VERICUT 7.2.3 Interim Release

Release Notes

June 12, 2013

VERICUT Version 7.2.3 is available for all supported Windows platforms.
V 7.2.3 contains everything described above for V7.2.1, plus the following additional fixes/enhancements.

CAM Interfaces

CATIA-to-VERICUT Interface (CATV)

The CATV.CATScript no longer fails to execute when there is a space in path name.

Edgecam-to-VERICUT Interface (ECV)

Edgecam ".csv" tool files are now passed correctly through the Edgecam-to-VERICUT Interface to VERICUT.

A specific Edgecam Stock model, defined as a wire frame tube, is now passed correctly through the Edgecam-to-VERICUT Interface to VERICUT.

Specific turning Stock and Design models (Pro/Engineer solids in Granite format) now pass correctly through the Edgecam-to-VERICUT Interface to VERICUT.

The Edgecam-to-VERICUT Interface no longer creates certain tool files with a “.tls.v53 extension instead of a “.tls” extension.

Esprit-to VERICUT Interface

The Esprit-to-VERICUT Interface is enhanced to enable passing subroutines in Esprit through the interface to VERICUT.

Unexpected Esprit-to-VERICUT Interface termination no longer occurs when running the interface on a Windows 7 computer.

Unexpected Esprit-to-VERICUT Interface termination no longer occurs on a Japanese environment computer with Win7 and Microsoft Office 2010 installed.

GibbsCAM-to-VERICUT Interface (GibbsV)

New feature, Fixture WG Override, is added to the GibbsV Main window enabling you to specify the work group geometry to be used for the fixture model instead of the default definition.

GibbsCAM coordinate system names are now retained during transfer through GibbsV to VERICUT. To avoid any possibility of duplicate names, GibbsV prepends GibbsCAM coordinate system names with "CS*n*" where "*n*" is 1, 2, 3, 4, etc. For example, "CS1 Attach XZ plane", "CS2 Attach2 XZ plane", ...

The GibbsV "base" file name is now added to the front of SOR and other created model file names.

GibbsV now passes a specific GibbsCAM Lathe Boring Bar tool holder so that it displays correctly in VERICUT.

GibbsV now passes a specific GibbsCAM Lathe Boring Bar tool holder correctly to VERICUT.

A new feature, Subsystem ID, in the GibbsV main window enables specifying a Subsystem ID for each Tool Group.

GibbsV now transfers the Stock and Design models in a specific GibbsCAM part file, when using Stock WG Override, and Design WG Override features, to the correct location in VERICUT.

GibbsV now transfers the correct driven point, for a specific GibbsCAM turning tool, to VERICUT.

GibbsV now transfers the correct driven point, for a specific GibbsCAM turning tool, to VERICUT.

GibbsV now processes correctly when folder names contain the following small letters of the Russian alphabet: х, ц, ч,ш,щ,ъ,ы,ь,э,ю,я and when the name of the folder contains more than 8 Russian letters.

GibbsV is enhanced to enable seeing the file name when there is a long directory path.

GibbsV is enhanced to enable specifying the path to separate folder for posted G-Code.

GibbsV no longer automatically outputs STL files to the previously saved directory path enabling the directory path to be changed.

The GibbsV "Use Comment as Tool ID" feature now correctly sets the VERICUT "Tool Change By" feature to Tool Number.

GibbsV now exports Fixture and Stock models in the correct position when the Fixture and Stock models have the same names.

GibbsV now passes turning tool inserts to VERICUT in the correct position.

GibbsV now automatically sets the Main Spindle XY plane when outputting solid tools so that the tools are in the correct orientation when passed to VERICUT.

GibbsV no longer passes incorrect Design models to VERICUT.

GibbsV now creates the CSYS for the G-Code Offsets in the correct position.

GibbsV now passes Tap tools to VERICUT with the correct Minor Diameter.

Mastercam-to-VERICUT Interface (MCAMV)

MCAMV now correctly passes SETUP NAMEs containing special characters to VERICUT.

MCAMV now creates all programmed tools for a Mirrored Toolpath Group.

MCAMV Custom Tool Profiles now correctly found and used.

MCAMV NC Program and Subroutine extensions are now saved in the MCAMV Preferences file. If a file with a new extension is selected, the current extensions list is updated, and is stored in the MCAMV Preferences file upon selecting OK or Apply.

Unexpected MCAMV termination no longer occurs when the Add button is selected and there are no program groups.

MCAMV now correctly updates the File Name field when a different Mastercam part file is opened.

NX-to-VERICUT Interface (NXV)

NXV no longer transfers a tapered shank tool when a shank taper value is not specified in NX.

NXV now correctly transfers the correct block size, when Blank geometry defined using the NX Bounding Block option are transferred when other models are visible and when offsets have been specified in the NX Bounding Block option.

NXV now transfers a specific tool holder in the correct position when using VERICUT 7.2.1 and NX8.5.

NXV no longer causes unexpected NX8 termination when running a specific NX7.5 part file.

All NX8 tool types with "Shank" are now correctly passed through NXV to VERICUT.

Tools that use a Degree symbol in the tool description are now successfully passed through NXV to VERICUT.

The NC Program that is selected for a 2nd operation is now maintained after you close the NXV menu and then re-open it.

NXV now correctly passes Program Zero Table values to VERICUT.

Unexpected NXV termination no longer occurs on 32 bit computers when an NC program is removed from the list.

5-parameter milling cutters with a negative taper angle are now correctly passed through NXV to VERICUT.

NXV no longer supports NX5.

Pro/E-to-VERICUT Interface (PROEV)

PROEV now works with Creo 2.0.

PROEV correctly passes tool information from Creo 2.0 to VERICUT.

PROEV now correctly creates the tools and the tool list from Creo 2.0 tool data and passes them to VERICUT.

Multiple models/assemblies can now be picked in PROEV using the <Shift> key. When the selection process is complete, press the OK button in the Select window, or Cancel button to ignore current selections.

PROEV now correctly passes gage lengths when they are set to 0 in Pro/E.

PROEV now passes turning tools to VERICUT in the correct orientation.

PROEV now passes all tools in a specific Pro/E manufacturing file to VERICUT.

PROEV now correctly passes a turning insert in a specific Pro/E manufacturing file to VERICUT.

PROEV now passes all tools in a specific Creo 2.0 manufacturing file to VERICUT.

PROEV no longer creates an empty tool library file from the tool data in a specific Creo 2.0 manufacturing file in VERICUT.

The option of using a Russian language file is added to PROEV.

PROEV uses a new method to determine the location of a tool's gage point and orientation as described below.

1) If the SPINDLE_CONTROL_POINT is defined, then the orientation and gauge point is derived from the SPINDLE_CONTROL_POINT. Any GAUGE_X_LENGTH, GAUGE_Y_LENGTH or GAUGE_Z_LENGTH defined will override the gage point derived from SPINDLE_CONTROL_POINT.

2) If the TOOL_ATTACH_POINT is defined, then the orientation and gauge point is derived from the TOOL_ATTACH_POINT. Any GAUGE_X_LENGTH, GAUGE_Y_LENGTH or GAUGE_Z_LENGTH defined will override the gage point derived from the TOOL_ATTACH_POINT.

3) If the GAUGE_X_LENGTH or GAUGE_Y_LENGTH or GAUGE_Z_LENGTH is defined, then the gage point is derived from the GAUGE_X_LENGTH and GAUGE_Y_LENGTH and GAUGE_Z_LENGTH.

4) For all other situations the gage point is set to the tool LENGTH.

AUTO-DIFF

AUTO-DIFF now works correctly in batch mode using Batch Wizard and “batchp”.

CAD Model Interface

The CATPart reader now correctly interprets the visibility of CATIA models.

G-Code Processing

New macros, **SetComponentAcceleration**, **SetComponentDeceleration**, **SetComponentRapidRate**, and **SetComponentMaxFeed**, are added to support adjusting acceleration/deceleration values during G-Code processing.

CDC no longer fails with circle off from helical full 360 circles.

False collisions are no longer reported for a specific project file when the Animation Slider is set at 100%.

Drilling cycles in the library osp_p200m control are now correct.

The display of Axis Variables now matches Axis Mapping for Siemens 840d controls. New macro, **SetAxisVariableNames**, is added to support axis variables.

The library Siemens 840d control is enhanced to better support TRAORI. New option "PARTFRAME" is added to the **SiemensSystemFramesCancel** and **SiemensSystemFramesRestore** macros to support the 840d TRAORI enhancements. This option deactivates/activates $P_PARTFRAME from the chain of translations while $P_WPFRAME still is active.

Siemens 840D axis mapping now processes correctly when using XYZ A1A2A3 axes.

CYCLE800 now works correctly for a specific project file where there is a "_A=180" and "_B=90" programed.

Siemens 840D control and subroutines now restore frames correctly when PAROT is active. New optional parameter “DWO” is added to the **SiemensTRWorkCoordinate** macro to apply the work Offset with the **DynamicWorkOffsets** macro active.

The Siemens probing CYCLE979 now processes correctly when used in a specific project file.

New macro, **CycleTurnGrooveDrivenPoint**, is added to support the Okuma "Longitudinal groove fixed cycle" G73.

New macro, **AutosetTableAxisVarsAdv**, is added to handle Registers and SubRegisters.

The Siemens CYCLE84 now processes correctly when used in a specific project file. New optional parameter “DWO” is added to the **SiemensTRWorkCoordinate** macro to apply the work Offset with the **DynamicWorkOffsets** macro active.

The output of "Problem parsing current line starting at text: ..." error messages are now suppressed by default. The “parsing” error messages can be turned on using the enhanced **TurnOnOffMessage** macro with Override Value=1 and Override Text=GenParseError in the Start of Processing event.

Macro **SiemensCompToVcAxisMapping** is enhanced to automatically create the corresponding Words in the Word/Format window.

Conditionals, **HeidCondLeftParen** and **HeidCondRightParen** are enhanced to look for the last non-white space character instead of the last character that could be a blank space and cause problems.

The library Siemens 840d control now correctly differentiates between upper and lower case when processing a Siemens MIWRITE: engraving cycle. New macro, **StringMatchCase**, is added to specify whether to match or ignore case. The default is ignore (Override Value = 0). To match case, use Override value = 1 when comparing strings.

Debug Variables on the Output Options window, Debug tab is enhanced to include variables referenced by "*Macroname*" Override Value.

The **Heid_EndSub** macro is enhanced such that when an "END PGM" is encountered, VERICUT now keeps returning from subroutines until it gets to a subroutine that is different than the current. In other words, VERICUT returns from all subroutines that are active in the program, and then returns from the program.

VERICUT no longer reports false "undefined word" errors for subroutine calls.

The conditional **OsaiCondEqualWord** now interprets the '=' as a logic test as it should when it follows the strings "GTO", "IF", "EPB" or "WOS".

New conditionals, **PlasmaCondLParenWord** and **PlasmaCondRParenWord**, are added to support the "If" statement for a Mandelli machine with a Plasma control where a "(" is not a "start of comment" and a ")" is not an "end of comment".

PlasmaCondLParenWord

This conditional determines whether or not ‘(‘ starts a comment. If the ‘(‘ is nested within angle brackets ‘<’ and ‘>’ then it will be interpreted as “Left Precedence”, otherwise it will be interpreted as “Begin Comment”.

PlasmaCondRParenWord

This conditional determines whether or not ‘)‘ ends a comment. If the ‘)‘ is nested within angle brackets ‘<’ and ‘>’ then it will be interpreted as “Right Precedence”, otherwise it will be interpreted as “End Comment”.

The VERICUT session no longer "hangs" when it reaches the “END PGM” at the end of the main program.

The VERICUT session no longer "hangs" when processing probing tools in turning mode.

Siemens 840d "$P_PARTFRAME" is now separated so that it can be deactivated with macro **SiemensSystemFramesCancel** using Override Text=PARTFRAME or activated with macro **SiemensSystemFramesRestore** using Override Text=PARTFRAME.

Tangential approach and Tangential exit motions are now correct when cutter diameter compensation active and the Tangential approach and Tangential exit motions are parallel.

False “Spindle direction” and “holder collision” errors are no longer produced for a specific project file.

The VERICUT session no longer “hangs” while processing a Cycle208 subroutine with macro **CutterCompFull** active.

A new check is added to determine the potential problem predicting the behavior of simple circular (G2/G3) motion on Fanuc CNC’s resulting from a difference between Fanuc’s old arc method (FS15) and its newer method (FS16). This only applies to Fanuc CNC’s and for motion along very short arc segments. By default, this check is turned on and VERICUT will output a Warning if it determines that the two Fanuc Arc methods produce a different solution for the motion along the arc. New macro, **FanucArcLengthWarning**, enables you to turn off this check.

Using macro **CutterCompFull** in a specific project file no longer generates bad motions when run on a 64 bit computer.

New macro**, CycleMillPocketAbsDepth**, is added to support milling a pocket to an absolute depth, such as Haas G12 and G13. **CycleMillPocketAbsDepth** sets the absolute depth for the pocket based on active program zero.

Using the macro **CutterCompFull** with Override Value = 1 in a specific project file now produces the correct motions.

Macros **BlockSkipSwitch1**, **BlockSkipSwitchOff**, and **BlockSkipSwitchOn**, have all been modified to be called during the SCAN pass.

Macros **Heid_PolarRadius** and **Heid_PolarAngle** now process cycle motion correctly. Macro **CyclesExecuteModal** is enhanced to handle Polar Coordinate input.

Macro **CutterCompFull** with Override Value = 1 now generates the correct motion for a specific project file.

The macro **Heid_PolarIncAngle** now produces the same results as on Heidenhain control on the machine.

The Siemens CYCLE97 now processes correctly for a specific project file using a facing head tool.

The Siemens CYCLE800 now correctly adopts the angles set in the Work Offset for a specific project file.

The library hei530 control is enhanced to enable using the Heidenhain TCPM function.

New option, “CurToolVector”, is added to the **SetDynamicVars** macro. The key word is followed by a triplet of NC variables where the current tool vector’s I, J, and K values will be stored. The vector is defined in the stock Csys, the same as it is shown in Status window. An example for a Siemens 840D control it is:

Override Text=CurToolVector $P_TOOLO[0] $P_TOOLO[1] $P_TOOLO[2].

The library Heidenhain 530 control is enhanced to support CYCL DEF 240 Centering.

Tapping error messages have been enhanced to make them clearer as to what the problem is.

VERICUT project files now open correctly when CGTECH_OLD_FSB=Yes to use the old VERICUT file selection box.

A Stock sweep file that has the **Zmin**/**Zmax** values reversed no longer causes VERICUT not to process. As long as there is a difference in the two values, VERICUT will still calculate the thickness.

The status of the **No Animation** check box no longer affects processing time in Batch mode.

The G-Code Processing window has been enhanced to support shortcuts Ctrl+X, Ctrl+C and Ctrl+V for Cut, Copy and Paste.

False "Fast Feed removed material ..." errors are no longer output for a specific tool assembly in a specific project file.

The Tool Holder is no longer displayed red in a Profile view.

Unexpected VERICUT termination no longer occurs when a saved In-Process file is opened via the Project Tree.

Two new functions, OperatorValueInput and OperatorTextInput are added to enable customizing the text in the pop up window when using the NumInput function with the condition NumCondDollarSignWord. They can be used as follows:

#1 = VALUE_INPUT("Enter X Value")
NAME = TEXT_VALUE("Enter your Name")

VALUE_INPUT is then defined as a Word of type function which calls OperatorValueInput

TEXT_INPUT is then defined as a Word of type function which calls OperatorTextInput

A new function, TEXT_INPUT, is added to get a text string from a popup menu enabling the use of text strings with condition "NumCondDollarSignWord". It can be used as follows:

NAME = TEXT_INPUT("Input your Name").

TEXT_INPUT is then defined as a Word of type function which calls OperatorTextInput

In the Project Tree, Cut Stock is now updated when it transfers from Setup#1 to Setup#2.

When the **Auto-set working directory to the current project folder option** is set in the Preferences window, it now also sets the working directory used in the Save Project As window (**File menu > Save As)**.

VERICUT will now prompt you to save the Machine file after adding or modifying Machine Notes, before opening another project.

The **AlternateTool** macro now works correctly for STL and VERICUT insert cutters.

The **ToolRetract** macro has been enhanced so that if a text value of "NOLIMIT" is passed, the tool will retract the specified distance. If the retract motion causes the machine to exceed its travel limits, an error message: "...Component "*comp*" exceeded maximum limit..." will be output just like on the actual machine.

Machine Simulation

An Error message, "Tricept singularity occurred!" is output to the logger when the Tricept reaches a singular point.

Using the “Undo” button in the Project Tree no longer breaks the linkage of Link Components.

A Tricept’s kinematic no longer changes orientation when activating a Tool shift along the X-axis.

The motion is now consistent when using macro Ijk2AbcType with Override Value 18 and with the new Override Value 34 when used with tool Tricepts and multi-tools.

Constant Gouge Check is enhanced to work correctly with broaching and gear hobbing motions.

A problem causing a facing head tool to sometimes be displayed in the wrong position in a Workpiece view is corrected.

Tricept Ijk2AbcType 29 now produces the correct machine motion.

Miscellaneous

Support for DEF 252 is added to the library TNC 426 and 530 controls.

Support is added to the library Heidenhain 530 control to ignore the cycle if Q201 (Depth) = 0.

Support is added for FI, FU and RO to provide the same function as FIX, FUP and ROUND for the fan18im.ctl family.

The library hei530 control is enhanced to include conditional TOOL with all DEF integer words.

Stand-alone Tool Manager (toolman.bat) now works correctly with a VERICUT Limited license.

A problem with CME API function “cmeapi_set_var()” is fixed.

Unexpected VERICUT termination no longer occurs when processing a specific OptiPath API custom optimization program on a 32 bit Windows 7 computer.

OptiPath

OptiPath no longer adds duplicate XYZ positions to the optimized NC program for a specific project file using Siemens 840d axis mapping.

The ability to define the words used for the Axes in OptiPath is added.

Calculated OptiPath Time is now correct when (VERICUT-OPTIPATH OFF) comments are used in the NC program to suspend optimization.

The VERICUT session no longer freezes after using Interactive OptiPath when there is another setup after the one where the OptiPath Interactive window was opened.

OptiPath now retains the original motion values (e.g. XYZIJKABC etc.) present on input blocks unless the block optimization modifies the block to have a new feed rate, spindle speed, or motion breakup.

Drill tools marked "OK to Mill" are now optimizable.

VERICUT no longer turns off Machine Collision checking after a reset following an OptiPath Interactive optimization.

OptiPath now outputs the same circle format in the optimized NC program that was used in the original NC program.

The default Air Cut Feed Rate can now be altered in Interactive OptiPath.

Tool Manager

Row alignment in Tool Manager, Tool Search, and Variables windows are now correct when View menu > Look & Feel is set to Windows when running VERICUT on Windows Vista or Windows 7 computers.

Importing a coordinate system from a file now works correctly in stand-alone Tool Manager.

A “referenced” probe tool, in a specific project file, now works correctly after the probe has been translated.

A new **Tool Type** field is added to the Search Tool window.

The Tool Library file locking feature is now correctly enabled after a very specific sequence of actions.