



WHAT IS PRINT THE FLEET?

- The scope of this project includes developing procedures for building parts, qualifying parts, delivering parts, and training non-engineers in the use of 3D printers.
- NAVSUP (Naval Supply Systems Command) is working with OPNAV and CDSA Dam Neck to help identify printable parts and create a suitable infrastructure to host files and bring these parts from the engineer to the warfighter.
- Feedback from all users will be recorded to continually improve processes and procedures.

“When advanced manufacturing and 3D printing becomes widely available, we envision a global network of advanced fabrication shops supported by Sailors with the skill sets and training to identify problems and build and make products. In some ways, Sailors with this expertise could be considered “military MacGyvers” that help us reduce costs and solve logistics problems on the fly.”

— VADM Phil Cullom, OPNAV N4, addressing Sailors and civilians attending the First-ever Maker's Faire held at CDSA June 2014. See more of Admiral Cullom's address at: <http://www.youtube.com/watch?v=ibaujmm1ToY>

FUTURE OPPORTUNITIES

CDSA Dam Neck's location in Virginia Beach enables engineers to provide direct support to the Fleet in the Hampton Roads area.

This allows CDSA Dam Neck to work with the local military to develop a systematic approach to AM, and, through Print the Fleet, pave the way for our warfighters to have 3D printing access.

In the future, it is expected that the warfighter will be able to print parts worldwide, including aboard a vessel.

Have an idea for a printed part?

Want more information?

PTF@navy.mil



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PRINT THE FLEET



PRINT THE FLEET is a project dedicated to introducing additive manufacturing to the Fleet.

The project is led by the Office of the Chief of Naval Operations (OPNAV), Combat Direction Systems Activity (CDSA). Dam Neck is the technical lead.



ADDITIVE MANUFACTURING

Additive manufacturing (AM), also referred to as 3D printing, is a type of advanced manufacturing, is a process of constructing three-dimensional objects by adding layers of material in lieu of removing material (subtractive manufacturing). Shapes can be created not possible through traditional manufacturing techniques.



A FORTUS 400mc will be used at CDSA Dam Neck to provide AM support for the Fleet. This printer has the ability to print in ABS-ESD7, polycarbonate and ULTEM 9085.

CDSA Dam Neck has partnered with other warfare centers to print parts that the Fortus 400mc is not capable of printing.

CURRENT NEED

Traditionally, spare parts for the warfighter are either:

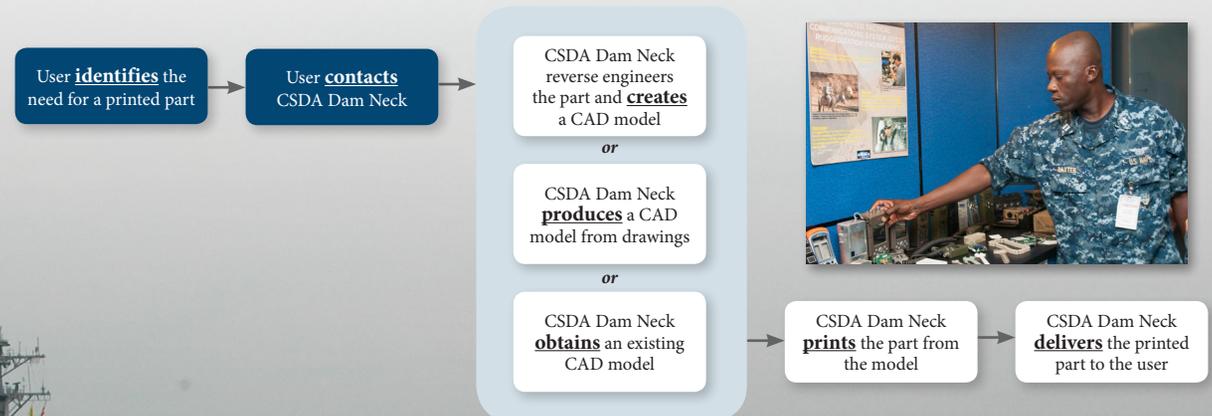
- stored nearby, taking up much-needed space
- shipped to the warfighter when requested, which can be time consuming and costly
- or obsolete and need to be redesigned and manufactured, which can be even more time consuming and costly

BENEFIT TO THE WARFIGHTER

AM has the capability to bring parts to the warfighter more quickly and cost effectively.

By printing parts on nearby military installations (or eventually shipboard), inventory can be reduced and shipping costs can be nearly eliminated for many items.

Within days or hours of identifying a needed part, a model can be designed and uploaded to a database for printing, allowing for a more rapid response to the warfighters' needs.



ADDITIVE MANUFACTURING CAN SAVE TIME, DECREASE COST, AND REDUCE INVENTORY FOR THE U.S. NAVY.