

T TRANSITIONS

SENVOL SPOTLIGHT



Senvol Software Enhances Additive Manufacturing

By Tara Clapper

In late 2020, the United States Army Research Laboratory awarded Senvol a contract for the application of the Senvol ML software. [Senvol ML machine learning software](#) enhances the ability of the user to rapidly develop or qualify additive manufacturing (AM) materials and processes. This contract is facilitated by the Advanced Manufacturing, Materials, and Processes Program (AMMP) and complements the STTR.

Senvol ML's algorithms permit a flexible AM process, allowing for more rapid implementation of AM. With this technology, the Army can apply Senvol ML software to analyze data from any AM machine, material, or process.

Senvol had a Phase I STTR contract via the Office of Naval Research (ONR). In year two, Senvol won a Phase II contract. The program is currently in the Phase II Option period, with funding from a variety of different sources, including Naval Systems Sea Command, Naval Air Systems Command, Air Force Research

Laboratory, and ONR. The fact that there are four DoD entities funding the program demonstrates the breadth of the Senvol ML software's application. Overall, the Navy contract had four phases: Phase I Base, Phase I Option (completed at end of 2017), Phase II Base (completed November 2019), and Phase II Option (estimated completion, end of March 2022).

"We have already had various transition agreements for the additive manufacturing machine learning technology that we developed during our Navy Phase II STTR, spanning both the DoD and commercial sectors. For example, the Senvol ML software is being used to support a missile application with the U.S. Army via the AMMP program," explains Zach Simkin, President of Senvol.

An investment in Senvol ML ultimately results in cost savings for the Army, which will save on the typically laborious material and part qualification process. This increase in speed contributes to warfighter readiness, says

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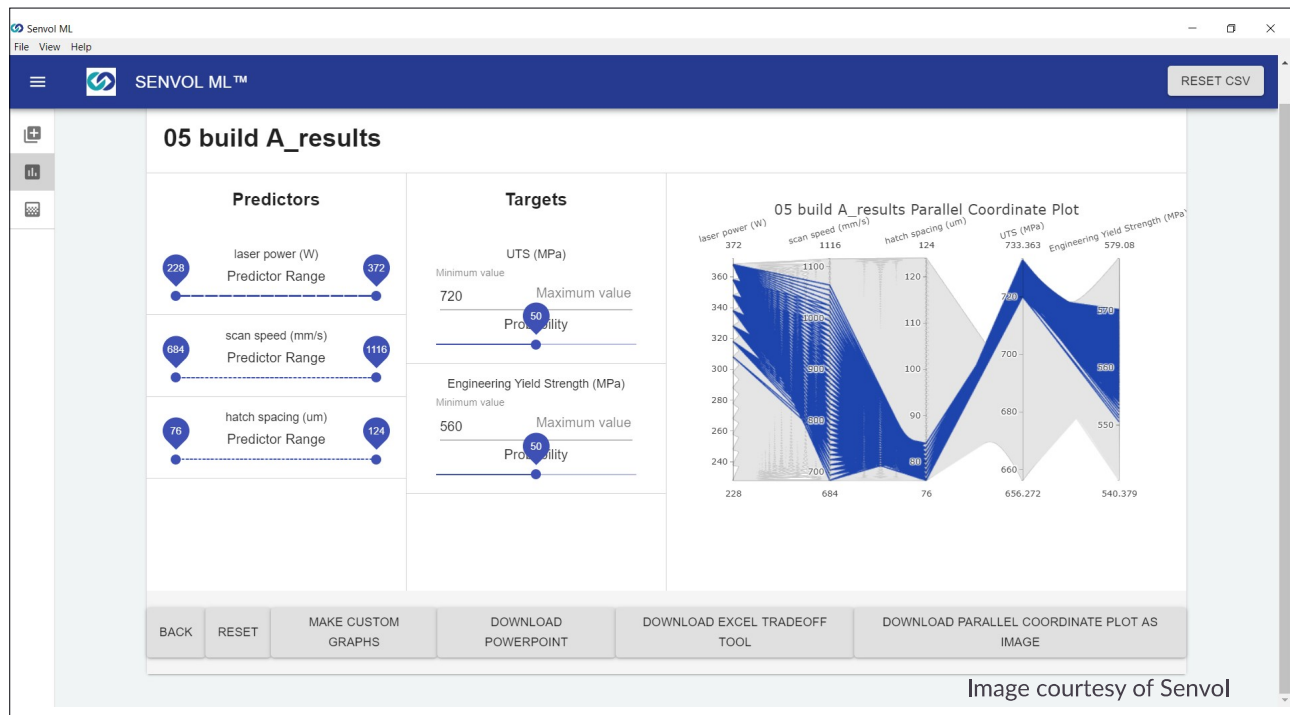
Senvol Software Enhances Additive Manufacturing (continued)

Senvol President Annie Wang.

Senvol makes “machine learning software for additive manufacturing, with users in various industries. The software is used to support qualification of additive machines and materials, rapidly optimize process parameters, predict material properties, and support quality assurance. The software tool helps organizations minimize data generation costs,” Simkin describes.

Consulting, run by Dr. William E. Frazier. The National Center for Manufacturing Sciences administers this Army contract via the AMMP. The Army award spans September 2020 through September 2022.

Simkin notes that this is one such example of commercialization success in which the Department of Defense finds multiple uses for a dynamic product. “The rate at which we are seeing transition success outpaces the typical,” Simkin notes.



Screenshot of the Senvol ML software

Currently, Senvol is in the process of executing its AMMP program as well. AMMP funds programs pertaining to various advanced manufacturing and materials.

Senvol’s partners on its program are Lockheed Martin Missiles and Fire Control, EWI (Edison Welding Institute), and Pilgrim

Additionally, Senvol sells its machine learning software tool to multiple commercial customers.

To learn more about Senvol, visit the company website at <http://senvol.com/>.

