



## MachiningCloud Success Story

Benjamin Strobel, Chief Machinist, Terps Racing  
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### MachiningCloud Accelerates CAM Programming for UMD Racing Team

As one of the world's leading research institutions, the University of Maryland provides a collection of digital manufacturing resources as a service to the campus and surrounding community. These resources, called Terrapin Works, range from consumer grade 3D printers to high-end production systems capable of creating complex parts.

One of these resources is Terps Racing, an award-winning racing program. Team Formula is a highly-ranked student-led team whose members design, construct, test, and race a formula race car in national Formula SAE® events. FSAE is a student design competition organized by SAE International (formerly Society of Automotive Engineers).

Ben Strobel, Mechanical Engineering undergrad, Senior Lab Engineer, and Chief Machinist for the Formula SAE Team is responsible for making parts for the racing team as well as outside businesses in the area, while training other students in how to use the two CNC machines on campus — a GENOS M460-VE vertical machining center and a GENOS L200E-M turning center.

Along with his many roles at UMD, Ben is responsible for procuring and replacing cutting tools for the CNC machines. Since Ben's days are packed with studying and working, he relies on MachiningCloud to quickly search for tools in its digital catalogs and add them to his tool list in the App.

*"It is really convenient in checking that tools/inserts/tool holders are compatible, and finding order numbers."*

#### The MachiningCloud Solution

After updating and reviewing his tool list in MachiningCloud, Ben sends a list of the required tools and tool numbers to the university's purchasing department. Since many of the tools are simply reorders, it's convenient to keep his tool list in MachiningCloud.

Beyond easily searching for the right tools and assembling his tool list with MachiningCloud, Ben also uses the export feature, which has saved him significant time in defining tools and programming jobs.

Team Formula recently migrated from a legacy CAM system to ESPRIT CAM software for their expanding CNC programming needs. ESPRIT is a MachiningCloud partner, which means that Ben can export his entire tooling job from MachiningCloud and bring the tool data directly into ESPRIT to create an accurate virtual replica of his tool list.

#### The Challenge and the Outcome

Defining cutting tools one-by-one in a CAM system can be time consuming, especially for turning inserts. MachiningCloud is continuously refreshed with the newest product data from top tool manufacturing partners. This ensures the tool geometry is the most accurate available, so keeping tool data up-to-date in a virtual tool library is a snap — one benefit of having tooling data on the Cloud.

The savings in time that it takes to search for the right cutting tools through various resources allows Ben to find all he needs in one place — no need for him to check multiple catalogs or websites.

### UNIVERSITY OF MARYLAND

**PROBLEM** Time consuming process of setting up cutting tools in a CAM system.

**SOLUTION** Downloadable geometric data from tool manufacturers in MachiningCloud.

**RESULTS** Quick and accurate tool data for CAM programming and simulation.



- Simple Steps
- Maximize Efficiency
- Increase Accuracy
- Better tooling decisions



Select tools



Build assemblies



Verify availability



Obtain speed & feed recommendations



Download data

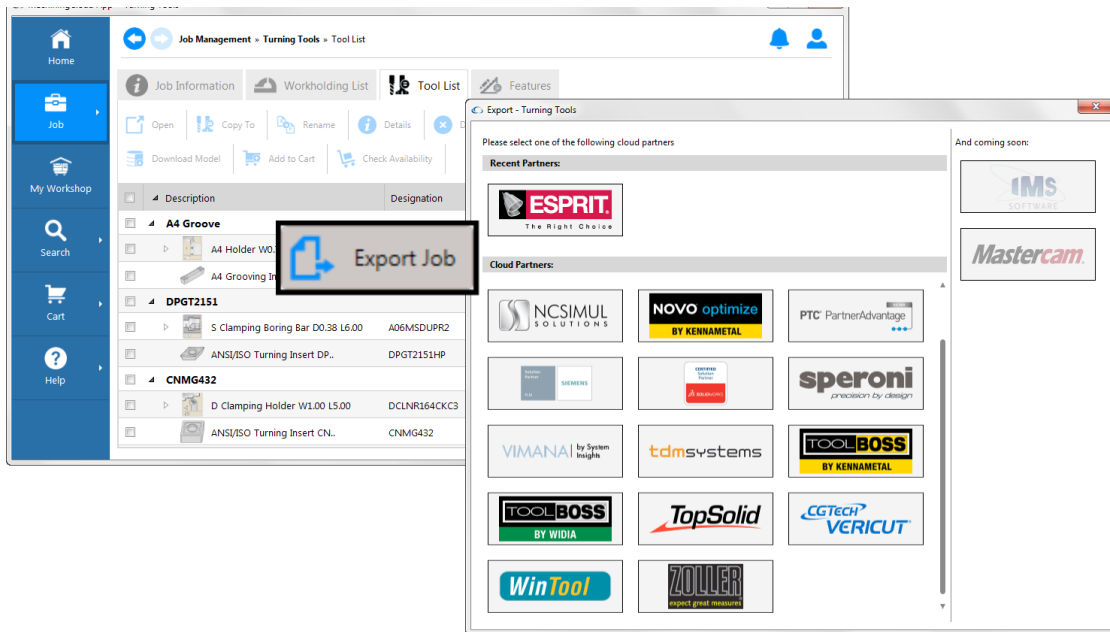


Collaborate with team

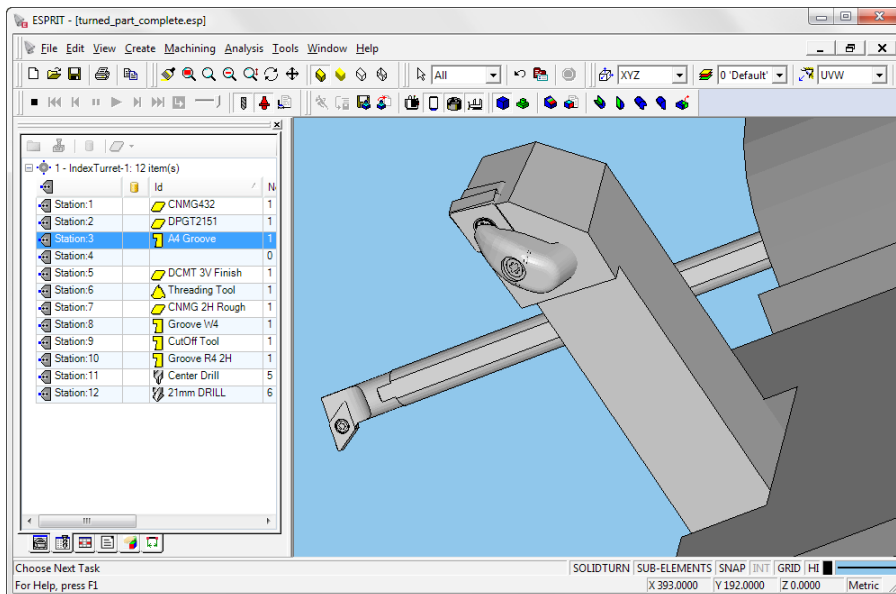
Once he builds his tool list in the App, Ben can continually reference his library in the App for reorders or access those tools for other jobs. Furthermore, and most helpful to him, is the ability to export his entire tooling job directly from MachiningCloud to his ESPRIT CAM software to create replica 3D models to ensure accurate CNC programming.

### Pearls of Wisdom

*"The feature I use most by far is exporting tool geometries into ESPRIT. I also use it to check tool dimensions to ensure that my libraries are up to date. Otherwise, generating tool geometries is difficult, and very easy to mess up."*



Export data for an entire tool list from a MachiningCloud job to your choice of cloud partners.



Complete tool data from MachiningCloud makes tool setup in other applications fast and easy and simulations more reliable.

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