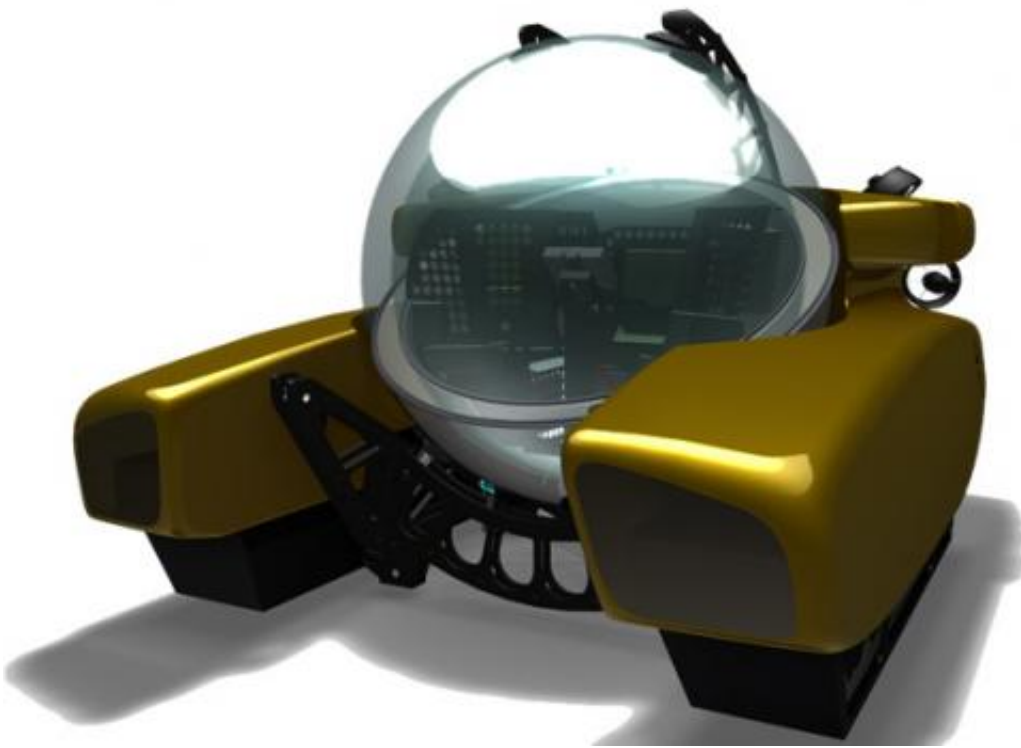


# New Triton submarine in race to reach ocean bottom

April 27 2011, by Deborah Braconnier

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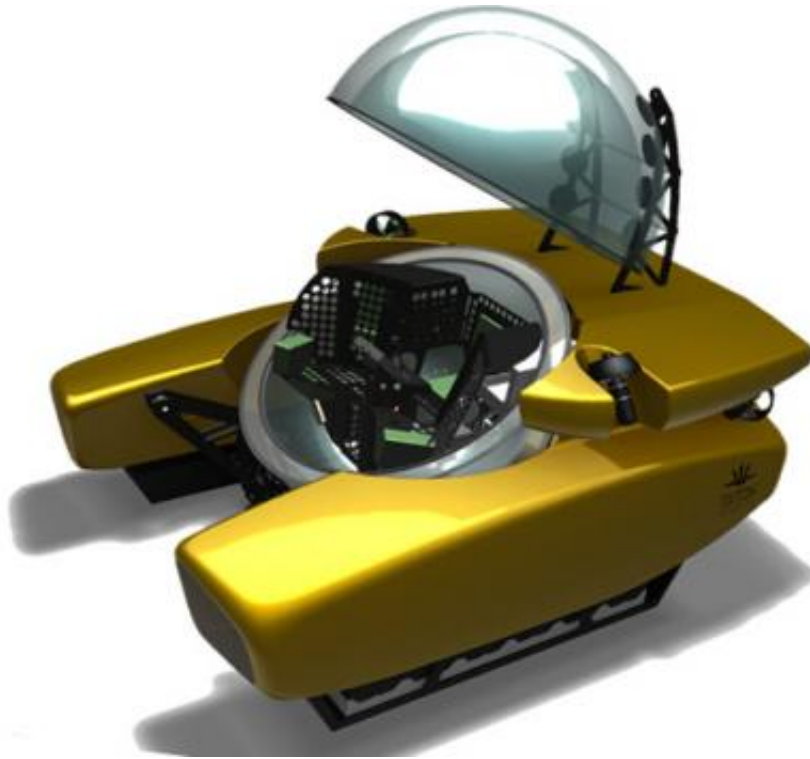
(PhysOrg.com) -- Step back to 1960 when Trieste, the first and only manned vessel, reached the deepest known part of the ocean called Challenger Deep in the Mariana Trench near Guam. No other vessel has ever managed to reach this depth of near 36,000 feet. In an announcement this week, Triton Submarines hopes to be the next to

reach this great depth in a newly designed submersible.

Triton currently designs submersibles capable of going to a depth of 3,300 feet and are predominantly made for yacht owners and scientists. Their new design, according to CEO Bruce Jones and his team, is called with Triton 36,000 and will be able to reach that depth.

Current submersibles use acrylic for the passenger compartments; however, this new design will be using a thick glass shaped in a sphere with a technique created by Rayotek Scientific, whose clients include 3M, [Boeing](#), DuPont and [NASA](#).

According to Rayotek CEO Bill Raggio, the borosilicate glass (soda-lime glass) gets stronger under compression, so the underwater pressure found at the ocean's bottom should not cause it to crack. Because of the fact that the expansion and contraction rates are different in metal and glass, areas where the two join can become an issue. Rayotek has created a new patent pending technique which turns the glass into a sphere and more details cannot currently be released.



Unlike the two-man Trieste, the new Triton 36,000 will be designed to hold 3 people. The glass [submersible](#) will be required to undergo extreme testing at a pressure rate of at least one and a quarter times that of the planned depth.



Triton1000

Joining in the battle to reach the ocean floor is James Cameron's [submarine](#) powered with an electric motor and made of composite materials. Richard Branson is also working on his flying underwater craft and is constructed with carbon fiber and titanium with a quartz viewing dome.

**More information:** [www.race2innerspace.com/](http://www.race2innerspace.com/)

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