VALIDATE

VALIDATE CAD MODEL TRANSLATIONS DIRECTLY WITHIN VERISURF

Satisfy OEM supplier compliance specifications for Digital Product Definition (DPD) and prevent manufacturing errors

1-CLICK TRANSLATION VALIDATION & REPORTING

The Manufacturing Challenge

OEMs are keenly aware of the potential for translation errors in rapidly emerging 3D Model Based Definition (MBD) environments. Manufacturing suppliers rely on OEM-provided 3D CAD models as the authority data source for downstream operations like NC programming, machining, and inspection. OEMs now require suppliers to provide quality assurance process documentation that proves the accuracy of all translated CAD models back to the authority CAD model. Global competition, modern CQI best practices, high cost of rework and the threat of litigation also demand that potentially costly CAD file translation errors be detected and eliminated as early as possible in the manufacturing process.

Verisurf Validate Eliminates Translation Uncertainty

Verisurf Validate provides precise CAD model translation validation by comparing the authority CAD model to the translated CAD model, enabling manufacturers to quickly identify any translation error.
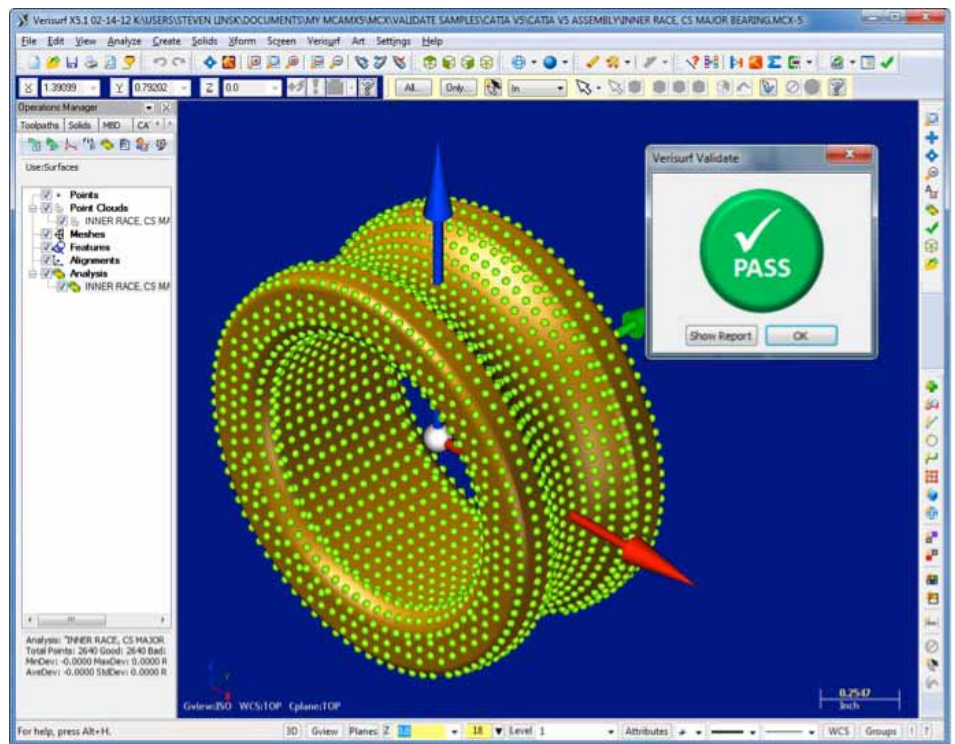
Verisurf Validate provides the ability to specify validation tolerances that control the acceptance of dimensional integrity of the 3D shape. The automated comparison process returns a simple and obvious Pass or Fail result as illustrated in the screen capture image shown. Upon completion of the comparison process, **Verisurf Validate** creates a summary validation report with detailed comparison results. **Verisurf Validate** handles models from all major CAD/CAM systems natively without the expense of any additional CAD licenses.

Integrated 1-Click Translation Validation Improves Quality and Fulfills Compliance Requirements

Ideally, manufacturers would validate CAD file translations before defining NC tool paths and again before performing CAD-based inspections. This process methodology ensures common translation errors are identified early, thereby reducing the potential for expensive and time-consuming rework or scrap problems. **Verisurf Validate** delivers these efficiency improvements handily while simultaneously ensuring compliance with OEM specifications that require documented proof of derivative CAD data validation.

Verisurf Validate compares translated models imported from virtually all mainstream manufacturing CAD formats with their native counterparts and certifies adherence to nominal within required tolerances.

A fully integrated add-on to any Verisurf or Mastercam license, **Verisurf Validate** can be run with the convenience of a single mouse click. Upon execution, **Verisurf Validate** automatically generates a global point cloud with a user-definable grid density on all imported (translated) model surfaces. **Verisurf Validate's** patented comparison engine then compares these point locations to their corresponding surface projections on the native CAD file - precisely calculating any deviation from nominal and comparing these to the acceptable tolerance limit set by the operator. If all deviations from nominal are within acceptability limits, the system displays a graphical "Pass" indicator with an option to review the automatically-created results report.

VALIDATE

BASIC   MEASURE   BUILD   ANALYSIS   REVERSE
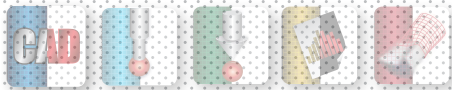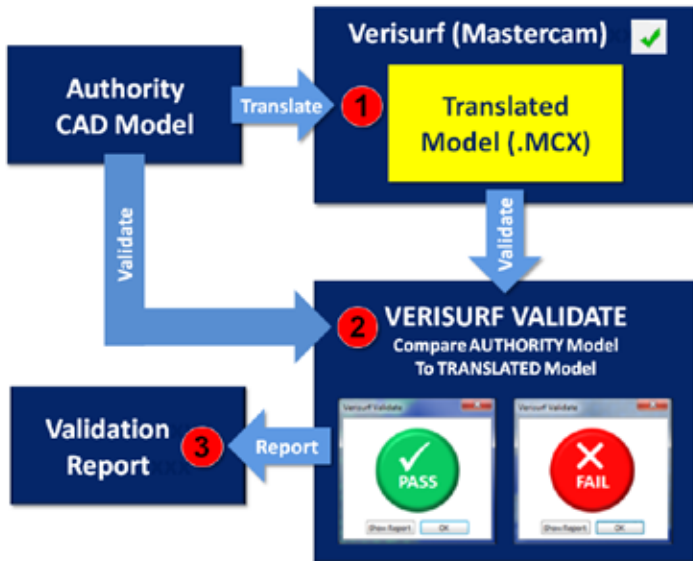
Verisurf Validate compares translated models imported from any major CAD format to their native counterparts and certifies adherence to nominal within required tolerances

9.2 Translations - Suppliers are responsible for all dataset translations used for manufacturing and inspection, and must have a clear documented process for each. The documented process must include a method to verify the accuracy of translations. (See definitions for description of "translation".)

9.2.1. Acceptance criteria for accuracy of translated surface profile/geometry, (tolerance) must be determined by the supplier, and must ensure the end product will be within engineering tolerance/specification. Objective evidence of translation validation must be retained. (Typical allowable deviation tolerance is .0001 to .001 inch.

*Excerpt from Boeing's D6-51991 specification "QUALITY ASSURANCE STANDARD FOR DIGITAL PRODUCT DEFINITION AT BOEING SUPPLIERS" highlighting requirements fulfilled by **Verisurf Validate***

FEATURES AND BENEFITS

Features
• Quickly validates CAD model translations
• Customizable validation tolerance criteria
• Ultra-fast processing of model topology
• Native support for all major CAD model formats
• Easy 1-button activation with simple Pass/Fail result
• Complete validation results reporting
• Choose from Validate or Validate Lite
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Benefits
• Supports continuous QA improvement initiatives
• Eliminates need to buy multiple CAD systems
• Reduces wasted time, scrap, and rework
• Complies with OEM quality requirements for data integrity management
• Satisfies Boeing D6-51991, Northrop/Grumman SQ&TP 0120, Goodrich/U.T. QA-111 and other OEM DPD supplier specifications
• Validates migration of legacy CAD data
• Satisfies FAA process and traceability requirements

Flexible Configuration Options

[1]Verisurf Validate
• Mastercam
• IGES
• STEP
• [2]CATIA V4
• [2]CATIA V5
• [2]Unigraphics/NX
• [2]Pro/Engineer
• SolidWorks
• Inventor
• Parasolid

[1]Verisurf Validate Lite
• Mastercam
• STEP
• IGES

For additional information on **Verisurf Validate** or **Verisurf Validate Lite**, please contact your Verisurf Software Regional Manager or call Verisurf sales toll-free at (888)713-7201

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[1]*Verisurf Validate available in standalone (single user) or shareable (floating) license configurations. Verisurf Validate Lite available in standalone (single user) licensing configuration only*

[2]*Validation of these formats requires purchase of optional CAD translators available from Verisurf required for initial CAD file import*
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