SERMC 3D Lab produces another AM win for Navy

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By SERMC Public Affairs

NAVAL STATION MAYPORT, Fla. – Additive Manufacturing (AM) 3D printers continue to enable sailors across the Navy with continuity of operations of the fleet's warships. New high-resolution 3D printers at Southeast Regional Maintenance Center (SERMC) are adding the capability to manufacture intricate replacement parts on-site, directly impacting the command's ability to meet established availability deadlines and increase a naval ship's presence at sea.

Recently, USS Farragut (DDG 99) was nearing completion of a

maintenance period at SERMC, when the ship's personnel discovered an irregularity with a radar system. LTJG Anton Tyree, USS Farragut Electronics Material Officer and ship's personnel identified a malfunctioning part, and as the solution, decided to consult with SERMC to produce a replacement part.

"I felt this part was a great candidate for my first 3D print design for SERMC, said Tyree. "I went to work providing as much detail as possible on the form about the part."

SERMC's Additive Manufacturing coordinator Chief Machinist Mate Nicholas Heinrich reverse-engineered the part in about 40 minutes and added the data into a computer aided design program for printing. A replacement part was produced from conception to completion in a total of 3.5 hours.

"The original part was injection molded and the 3D printed version was made with more rigidity than the original," said Heinrich, who also printed an additional replacement part so the ship would have an extra while at sea.

"If any ship on the waterfront needs the same part, we can manufacture a new one in about two hours," added Heinrich.

"This accomplishment is another historical first for our 3D Lab here," said Capt. Justin Dowd, SERMC commanding officer. "Today we demonstrated that if a customer on the waterfront needs something quickly, they can rely on SERMC's talented workforce and new printers to deliver a high-quality solution to the warfighter in a short period of time."

This new part has been underway for several weeks and is proving its ability to stand up to the demands of naval ships operating at sea.