Extending the analytical capabilities of CAD

Teamcenter® Visualization Professional takes the analytical power of today’s leading CAD features and puts them into an easy-to-use tool that enables you to visualize your product designs during collaborative design reviews without the use of a 3D CAD authoring system.

Traditionally, extended design teams have had to wait for a design to be complete before they could validate it for form, fit, function and manufacturability. Teamcenter Visualization has proven its credentials as the world’s leading visualization standard for more than a decade by providing unmatched performance and a solution portfolio of unsurpassed breadth. Teamcenter Visualization has generated substantial returns on investment for more than 900,000 users in more than 35,000 sites across 43 countries. As a result, Teamcenter Visualization not only provides your enterprise with the best visualization technology on the market today, but also enables you to collaborate with industry-leading companies around the world.

Visualization Professional allows downstream participants in the product lifecycle – which typically encompass more than 10 times the number of CAD authors – to begin their evaluations earlier in the lifecycle than was possible before. Having full-function design review tools at your fingertips during your reviews enables better decisions, faster, without wasting valuable meeting time.

Teamcenter Visualization is powered by JT™ technology. The JT format is a highly flexible CAD neutral format that allows full representation of relevant model information. Depending on your type of business processes, JT data can be very lightweight or it can be richer, holding precise model geometry, product structures, attributes and product manufacturing information, including geometric data, translations and annotations.
Features

• All Teamcenter Visualization Base and Standard capabilities (presented in their respective fact sheets). Key Base and Standard capabilities are listed below in italics.

  2D viewing of all standard formats, including PDF, BMP, GIF, JPG, TIFF, CGM, HPGL, ICES, DXF, DWF (6.0 and above) and DWG

  Complete 2D navigation, measurement and markup tools, plus 2D compare

  Ability to visualize in JT format and navigate multi-CAD assemblies from major 3D CAD systems

  Advanced 3D measurement

  Ability to visualize product structure, properties and layer information

  Ability to visualize PMI

  Advanced 3D visualization tools

  Enhanced 3D session and conferencing

• 3D comparison

• Dynamic 3D cross-sectioning

• Ability to view CAE results exported in JT format

• Callout and Symbol Manager for annotating exploded view illustrations

• Thrustline Editor for creating and displaying advanced exploded view centerlines

• Outline Capture for capturing hidden-line removed representations of the geometry

• Precise transformation

• Manipulators for interactive translation, rotation and scaling

• Appearance editor

• Fly navigation mode

• Read Visualization Publish files

• Motion file playback (VFM files created by Visualization Mockup and other motion authoring systems)

• Support for stereo viewing

• Animation file playback

• Ability to export JT (including alternate hierarchies), VRML, Nastran, and PLM XML files

• Ability to extend with Publish, Animation and Concept add-ons

• Ability to create session packages

• Windows, UNIX and Linux (SUSE) support

The lightweight nature of JT enables product teams to visualize extremely large assemblies and validate the interfaces of sub-assemblies and components in the context of the complete assembly. In fact, CAD users often employ Teamcenter Visualization for large assembly viewing because their native CAD system cannot handle this amount of data. JT is so complete that it can even replace CAD files for data exchange between OEMs and suppliers.

The advanced 3D measurement, cross-sectioning and comparison capabilities of Visualization Professional allow users to interrogate these models just like a CAD system. Manipulation features enable users to evaluate form, fit and function by allowing measurements in various stages of articulation. The flexibility of JT supports visualization data, as well as precise surface definitions (BREP) for CAD-level precision. JT files can be generated for all major CAD formats – thereby facilitating truly interoperable enterprise collaboration that allows users to work with multi-CAD assemblies.

Visualization Professional provides users with the tools they need to leverage multiple forms of design data and share this data in a common visual representation. This parallel stream of design data enables more lifecycle participants to leverage design data early in the design process – resulting in shorter cycle times, higher product quality and lower development costs.

Scalable solution that grows with your enterprise

The following Teamcenter Visualization service levels enable you to scale and extend the scope of your visualization solution to match the physical and functional growth of your enterprise.

Teamcenter Visualization Base – a powerful visualization solution that provides 2D and 3D visualization functionality, extensive 2D markup tools and 2D investigation tools, including measurement and comparison capabilities. Includes basic 3D viewing plus ability to visualize product structure.

Teamcenter Visualization Standard – an enterprise 2D/3D view and markup solution that provides advanced 3D visualization functionality, powerful 3D markup tools, 3D measurement and access to advanced product data including product manufacturing information (PMI).

Teamcenter Visualization Professional – a full-function design review tool with 3D investigation tools, including cross-section, 3D comparison and user-defined coordinate system capabilities that allow users to perform analysis on multi-CAD assemblies – collaboratively – without using a CAD system.

Teamcenter Visualization Mockup – a sophisticated digital mockup solution used to assemble a complete digital prototype, perform advanced analysis – including static and dynamic clearance analysis on the whole product – and detect issues early. Optional add-ons include, Clearance Database, Publish, Jack (ergonomics), VSA (tolerance analysis), Quality, Animation Creation and Path Planning.

iSeries – an easy to deploy and maintain web browser-based implementation of the Teamcenter Visualization Base, Standard and Professional service levels.