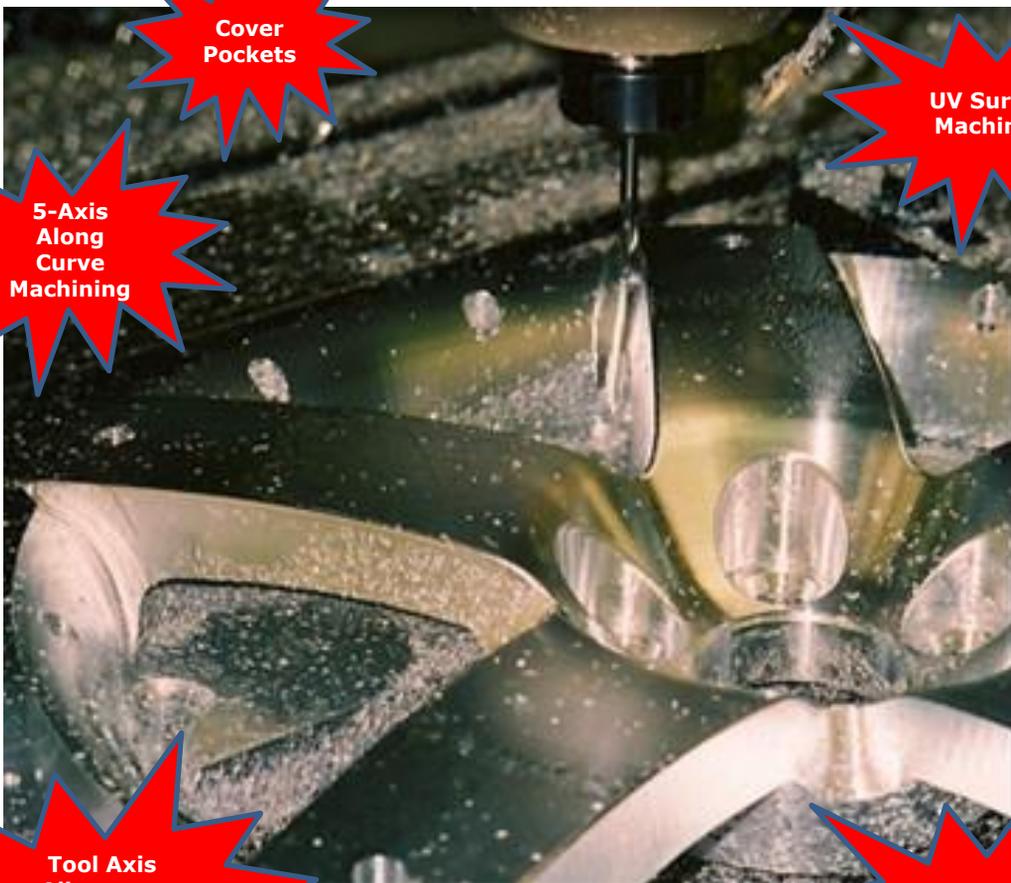


NCG CAM

NCG CAM Solutions Ltd.

NCG CAM - V14.0



**Cover
Pockets**

**5-Axis
Along
Curve
Machining**

**UV Surface
Machining**

**Tool Axis
Alignment
Curves for 5-Axis
Along Curve
Strategy**

*Image courtesy of : Concept Tooling, UK
<http://www.concepttooling.co.uk/>*

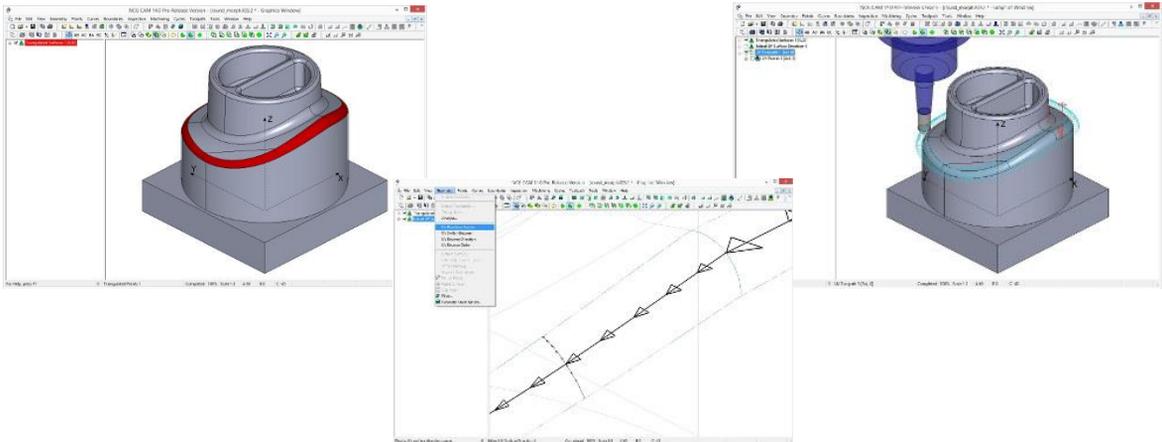
**Tools to Align
3+2 Axis**

New Features for NCG CAM V14

NCG CAM New Features V14– Base Module

UV Surface Machining – Part 1 - Provide Multiple Surface UV Machining

This new feature will allow the user to select either a single surface, or a series of appropriate adjacent surfaces, and then to generate machining passes using the selected surfaces and the underlying UV direction parameterisation. This can be done by either a given number of passes, or a step-over distance.

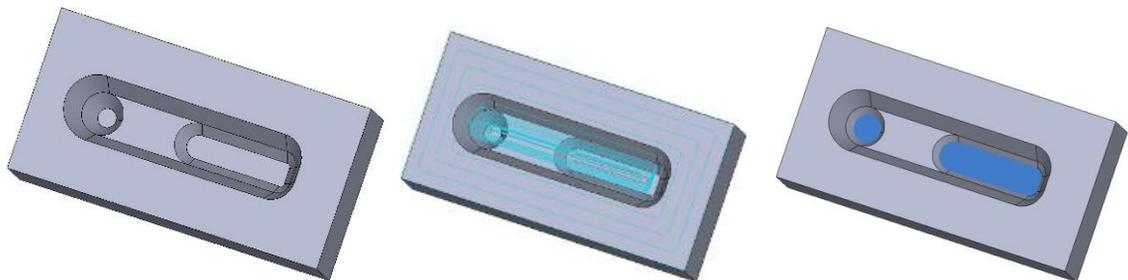


This is not totally automated at this stage and requires the user to investigate the UV surface parameters with a view to swapping them to align them to a common machining direction. The UV directions are indicated by arrows.

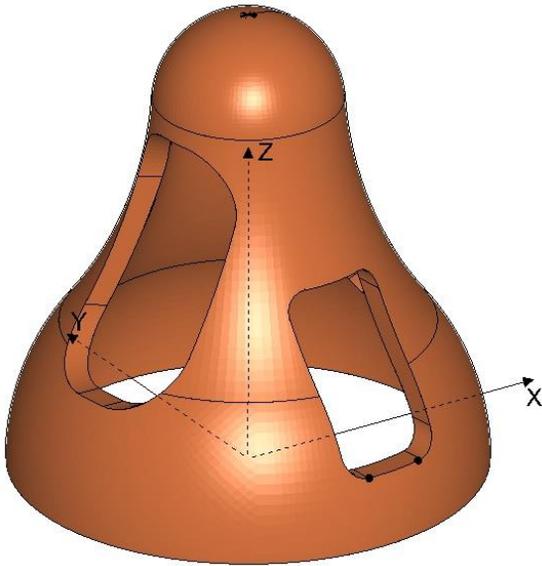
Cover Pockets

New functionality is now available to allow the user to create planar patches from curves, machining passes, or remaining passes.

Creating planar patches from the highest inaccessible passes in a Roughing Toolpath will cover and protect pockets of remaining stock, preventing smaller cutters falling into un-machined regions.



Tools to Align 3+2 Axis



New tools are now available to help the user to align 3+2 Axis boundary planes.

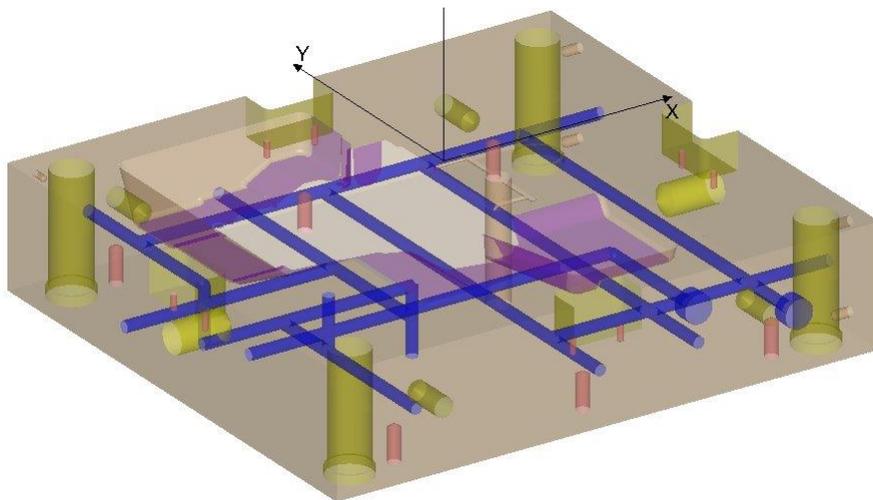
Boundary alignment is a particular problem when there is not a planar surface with a suitable normal to orientate from.

Quick Change Background Colour

The user is now able to quickly change the 'Background Colour' by either using the Drop-down Menu, or clicking the 'Right' button on the mouse. Previously 6 mouse clicks were needed to change it, via the Tools Options page.

Translucent View of the Surfaces

With the surfaces displayed in Shaded mode, it is now possible to change the translucency of all surfaces in a single operation.



One use for this is to enable the user to see the holes inside the part when drilling.

Improved Automation - Drilling in Macros

Additional functionality has been added to make it possible to setup Macros to define drilling canned cycles and make them 'Data Independent' in the same way that milling operations can be setup as Boundary independent by selecting new Boundaries.

Copy and Paste Parameters

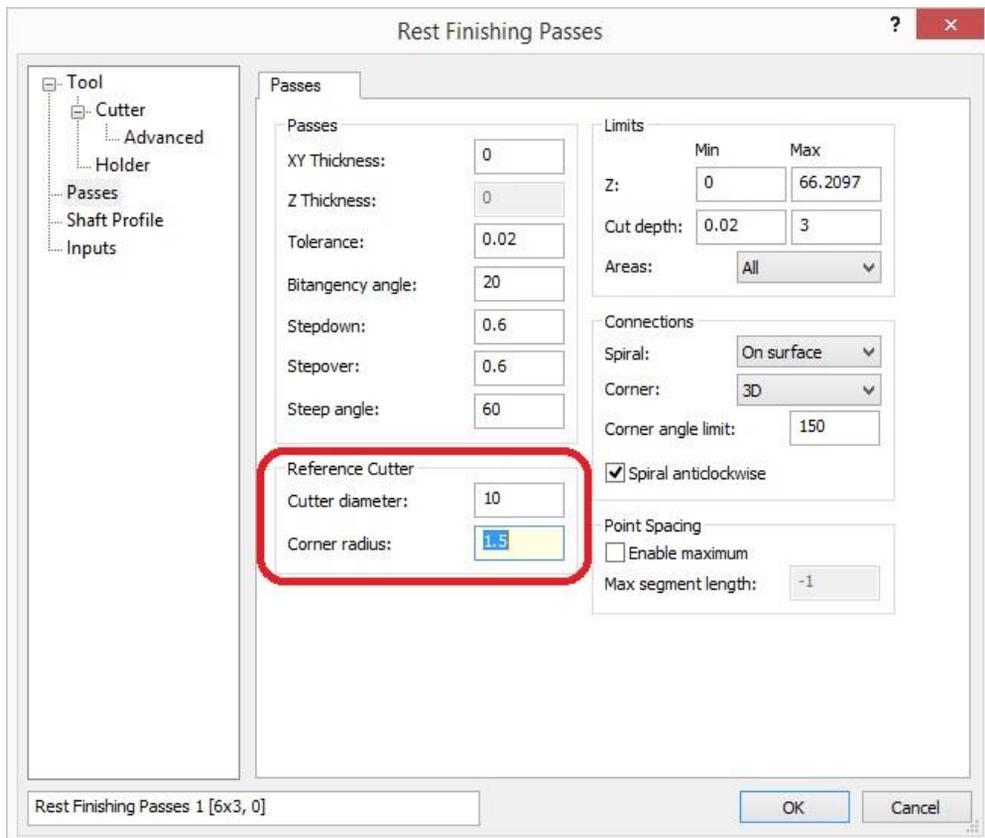
NCG CAM v14 has the ability to Copy all the strategy parameters from the dialog page to the copy buffer.

This enhancement will allow the user to be able to paste the copied parameters into a similar dialog in another **NCG CAM** session, reducing programming time and errors.

Rest Finishing with Toroidal Reference Cutters

In **NCG CAM** v13 it is possible to machine material that has not been removed by a previous cutter, for example, from the internal corners of the job using Rest Finishing passes.

This enhancement allows the reference cutter to be of a toroidal specification, but the Rest finishing passes must still use a ball nose cutter.

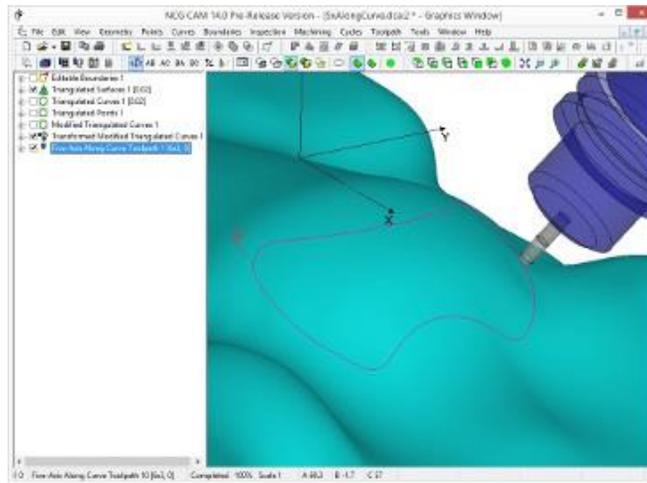


NCG CAM New Features V14– 5-Axis Add-on Module

5-Axis Along Curve Machining

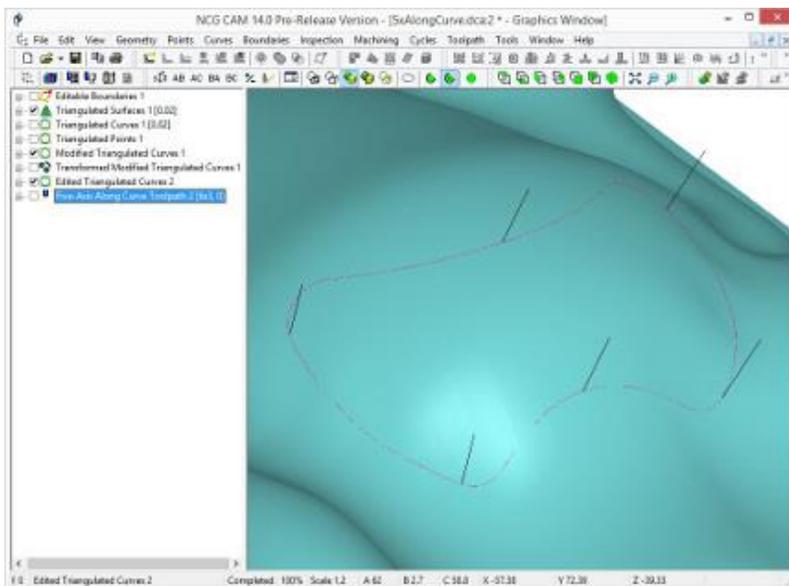
This new feature will allow the cutter to follow a given curve, and the tool axis will remain normal to the underlying surfaces.

One example of the use of this feature is to cut windows or trim profiles and edges of components made from composite materials.



Tool Axis Alignment Curves for 5-Axis Along Curve Strategy

This new feature will allow the cutter to follow a Curve, then a second folder containing additional direction vectors will determine the tool axis. When machining, the tool axis will gradually tilt through these vectors, as it follows the curve.



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