



## Welcome to the ModuleWorks Newsletter

Welcome to the ModuleWorks newsletter with all the release and company news. This edition coincides with the release of our 2012.12 components, the 3<sup>rd</sup> major update of 2012.

2012 has been another good year for the ModuleWorks team. Highlights include the successful launch of the new 5-Axis MultiBlade product and a number of additional partners using our simulation technology.

Fall was a busy tradeshow season for the ModuleWorks team. Our booths at IMTS in Chicago and Euromold in Frankfurt were busier than ever and we visited a number of other fall shows to catch up with partners and meet new prospects. Check the website for our 2013 schedule.



## Latest Release – ModuleWorks 2012.12



- 10am CEST
- 5pm CEST

December marks the release of the latest version of the ModuleWorks components, 2012.12. As usual, we continue the theme of adding a broad range of enhancements across each of the products and have many new machining and simulation features.

We run What's New webinars with each release. Look out for your invite for these with each release. Click the links to the left to register for the 2012.12 18<sup>th</sup> December Webinars.

### 5-Axis Machining

SWARF machining has been redesigned to simplify and speed up programming. Automatic tool placement to give best fit contact between tool and surface is now the default setting and eliminates the need for manual settings. Geometry selection is easier with automatic side selection and multiple surfaces or entire bodies can now be specified as input.

A new Port machining product provides a complete CAM solution for port type geometries. Highly automated for fast programming, the new product provides roughing and finishing along and around the port with automatic area, side and spine detection.

Additional tool control options have been added to aid collision avoidance and ease of use. Automatic tilting can be used to tilt the tool away from collision with the tool tilting away in either or both the lead-lag and side direction.

5-Axis laser and wire application have improved capability. Markers can be used for laser machining to indicate corner motion and these can be used to lower power setting to avoid burning of the part. Wire EDM application can now specify the initial drill hole and use this as the start position for the toolpath.

### 3-Axis Machining

A new parallel roughing strategy is available for efficient machining of longer parts. The toolpath is a parallel cut pattern with user specified depth increment trimmed to stock to minimize air cutting.

3-Axis machining now includes engraving capability for machining of lettering and other fine detail. Both roughing and finishing are provided.

All 3-Axis strategies now allow user specified feed rates for each of the different link moves between passes and regions of the toolpath.

### Simulation

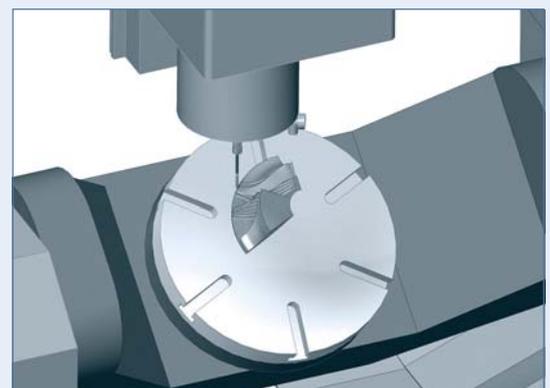
Stock removal using the 3-Axis and Turning Cutsim engines now provides the option to automatically remove free floating 'chips' generated during simulation.

There is now improved support for insert based cutters. These tools have a non-cutting region at the center of the tool; collision detection and material removal now handles this part of the tool as such.

Additional rendering options are now provided. A background watermark/logo (company logo) can be specified and wireframe geometry can also be displayed to give an improved visualization of 5-Axis motion.

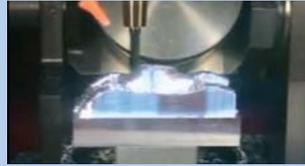
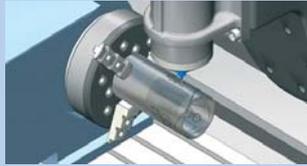


Best Fit SWARF machining



Simulation of SWARF machining

## Latest videos online



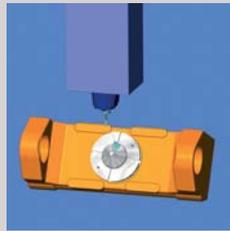
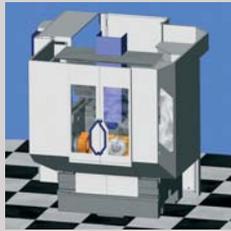
See these and more at [www.youtube.com/moduleworksvideo](http://www.youtube.com/moduleworksvideo). Also see the ModuleWorks tutorial channel at [www.youtube.com/moduleworkstutorials](http://www.youtube.com/moduleworkstutorials) for interactive tutorials to be used in conjunction with our online help.

## Tech Tips Tech Tips Tech Tips

### Machine Simulation

ModuleWorks Machine Simulation has some good features to allow users to quickly investigate areas with problems and drill down to the important geometries. There are different modes for machine and work piece focus that allow you show different aspects of the simulation but there is also a simple naming method to control the visibility of the important pieces of the machine by following the steps below:

- ▶ Enter Edit Machine mode.
- ▶ For each of less important graphical components, suffix their names using the letters 'mh\_' (so you have names such as 'mh\_case' and 'mh\_floor').
- ▶ Save the machine.

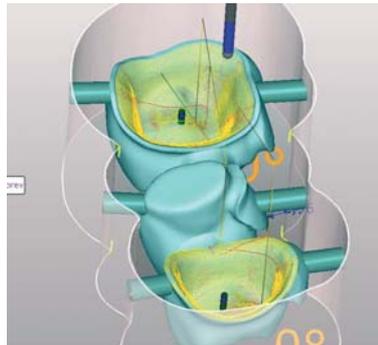


## Partner Focus: exocad GmbH

We recently confirmed our partnership with leading dental industry CAD/CAM vendor, exocad GmbH who provide a complete CAD/CAM system for customized dental applications, targeted at the OEM market.

The latest addition to exocad is exocam, a fully featured, easy to use CAM solution for dental manufacturing supported by state-of-the-art ModuleWorks 3-5 Axis machining technology for fast and accurate toolpath generation.

Maik Gerth, exocad CTO comments, "We looked at different alternatives for tool path generation, including the 'make or buy' comparison, and it was a clear choice to integrate ModuleWorks technology, to quickly expand our 5-axis CAM product range."



# exocad

### Moduleworks Partners



## Meet the TEAM



**Christine Pranzas**  
*Software Developer*

Christine is based in our head office in Aachen, Germany where she is a part of the 5-Axis development team.

Christine holds a degree in Computer Engineering and has recently attained her Masters in cooperation with ModuleWorks. Her final thesis was entitled "Optimized NC-toolpath calculation for 5-Axis SWARF machining", an ideal background for her present work with ModuleWorks.

Since completing her Masters she has worked full time for ModuleWorks and has been working on 5-Axis SWARF milling and the newly introduced capability for 6-Axis chain saw machines. She is also involved in a number of European-wide research projects.

Outside of work, Christine enjoys sports. She has also made her own range of clothes and is currently learning Spanish.

### Find us online

[www.moduleworks.com](http://www.moduleworks.com)



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