

What's NEW in VERICUT 9.0.1

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February 28, 2019

Dear VERICUT® User:

Thank you for your continued investment in VERICUT, an important part of your NC programming and machining process!

VERICUT 9.0.1 features a new graphics engine which provides sharper, clearer and more realistic views of machines and the machining process. These changes and more will be described in the following pages. Please take a moment to review what's new and improved in this release.

Maintenance and Licensing Information

NOTE: This software requires VERICUT 9.0 licensing.

To Get a License – use the link below to submit a License Request:

http://www.cgtech.com/vericut_support/request-license/.

Licensing is sent via Email only.

VERICUT 9.0.1 runs on 64 bit Windows, and is supported on Windows 7 and Windows 10 computers. It is not available for 32 bit Windows computers.

VERICUT's license server will continue to run and be supported on 32 bit or 64 bit computers.

Software maintenance keeps you on the cutting edge - CGTech provides update software to customers with current software maintenance. Your continued maintenance ensures that you have the most advanced verification technology available. If your maintenance has expired, please contact your CGTech representative (<http://www.cgtech.com/about/contact-us/>).

Sincerely,

Gene Granata

CGTech VERICUT Product Manager

Enhancements and Changes in V9.0.1

Verification

Ambient Occlusion added to View tab for more dynamic visuals.

Graphs feature now displays Tool Use times.

Machine Simulation license can be turned on or off with one button.

Added the capability to set default value for INT and REAL on a PROC statement.

Edges can now be displayed on cut stock models.

Logger Messages now display referenced line in NC Program.

Optimization

Force CSV files have been implemented for saving optimization data.

Save As Optimization Settings and **Save As All** Optimization Settings options have been added to Force Charts.

Tool Manager

Enhanced Edit Search Tool to allow tool graphics to be rotated.

Enhanced min and max chip thickness limit check of "Stock Material Record" in Tool manger.

Resolved an issue with position of CSYS in circle center.

Machine Simulation

New Gage Spindle Offset macro has been implemented.

G-Code Processing

Rotation Planes have been added to WPInput Frame.

Added support for the subroutine name to be specified as an expression within Okuma CALL.

Siemens840D no longer checks for "Missing parentheses or brackets in IF or WHILE statement".

Enhanced Siemens TOFRAME logic to make us of ljk2ngles.

Corrected an issue related to AutosetToolManDrvPnt840DVars macro.

Probing

Added support for TCH Probe 3 and TABREAD/TABWEITE Commands.

Reports

Inspection Report icons have been enlarged for readability.

Reviewer

Reviewer inherits VERICUT's specified translucency set.

VDAF

Introduced Location Colors for ease of visual reference.

Problems Resolved in V9.0.1

Verification

Fixed reported problem with TopSolid V7 dynamic controls.

An issue related to Review Status not updating Optimization and Cutting Conditions has been corrected.

An issue related to Project Tree scrollbar sometimes vanishing has been resolved.

An issue where certain tool changes caused unexpected termination has been corrected.

An issue where Tool Change By File Name and Tool Change By List sometimes swapped places has been corrected.

An issue related to Feed range cut colors not populating correctly has been corrected.

An issue related to View Capture not working correctly for some tools has been resolved.

An issue where VERICUT programs would not save to the screen where they were closed has been corrected.

An issue where unexpected termination would sometimes occur on opening the Variables window has been corrected.

An issue related to unexpected termination after Merge IP process has been corrected.

An issue where certain characters in Word Format Table could cause unexpected termination has been corrected.

An issue where EDM simulations failed to properly direct electrodes has been corrected.

An issue where IP files were unable to be processed correctly has been resolved.

An issue where opening Location Offsets caused unexpected termination has been resolved.

An issue where Align Cylinder feature failed to work as designed has been corrected.

An issue where Logger did not display all applicable errors has been corrected.

Tool representation in profile has been corrected to be more consistent.

Optimization

An issue related to Status window displaying incorrect volume removal rates after Force optimization has been corrected.

An issue related to Graphs window not resizing has been corrected.

An issue related to Chip Thickness display not updating correctly after optimization has been corrected.

An issue related to individual tools not optimizing correctly has been resolved.

An issue related to radial width inconsistency has been corrected.

An issue of AirCut Only Optimization not properly optimizing certain programs has been corrected.

Tool Manager

An issue related to Tool Manager's search tool not functioning correctly has been resolved.

An issue where Import CAD Tool insert face selection failed to populate has been corrected.

An issue where Tool Manager failed to switch tool units has been corrected.

An issue where Teamcenter Interface caused unexpected termination has been corrected.

Machine Simulation

An issue related to DST machines not simulating correctly has been resolved.

An issue related to certain projects running slowly has been corrected.

An issue where unexpected termination occurred during machine simulation has been corrected.

An issue where design component failed to reset to their initial position has been corrected.

An issue where cut stock would not transfer to new location has been corrected.

Fixed issue with multi-channel machine simulations not properly updating in workpiece views.

An issue where Lock Models did not work properly has been corrected.

G-Code Processing

ljk[ABC]AxisMotion macros can now be used to toggle AXIS SPAT mode.

Corrected an issue reading encrypted files.

Corrected a cutter compensation problem with internal rapid re-positioning motions.

Resolved reported issue with two setup APT simulation.

Installation

An issue where some anti-virus software would prevent VERICUT from starting up has been fixed.

AUTO-DIFF

An issue where Compare by Region results were mismatched has been corrected.

Probing

_ovi_ovr vars can now output as older cycles.

An issue related to misorientation in probing has been corrected.

Improved checking for _PRNUM.

Reports

An issue related to Inspection Reports tables not formatting correctly has been resolved

An issue where spaces would disappear from Report Templates has been corrected.

An issue where html Reports were unable to populate images when sent to Word has been corrected.

An issue where VERICUT PDF Reports would display inactive NC Programs has been corrected.

An issue of PDF Reports not centering text has been corrected.

Reviewer

An issue related to stock not moving in Reviewer has been corrected.

An issue related to Reviewer not displaying cutstock properly has been corrected.

An issue where Turret tools failed to rotate properly in Reviewer has been corrected.

An issue where Reviewer failed to read encrypted files has been resolved.

Issues of Reviewer experiencing unexpected termination have been reduced.

An issue where older tools failed to display in Workpiece View has been corrected.

An issue of older Reviewer files failing to load in 9.0 has been corrected.

VDAF

An issue of Design Locations not selecting correctly has been resolved.

Added Mirror Locations icon to VDAF Programming tool bar.

Fastener location can now be selected when creating Csys.

VMC Project

An issue related to measure groove results updating has been corrected.

X-Caliper

Corrected issue of Logger displaying X-Caliper measurements in incorrect units.

New Macros in V9.0.1

CloseBlock

Ijk2Angles

OpenBlock

OpenCloseBlockCheckOnOff

RotationPlaneInc2D

Siemens840DGoto

Siemens_P_EXTFRAME

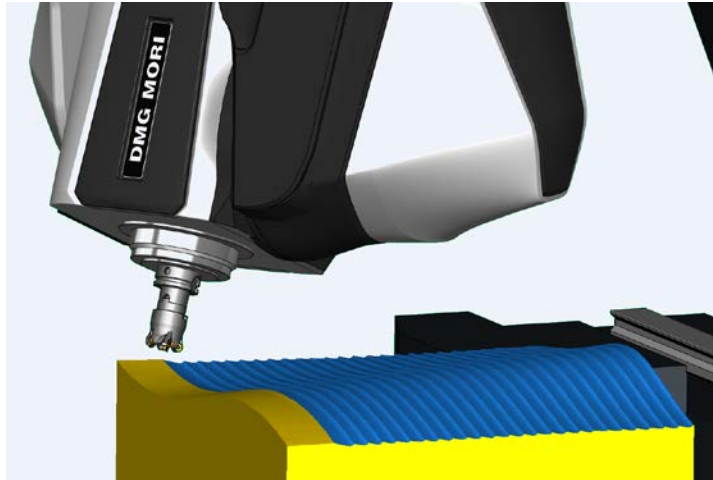
Siemens_P_TRAFRAME

VERICUT 9.0 Release Highlights

Enhanced graphics display

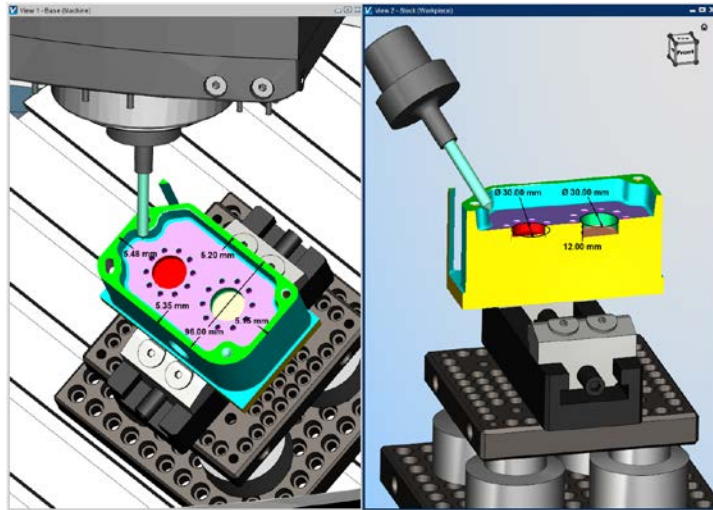
VERICUT 9.0's greatly enhanced image quality provides sharper, clearer views that make it easier to spot problems and imperfections in machined parts.

Get optimal performance running simulations in a single view. Switch seamlessly between Workpiece, Machine, or Profile views, or view layouts for optimal viewing.



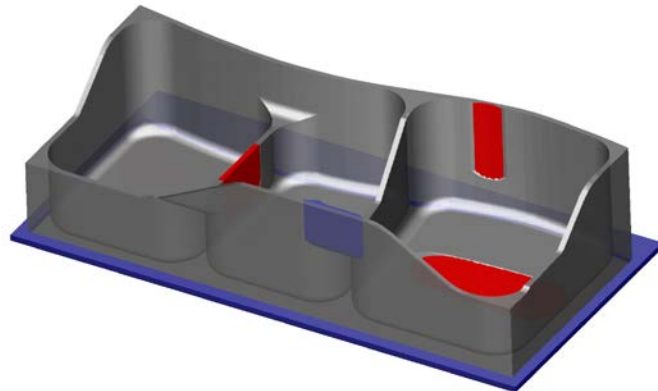
Streamlined verification

Any of VERICUT's major functions, such as AUTO-DIFF, Section, and X-Caliper, can be used in any view which streamlines the verification effort and increases productivity.



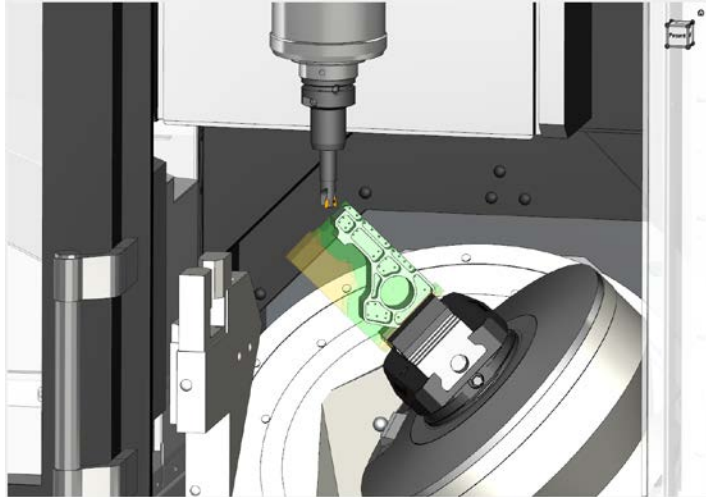
Appearance Settings

Appearance settings accompany the "Color" option for components and models, and can be used to add realism to objects in VERICUT simulations. A list of common materials is provided and can be used to make NC machines, cutting tools, fixtures, and machined parts look more lifelike, as well as easier to identify errors or incorrect cuts.



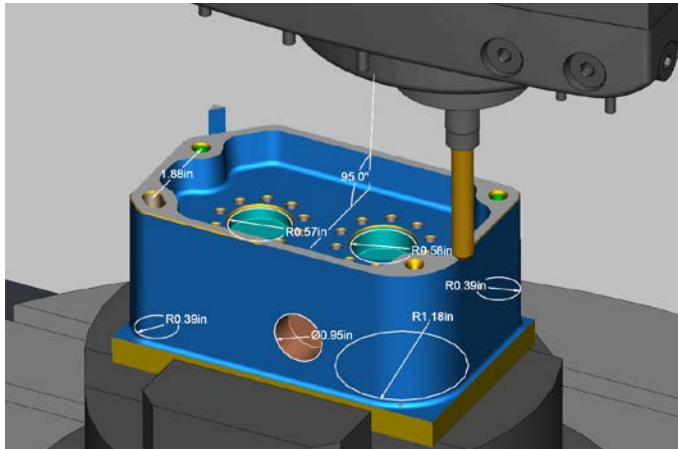
Enhanced Translucency and New Stock/Design View

New features are available to quickly display the Design part embedded in translucent Stock, and show AUTO-DIFF Gouge or Excess errors in relation to the Design part or cut stock model. Translucency can be applied to machine components or the stock model, then adjusted by the Translucency slider on the View tab. Translucency can also be set individually via the aforementioned Appearance Settings.



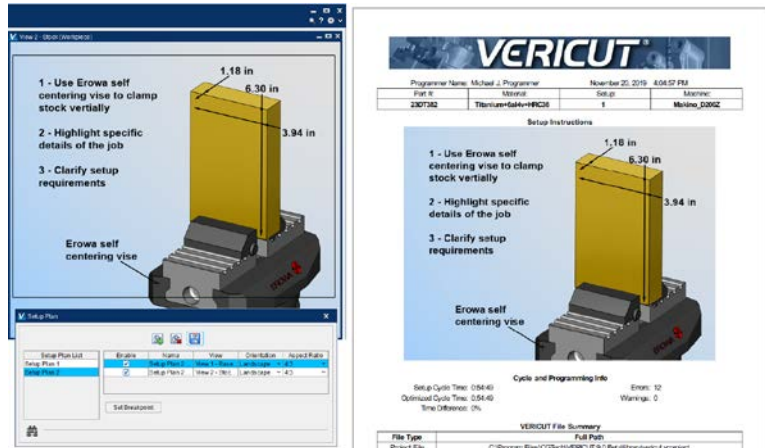
Enhanced X-Caliper

X-Caliper has several new measurements, and features that provide greater control over how measurements (dimensions) are shown, including compliment angles, diameters versus radii, colors and fonts. Images with dimensions can be printed, saved to an image file, or utilized in Setup Plans.



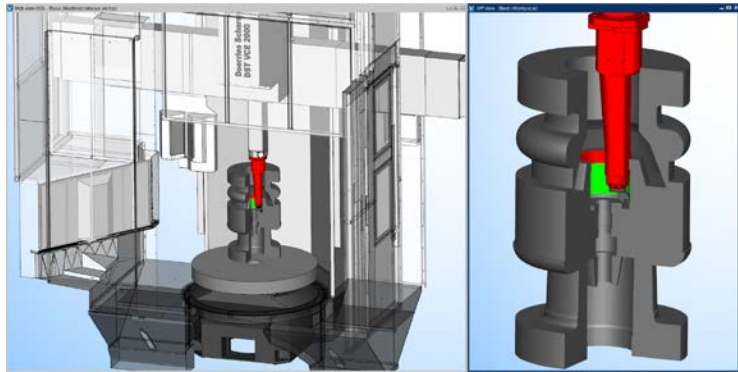
Setup Plan

A new Setup Plan capability makes it easier than ever to create images from the simulation with dimensions or notes that help others understand the manufacturing process. Setup Plans are easily incorporated in VERICUT's reports to document operation setups, or how machined parts should look at various stages.



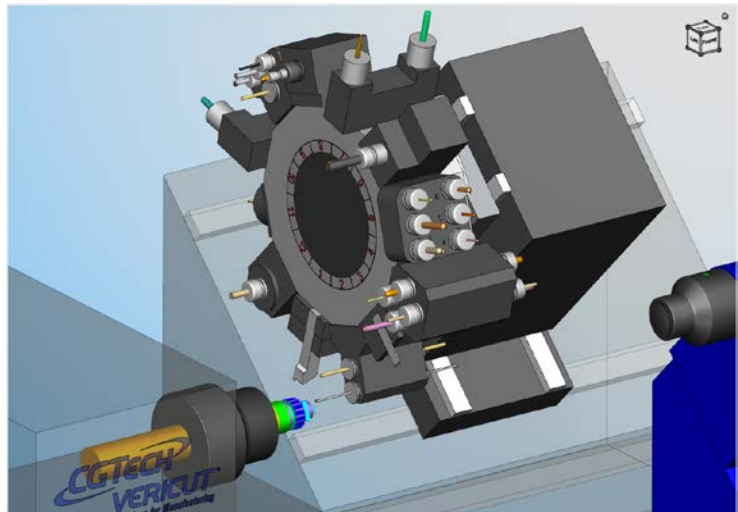
New Section Window

The new Section window is easier to use with dynamic section plane locations and angle adjustments. More options are available for how section planes are defined, including easy $\frac{3}{4}$ "wedge" section views, control over which object(s) are sectioned, and which view show sectioned objects.



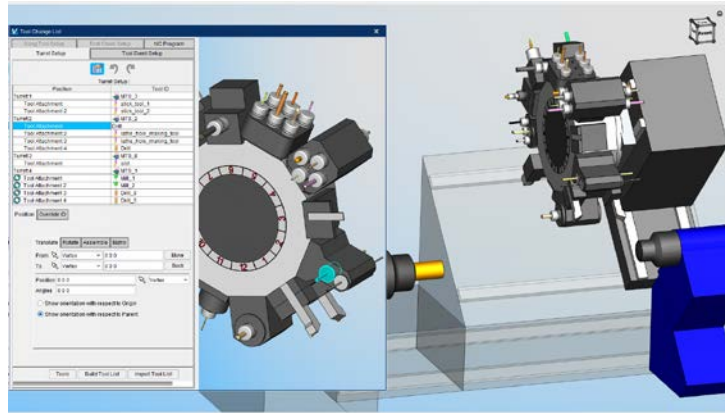
Multi Tool Station

The new Multi Tool Station tool component has been added in Tool Manager enabling users to setup an apparatus that holds multiple tools, attached to a single turret station. The Multi Tool Station can be fully configured in Tool Manager, or modified in the project via the new Tool Change List panel.



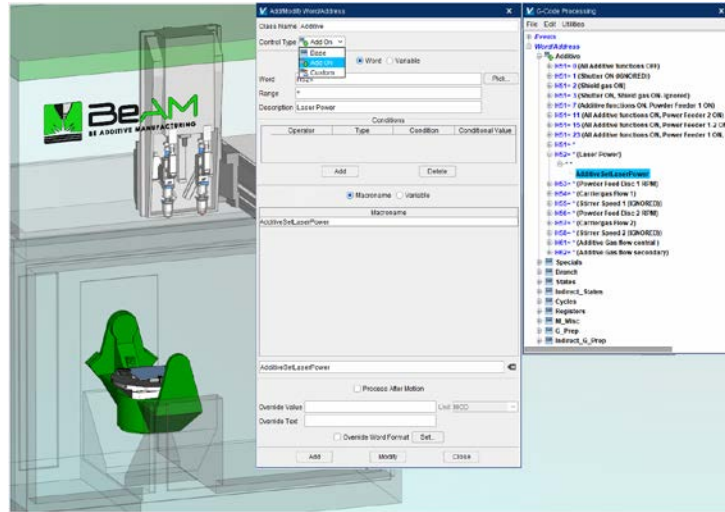
New Tool Change List Panel

Tool Change List panel is enhanced with capabilities to graphically setup tools on turrets, in tool chains, define orientations for “Flash” multi-function tools, and more. Tool change information is store in the Project file, ensuring the tools in VERICUT’s Tool Library remain “neutral” for use in other projects, and by other users.



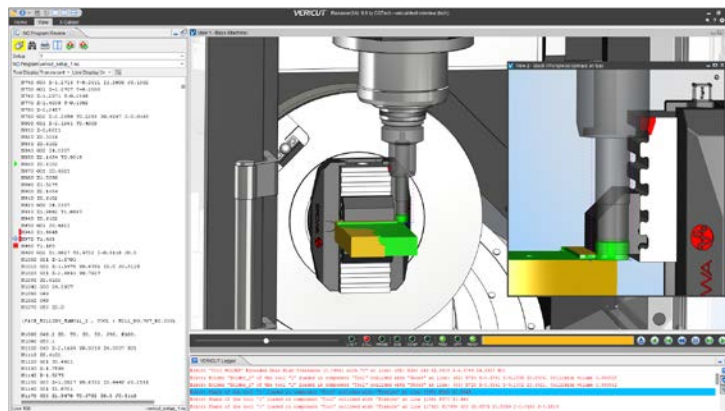
New Control File Types

Two new Control types have been introduced: Add On and Custom. These new control file types are referenced by and merged with VERICUT’s “Base” control, thereby making it faster and easier to configure builder add-on and custom NC code handling for a variety of CNC machines, and update them in the future.



Enhanced Reviewer App

VERICUT’s Reviewer application is powered by the same enhanced graphics engine featured in VERICUT Verification, and users will also immediately notice the dramatic boost in performance!



Enhancements and Changes in V9.0

Verification

Greater flexibility with views: ability to use “Picture in Picture” (small view in a large view) view layouts, multiple large views, etc.

Fit function is replaced with “Fit Selected” and will fit selected components or models, or fit all when nothing is selected.

Right-mouse menu option added to switch contents between two views.

HUD (Head Up Display) enable/disable option added in right-mouse menu.

Tools now appear red in Tool to Stock collision state, such as shank or holder interferences.

“Display Tool to Stock collisions” has been relocated from the X-Caliper tab to > Analysis tab, and made larger for improved viewing.

More flexibility in views: ability to rotate/zoom/fit/View Cube use while cutting, access more of VERICUT’s functions and manipulate windows, etc.

Section: ability to section through center axis of a hole.

: ability to section through machine components.

Section: ability to define view-specific section.

Section: dynamic sectioning that follows the Tool.

X-Caliper: “Stock/Design Distance” automatically make Design component visible when needed for measurements.

X-Caliper: ability added to measure and display dimensions in sectioned views.

AUTO-DIFF: Tool to Stock collisions (Holder and Shank collision errors) can be included with AUTO-DIFF results.

AUTO-DIFF: maintain consistent AUTO-DIFF window size between comparison methods and options, and allow window to be moved while comparing.

AUTO-DIFF: selecting a line in the AUTO-DIFF report also highlights the NC program line responsible for causing the reported issue.

NC Program branch of Project Tree can be double clicked or right-clicked to load files.

Tool Change List panel: new Turret Setup with Drag & Drop setup capability from Tool Manager. Tool position/orientation changes saved to project, instead of affecting tools defined in Tool Manager.

Tool Change List panel: support added for specifying “Flash” tool (multi-function tooling) orientation values.

VERICUT now supports native Windows File Selection and browsing capabilities.

Alpha numeric tools can now be mapped to an alternate tool using the new Tool Change List panel.

The following features have been retired from VERICUT 9 and higher releases: Curve Fit, FastMill, OptiPath “Surface Speed” optimization method, arbitrary Force Material selection (auto-selection occurs instead), Playback and AVI animation files.

The following features are not available in VERICUT 9, but are planned to be restored in a future release: Model Export “Features and Patches” method, Reviewer for I-Pad tablets.

VERICUT and Reviewer support high DPI compatibility mode for improved viewing on higher resolution screens.

Optimization

Force Charts has a new “Fill Comparison” option that identifies with fill colors where Force optimization increased (**bright green**) or decreased (**red**) the value being charted.

Force Charts keeps tools displayed even when the mouse exits the charts window.

Force-Analyze has a new option to auto-create Stock Material Records for tools that don't already have them (milling or turning).

Location of Optimization header comment records can now be located by line number in optimized output file.

Tool Manager

New OpenGL graphics greatly improves display quality of tools seen in Tool Manager.

New X-Caliper tab with nearly all of VERICUT's measurement and dimension display capabilities has been added to Tool Manager.

New 3-D “solid stock” view for Optimization Calculator showing cutter engagement.

The ability to multi-select tools has been added to Tool Manager.

New multi-line Message Logger area replaces the single-line message field in Tool Manager.

Machine Simulation

Refine Display now also works in Machine views to provide clearer views of the cut part.

Auto Refine Machine Animation performance and behavior have been greatly improved.

Improvements for robot machine building, and simulation.

G-Code Processing

ORIVECT has been enhanced to support IJK2Angles FROM/TO components.

Added support for local working plane transformation in Heidenhain iTNC530.

CAD/CAM Interfaces

Support added for MasterCAM 2020, EdgeCAM 2020, GibbsCAM 2019, Creo 6, CAMWORK 2019, and Surfcam 2019.

Installation

VERICUT supports high DPI compatibility mode for better viewing on higher resolution screens.

Reviewer

Faster load times for Review files, and dramatically faster simulation times.

Status window is updated by each NC program line processed in Reviewer.

Help Documentation

VERICUT Help is available online, enabling CGTech to provide updated Help with greater speed on a regular basis. A local copy of the Help is also installed by default.

Problems Resolved in V9.0

Verification

An issue related to when drill cycles are activated in incorrect work planes has been corrected.

Resolved an issue where the Play button Start/Stop At menu increased in width every time a new project was opened.

An issue related to AUTO-DIFF not displaying translucent options correctly has been resolved.

Translucent cut stock models remain translucent when sectioned, rotated or zoomed.

Optimization

An issue related to Force values changing for APT toolpath simulations, depending on which direction the tool is traveling has been corrected.

An issue related to Force Charts not populating ("Force charts parsing failed" error) for tools having a double-quote character (") in their names has been corrected.

Tool Manager

Imported CAD tools with inserts now set the tool's Teeth Value properly.
Standard Holemaking Tool Libraries now populate correctly.

G-Code Processing

An issue related to encrypted controls with subroutines producing errors in simulation has been corrected.

Global variables now clear on reset.

An issue related to Siemens control '\$P_UIFR' and 'CROT' Work Offset definition not working correctly has been resolved.

An error related to incorrect processing of **CycleTurnThread** has been corrected.

_STA1 has been enhanced to no longer have a limit.

Machine Simulation

An error related to Fanuc G41.2 G42.2 5-axis cutter radius compensation has been resolved.

X-Caliper

An issue related to unexpected termination when using Feature History on a threaded surface has been resolved.

Zoller Interface

Added option to select specific graphic files from ZOLLER TMS and to control the order which graphic files are read in from the Zoller Interface.

'Append to Tool Library' function is now saved to toolman.prefs file and remains modal until changed by user.

ZOLLER Interface now supports reading in STEP files to support turning tools.

ZOLLER Interface creates components with incorrect icon (holder) instead of the cutter icon.

Issue with Zoller Interface not creating driven points has been resolved.

ZOLLER Interface now reads in Technology data from the ZOLLER TMS to use in VERICUT Stock Material Records for use in Force optimization.

TDM Interface

TDM Interface creates components with incorrect icon (holder) instead of the cutter icon.

TDM Interface no longer exits when a tool assembly is read without a cutter.

Append to Tool Library function no longer creates duplicate Tool IDs.

Resolved issue with saving the TDM Interface window size incorrectly.

Issue with imported tap geometry overlaying VERICUT parametric tap is resolved.

TDM Interface now supports angled heads/live tools for use in VERICUT.

Teeth count for tools with multiple inserts display same Teeth value for all inserts.

CoroPlus Interface

Corrected issue with VERICUT exiting when reading GTC zip file.

Resolved issue where GTC note 'TRNGIBI was being defined as a milling tool but now is read in correctly as a turning tool.

Indexable end mill (GTC node MILSQI) now populates Radial Rake Angle (GAMF) field.

Resolved issue with newer formatted GTC.zip files containing multiple .p21 files that displayed components in the Tool Table.

Removed the population of Flute Length value from CoroPlus imported data.

MachiningCloud/Novo Interfaces

Added ability to read in the ID or Description from MachiningCloud/NOVO to use for Tool Manager's Tool ID

VDAF

Corrected issue with VERICUT exiting when reading GTC zip file

Resolved issue where GTC note 'TRNGIBI was being defined as a milling tool but now is read in correctly as a turning tool

New Macros in V9.0

AccelDecelLogic
ActivateAxisIfInActive
ActiveSpindleRestore
CalcCircleDataProbeRadiusOption
CirclePresentAxis
DrivenPointOffsetDirect
GageOffsetDirect2
Heid_Restore
LabelCaseSensitive
MirrorAutoReverse
MsWriteToFileHeid
Points2Normal
SetPoints
SetRelationalWorkCOordIndex
Siemens840DSubroutineProc
SiemensATRANSOption
SiemensCTRANSOption
Siemens_P_SETFRAME
TapeChaceTowsEvenOffset
TapeCacheTowsOddEven
TapeCacheTowsOddOffset
ToolCHangeHeadOrient
ToolChangeOrient
ToolChangeReport
ToolChangeReportAlpha
ToolChangeSpindleOrient