

Simulation, verification and optimization for CNC

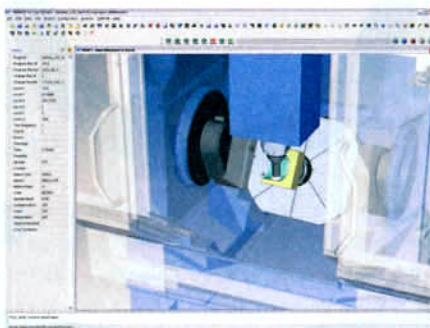
CGTech's Vericut, Version 6.1, is CNC machine simulation, verification and optimization software that enables users to eliminate the process of manually proving-out NC programs. It reduces scrap loss and rework. The program also optimizes NC programs in order to both save time and produce quality surface finish. Vericut simulates all types of CNC machine tools, including those from such leading manufacturers as Mazak, Makino, Matsuura, Hermle, DMG, DIXI, Mori Seiki and Chiron. It runs stand-alone, but can also be integrated with CAM systems such as Catia V5, Unigraphics, PTC, MasterCAM and EdgeCAM.

In Vericut 6.1, NC program review is integrated into the main desktop, enabling the user to navigate backwards from the last NC program line simulated. Error messages and NC program text is highlighted when a collision on the stock or fixture is selected. Optionally, material can be replaced while stepping backwards, and then removed again while stepping forward, giving the ability to readily identify problem areas.

Both machine views and profile views are now active in Review mode, including an optional toolpath line display in the profile view. Additionally, synchronized subsystem simulation (such as for Mill-Turn and multi-channel controls) can now be displayed in Review mode.

A new logger display shows messages in a scrolling list. Messages are organized by

category. Each category of message can be blanked or displayed as desired. Selecting an error or warning message in the list highlights the associated NC program line in the NC program display. The logger display is a dockable panel and can be located horizontally within the desktop or outside the desktop. Furthermore, additional Vericut status lights indicate activity during simulation.



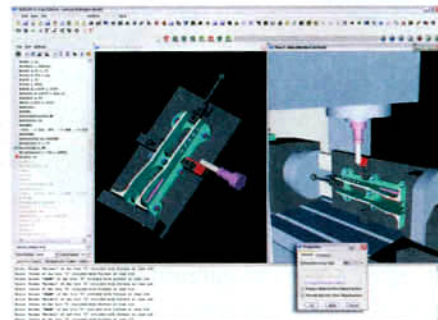
Auto-Diff constant gouge check can optionally check for a minimum amount of excess material relative to the design model. This is typically used where roughing cuts should leave a specific minimum amount of material for subsequent machining. Auto-Diff profile is improved to give more robust results on large and complex profiles where the design and cut stock models are nearly coincident.

Manual data input (MDI) simulation has been enhanced to include axis jog buttons and tool positioning by graphical picks. This can be useful during planning stages. The

MDI controls can be used to make sure the machine will reach all the necessary features of the part. Tool positioning includes offset values along the tool axis and side of the tool.

It may be desirable to "lock-down" Vericut's machine configurations at companies with multiple machines and several NC programmers. Encrypted machine and control files allow the site manager to prevent machine configurations from being inadvertently modified.

Menu features are reorganized so "project-specific" settings used during NC program simulation tasks are clearly separated from "machine/control" configuration settings. Using encrypted machine/control files automatically disables machine/control configuration menus. If desired, the machine/control Configuration menu can be completely removed from Vericut's main menu bar.



Turning tools with multiple inserts (such as "Flash" tools or other types of tools with

