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reThink
Engineering, Inc.

Volume 2 Issue 2
2nd Quarter 2008

UPCOMING EVENTS:

Moldmaking Expo
April 23 & 24, 2008
Novi, Michigan

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Newsletter

Spring 2008

GibbsCAM 2008 Enters Beta Testing

GibbsCAM 2008, v9.0, entered Beta Testing in April. Assuming all goes well, we expect that the final release will be in mid-summer. Should a Gibbs user wish to participate in the Beta test program, they should contact reThink Engineering. There are a set of reporting requirements and other qualifying criteria to participate and users should understand these prior to signing up.

Resellers, including reThink Engineering, got a copy of the software at the International Reseller Conference in California during the second week in February. That distribution was accompanied by three days of training.

While there are many new enhancements, such as unlimited undo, viewports, new preferences and new plugins, the major enhancement is the Advanced 3-D Machining Module. This was acquired from another company and integrated into GibbsCAM. There are ten new processes a user can choose from to generate toolpath. The Advanced 3D Machining Module will create interim stock shapes and calculate the next process from these shapes. Users will have more flexibility in defining stock without creating stock models. The module uses a multi-threaded processing strategy which allows users to stack calculations and even calculate multiple operations at the same time. A process manager shows the calculation processes and tracks their progression.

Toolpaths generated from the Advanced 3D Machining Module are very efficient and eliminate many of the wasted moves common with other methods. The expectation is that users will utilize this module as a default and go back to the existing methods only as a fallback.

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MDD Files for GibbsCAM

As we all anxiously await GibbsCAM 2008, there are a few things that can be done to prepare. Aside from re-evaluating PC hardware, running the application, and upgrading to multi-core processors, building our MDD (Machine Definition Document) files is an excellent step.

The MDD has been with us since the release of v7, several years ago. Initially this was used only for Multi-Task Machines and helped define the tool groups and various axis rotations. In GibbsCAM 2008 (v9.0), users will be given a new option in Cut Part Rendering. In addition to the normal CPR and Flash CPR, Simulation has been added. When selecting this new option, the simulation will look at things like tool change position. If no tool change position is defined, the simulation will do tool changes at part origin, X0,Y0,Z0. The MDD is the place to identify this and other machine details..

reThink Engineering will be introducing a 1 day class about MDD creation and maintenance. These will be offered beginning in May and will cost \$250. Look for a schedule on our website, www.rethinkeng.com. ■

reThink Engineering, Inc. is Proud to Sell, Service and Support the fine Software Products from:



TopSolid 2008 Ships

TopSolid 2008 began shipping to maintenance customers in March. The new DVDs should be in the hands of all TopSolid maintenance customers at this time.

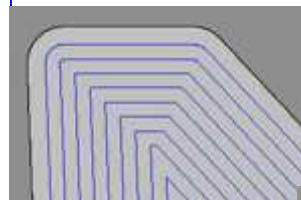
The development team was slightly ahead of the administrative team and permanent license codes for the new version are not yet available. Missler has indicated that permanent codes will be shipped prior to the summer holiday (sometime in late June/early July). Don't ask, we don't understand it either!



VoluMill

*A New Offering from reThink Engineering
Dramatically Reduce Pocketing Time*

VoluMill is a new product that works inside GibbsCAM 2008. It works as an internet service and generates toolpath that keeps cutters more fully engaged than standard toolpath. This allows you to mill at higher speeds and with deeper depths of cut. The toolpath is non-traditional as illustrated below:



Traditional toolpath for a pocket.

VoluMill toolpath for the same pocket.



VoluMill precisely manages material removal rates to enable your machine tools and cutting tools to perform at peak efficiency, removing material dramatically faster than with traditional toolpath strategies. VoluMill develops toolpath that maintains a constant material removal rate. This keeps pressure on the inserts and results in less wear on the tool. In pocketing applications, the increased speed is significant. Users can reduce their machine time for pocketing by roughly 50% .

VoluMill is sold on a monthly subscription basis. All toolpath calculation is done on the Internet. The interface into Gibbs was developed by Gibbs software engineers.



Call us for a demonstration!

GibbsCAM 2008

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Users can expect a rollout presented by a Gibbs Application Engineer. With so much new material, reThink Engineering will also offer a two-day class at reduced rates for maintenance customers. Schedules will be announced as the release date gets closer. ■

Top Secret: TopSolid

Missler software is preparing to reveal its newest update for TopSolid. This new version is set to be the “X” build or as you will learn to know it, TopSolid version 7. The new version is a complete rebuild from the bottom up. The development team at Missler Software took their knowledge of not only the CAD/CAM world but also the world of Microsoft Windows®. This new version is going to be unlike anything you have ever seen.

Imagine if you can a CAD/CAM package that has all of the exact functionality of Windows®. The ability to point to a feature on a part like a chamfer, click on it, and then drop and drag that information to another portion of the model OR to a different model in a different window all together. Cut, copy, and paste anything at anytime. If you can do it in Windows®, you will be able to do it in TopSolid version 7!

Missler will slowly begin to show off this new build of TopSolid throughout the year. If you attended the End-User conference in Chicago you saw a glimpse of the new software. It was very exciting for all! So keep your eyes open for this new and revolutionary new software! ■



Pitco Products was founded in 1958 to serve the aerospace industry. They still focus on making the best spinners in the industry. A spinner is the “nose cone” in front of a propeller on prop aircraft.

The process for making spinners has been largely manual from the beginning. A blank piece of aluminum (usually) is put on a spinning machine and an operator uses an axe handle to push the blank over a form. The part is heat treated. Once treated, the part is hand polished to a mirror-like finish. A protective coat is put on the part . Holes are then drilled for mounting and cutouts for propellers are milled.

Pitco began exploring ways to automate portions of the process to improve repeatability and consistency, thus reducing expensive rework and scrap. Over the past several years, they have added their own heat treat oven and become NadCap accredited. Pitco added an NC controlled waterjet for cutting blanks and other smaller parts.

Pitco has had a Milltonics 3-axis mill for many years and decided to add a 4th and 5th-axis capability to better automate the drilling and milling on the spinner shells and bulkheads. A Troyke trunion/table was added to provide 5-axis capabilities.

The final piece of the automation puzzle was a CAM application to program the newly enhanced Milltonics mill.

Since nobody at Pitco had ever programmed a 5-axis part, a CAM system that was easy to learn and use became critical. Local customer support was also key. After evaluating a number of CAM offerings, Pitco selected TopSolid as the last piece of the puzzle.

Ross Freimuth, the reThink Engineering Application Engineer on the project developed an accurate model of both the machine and the Troyke table. He then developed the post processor, taking a standard 3-axis Milltronics post and adding the 5-axis rotations and processes.

Tom Heyne is the Pitco project leader and lead programmer. He has learned both the CAD and the CAM side of TopSolid to handle the programming. Pitco’s customers are aerospace, so Tom has the unenviable task of dealing with CATIA files on a regular basis.



This project has paid off for Pitco as they project a 300% growth rate for 2008. This is leading Geoff Hoefflin, Pitco GM, to purchase a new, bigger, building.