SSGNs during the mid-2000s to allow them to carry and launch ASDS. DCS will only be deployable from a surface ship. The means of getting it off the deck and into the water have yet to be determined, though use of a crane or A-frame is likely.

The presence of a large ship putting DCS into the water 60 miles offshore is hardly clandestine or stealthy. The SSGN-deployed ASDS would have been much more difficult to detect. SOCOM will have to work out compensatory tactics if DCS is to be used successfully.

Yes, SOCOM needs a new way to deploy the SEALs, but you can't help but wonder if this is a step backward.

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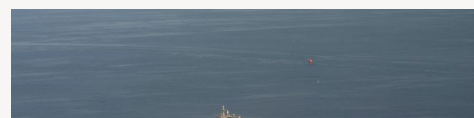
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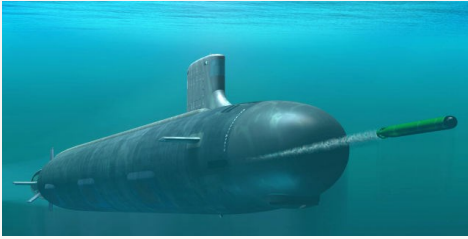
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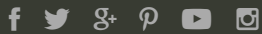
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