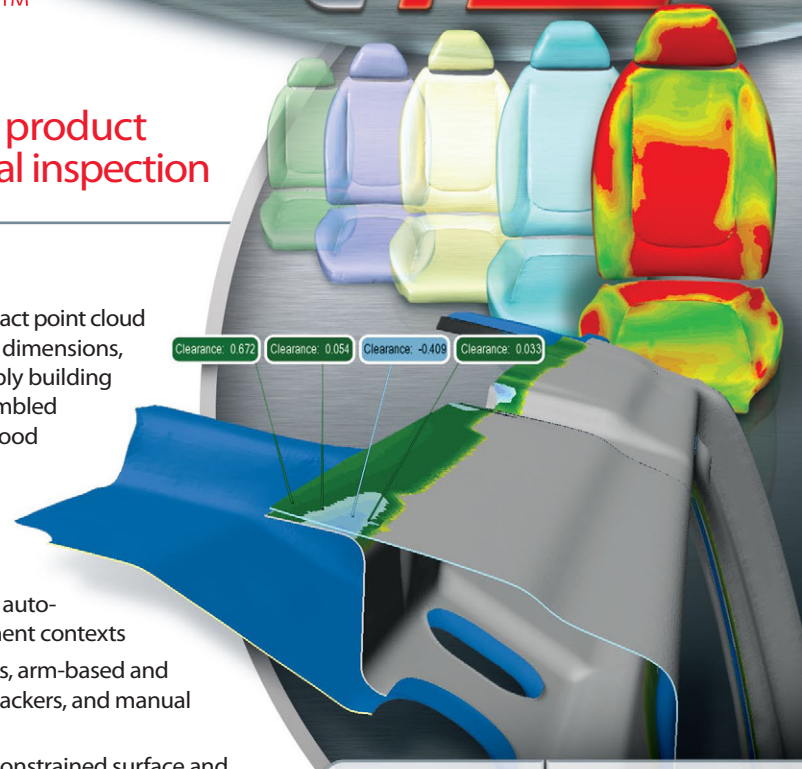
PolyWorks® v12

PolyWorks | Inspector™

The standard 3D metrology toolbox for product engineering, assembly guidance, and final inspection



Overview

PolyWorks/Inspector is a powerful software solution that uses non-contact point cloud digitizers and contact-based probing devices to control tool and part dimensions, diagnose or prevent manufacturing or assembly issues, guide assembly building through real-time measurement, and control the quality of final assembled products. The world's major automotive, aeronautic, and consumer good OEMs and tier-one suppliers have integrated PolyWorks/Inspector in their standard toolset to accelerate new product development.

Key features

- **Self-learning, parametric, traceable, and updatable** solution that automatically records the operator's intent and adapts to new measurement contexts
- **Universal platform** that supports high-density point cloud digitizers, arm-based and hand-held probing devices, photogrammetry-based devices, laser trackers, and manual CMMs for hybrid metrology applications
- **Powerful set of data-to-CAD alignment techniques** that include constrained surface and cross-sectional best-fit, best-fit within tolerance, as well as techniques based on features, reference points, flush and gap gauges, and more
- **Widest range of comparison and measurement tools** on the market for a complete analysis of surface, boundary, and cross-sectional deviations, feature dimensions and GD&T controls, in addition to flush and gap, profile radius, airfoil dimensions, clearance, thickness, and more
- **Integrated Statistical Process Control** (SPC) methodology
- **Embedded SmartGD&T™ technology** from Multi Metrics
- **Extended report capabilities** including customizable report layouts, automatic report generation, and export to Adobe PDF
- **Integrated DirectReplay™ remeasurement technology** to automatically measure a new piece without teaching or scripting
- **User-friendly macro-programming language** for advanced process customization
- ***Xtreme* graphical user interface** that offers fully customizable menus and toolbars, ideal for corporate-wide deployment
- **Free PolyWorks/IMView™ viewer** that maximizes corporate-wide information sharing among users, managers, and suppliers

Included with each license

- Free PolyWorks training at InnovMetric's headquarters
- One year of technical support from highly skilled Application Specialists with optional annual renewals
- Access to InnovMetric's on-line technical support zone
- Access to a comprehensive network of partners that provide PolyWorks service work, like macro development and interface customization

Primary industries served

Automotive
Aeronautic
Consumer goods
Energy
Metalworking

Primary applications

Assembled part inspection
First-article inspection
Metal casting
Plastic molding inspection
Prototype part inspection
Sheet metal inspection
Tooling inspection

Supported languages

English
Japanese
German
French
Chinese (simplified & traditional)
Spanish
Portuguese
Italian
Russian
Czech

CAD formats supported

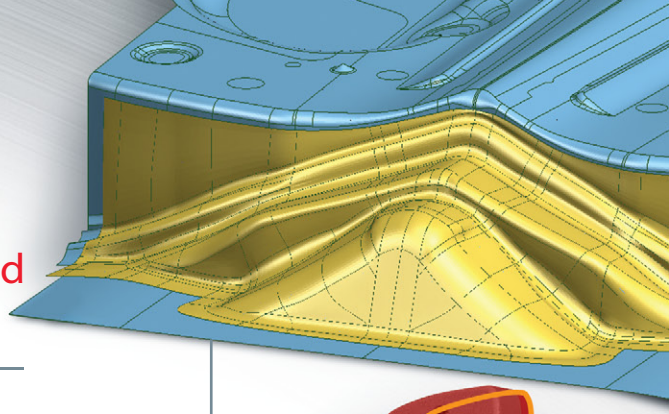
IGES
STEP
CATIA V4 and V5
UG
Pro/E
JT
Parasolid
SAT
Inventor
SolidWorks
VDA-FS

System requirements

Windows 64-bit or 32-bit Edition (7/Vista/XP)
Dual-core processor or two processors
2 GB of RAM or more
2 GB of free disk space and 2 GB of swap space
OpenGL graphics board (NVIDIA is recommended)
3-button mouse or 2-button with wheel

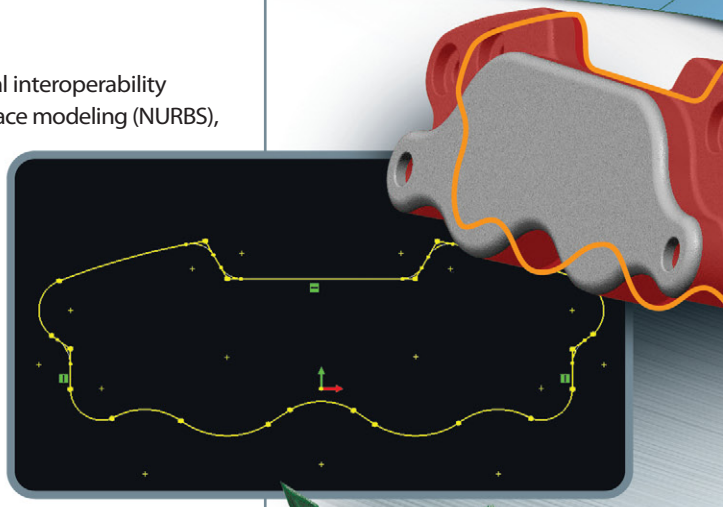
PolyWorks | Modeler™

Enabling true interoperability between digitized polygonal models and CAD/CAM applications



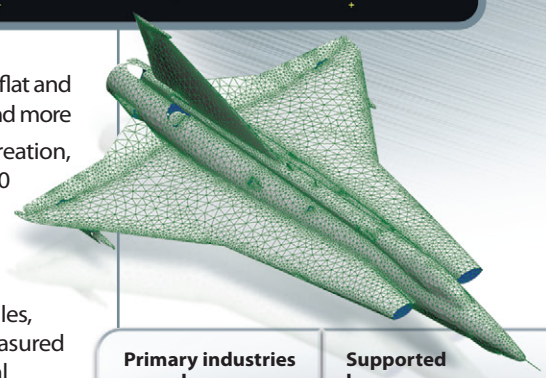
Overview

PolyWorks/Modeler is a comprehensive modeling solution that enables a total interoperability between point cloud digitizing equipment and polygonal modeling (STL), surface modeling (NURBS), and solid modeling workflows. Whether models are made out of polygons or NURBS surfaces, or were created from point cloud data or your CAD/CAM application, PolyWorks/Modeler offers you the optimal process that ensures the fastest lead time.



Key features

- **Universal platform** that supports all high-density point cloud digitizers by importing native and neutral file formats and digitizing using plug-ins
- **Complete alignment toolbox**, including best-fit alignment of individual point clouds or multiple scanning sessions and statistical analysis
- **World's best adaptive-meshing technology** with distributed processing capability over a computer network
- **Total polygon-editing toolbox** that enables correcting imperfectly digitized geometry using flat and curvature-based hole filling, boundary reconstruction, sharp edge and corner reconstruction, and more
- **Rapid NURBS surfacing capabilities** including automatic and interactive curve network creation, support of N-sided patches and T-junctions, automatic NURBS surface fitting with G2/G1/G0 continuity, and more
- **Parametric 2D sketching capabilities** that support arc, line, circle, and spline entities, and relational constraints between entities
- **Advanced interoperability with CAD/CAM applications** including import of IGES/STEP files, watertight tessellation of NURBS surfaces, morphing of tessellated CAD models toward measured models, volumetric or surface-based merging of digitized and tessellated CAD models, local reconstruction of CAD faces using fitted NURBS surfaces, and more
- **Finite element meshing** through the quadrangulation of triangulated models
- ***Xtreme* graphical user interface** that offers fully customizable menus and toolbars, ideal for corporate-wide deployment
- **Free PolyWorks/IMView™ viewer** that maximizes corporate-wide information sharing among users, managers, and suppliers



Included with each license

- Free PolyWorks training at InnovMetric's headquarters
- One year of technical support from highly skilled Application Specialists with optional annual renewals
- Access to InnovMetric's on-line technical support zone
- Access to a comprehensive network of partners that provide PolyWorks service work, like macro development and interface customization

Primary industries served

Automotive
Aeronautic
Consumer goods
Energy
Metalworking

Primary applications

Advanced visualization
Copy milling
Design and reverse engineering
Rapid prototyping
Simulation
Tooling manufacturing

Supported languages

English
Japanese
German
French
Chinese (simplified & traditional)
Spanish
Portuguese
Italian
Russian
Czech

System requirements

Windows 64-bit or 32-bit Edition (7/Vista/XP)
Dual-core processor or two processors
2 GB of RAM or more
2 GB of free disk space and 2 GB of swap space
OpenGL graphics board (NVIDIA is recommended)
3-button mouse or 2-button with wheel

InnovMETRIC Software

Your One-Stop 3D Metrology Partner

www.innovmetric.com

Corporate Headquarters | InnovMetric Software Inc. 2014, Cyrille-Duquet, Suite 310, Québec QC G1N 4N6 Canada
Phone: 418-688-2061 | Toll free: 1-888-688-2061 | Fax: 418-688-3001 | info@innovmetric.com

Québec Canada | **Detroit**, MI, USA | **Los Angeles**, CA, USA | **Dallas**, TX, USA | **Salisbury**, NC, USA | **Pune** India | **Shanghai** China
Paris France | **Lindau** Germany | **Kaluga** Russia | **Bangkok** Thailand | **São Paulo** Brazil
Duwe-3d AG, partner office in Europe

© 2011 InnovMetric Software Inc. All rights reserved. PolyWorks® is a registered trademark of InnovMetric Software Inc. InnovMetric, PolyWorks/Modeler, PolyWorks/Inspector, PolyWorks/Inspector Probing, PolyWorks/Talisman, IMAlign, IMMerge, IMEdit, IMCompress, IMInspect, IMSurvey, IMTexture, IMView, and "The Universal 3D Metrology Software Platform" are trademarks of InnovMetric Software Inc. SmartGD&T is a trademark of Multi Metrics Inc. All other trademarks are the property of their respective owners.

PTB Certified SmartGD&T™