

# Lifecycle visualization mockup

Using real-time digital mockup tools to detect and solve design issues early in your product lifecycle

## Benefits

- Reduces or eliminates physical prototypes using production-proven digital mockup capabilities to visualize and analyze lightweight and precise virtual prototypes
- Enables you to find and resolve form/fit/function design issues early in the design process with sophisticated spatial analysis tools including clearance and interference analysis capabilities
- Provides superior performance and rich-data support by leveraging open by design technology and the standard JT format

## Features

- All lifecycle visualization base, standard and professional capabilities (presented in their entirety in their respective fact sheets)
- Motion playback that enables you to detect interferences dynamically

## Summary

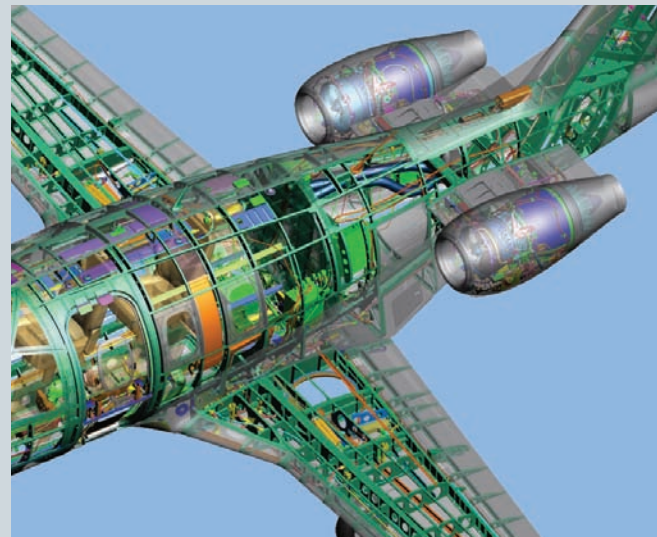
Teamcenter® software's lifecycle visualization mockup capabilities comprise the industry's most powerful real-time digital prototyping solution. By enabling your design teams to leverage advanced multi-CAD 3D visualization, large-scale product assembly analysis and universal collaboration capabilities in a single solution, Teamcenter dramatically reduces – and in some cases entirely eliminates – expensive physical prototypes. The solution also plays a crucial role in improving your total quality program and facilitating your time-to-market initiatives by enabling you to identify and resolve issues before they ever become costly problems.

## Taking advantage of the industry's leading digital prototyping solution

Teamcenter's lifecycle visualization mockup capabilities enable design teams to create high-level digital prototypes comprised of thousands of parts and components. Digital prototyping is an extremely cost effective alternative to physical prototyping that lets product makers realize enormous cost savings, productivity improvements and reductions in cycle times.

By leveraging the lifecycle visualization mockup solution, design teams can quickly build a high-level digital prototype, distribute the universally viewable prototype to widely dispersed team members, analyze its interrelated components, simulate the product's operations, enable team members to annotate their concerns and rapidly incorporate alternative design concepts.

Teamcenter's analysis and simulation capabilities make physical prototyping a remnant of the past. The solution's analysis



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### Features *continued*

- Ability to visualize and navigate multi-CAD assemblies in JT format from major 3D CAD systems, including NX™ software, Solid Edge® software, AutoCAD, Catia, CADD5, Inventor, Pro/Engineer and SolidWorks
- Neutral-file support, including ability to accept VRML and STL; STEP, IGES, and DXF supported with associated optional JT translators
- Extensive static and dynamic clearance analysis tools for evaluating designs for interferences, checking interfaces and evaluating separation requirements
- Advanced filtering capabilities that enable you to search on part attributes and properties to control geometry displays
- Volume clipping either inside or outside of a cuboid
- Extensive geometry editing tools which among other things, allow re-tessellation, decimation and creation of shrink-wrap volumes
- Ability to capture part motion for output to appropriate movie formats and sizes
- Ability to view multimedia documents created under Visualization Mockup's publish option
- Windows, UNIX and Linux (SUSE) support

capabilities enable you to check interferences, evaluate separation requirements, perform human factor studies, conduct parts in motion studies and determine whether sufficient accessibility is provided to facilitate maintenance procedures. Taken together, these capabilities allow you to detect and fix design errors long before you manufacture any parts.

The solution's digital prototyping capabilities are part of Teamcenter's lifecycle visualization suite, the world's market-leading set of product visualization solutions. The lifecycle visualization suite leverages the power of JT™ technology, the common 3D language for PLM visualization, collaboration and interoperability.

### Extended enterprise collaboration

Teamcenter offers the world's most widely used set of visualization solutions, employed by more industry professionals than any other visualization suite. Based on this leading market presence, the vendors and allied partners who participate in your supply chain are more likely to be using Teamcenter than any other solution on the market today. As a result, you and your design partners and suppliers can readily exchange product data and collaborate in workflow-driven design and manufacturing processes.

Teamcenter enables you to work in a true multi-CAD digital prototyping environment. With translators for all of the major CAD systems, the solution lets you create high-level assembly models comprised of parts and components drawn under various CAD systems globally dispersed across your entire enterprise.

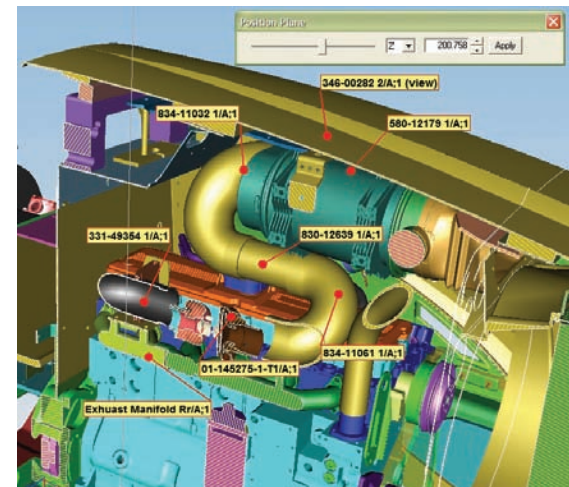
Because Teamcenter leverages the lightweight JT visualization format, you can quickly load, navigate through and analyze extremely complex assemblies.

This level of superior performance is matched by the solution's ability to carry NURBS data within the JT models to facilitate precise measurement and analysis. The solution's JT modeling capabilities also support manufacturing information (e.g., dimensions, tolerances and 3D notes) and attribute data to provide additional value to your visualization sessions.

With tight integrations to the Teamcenter platform, the lifecycle visualization mockup solution enables you to view data stored and managed by the world's leading PLM portfolio. This integration is especially appropriate for companies that want to manage product data across the entire product lifecycle. Teamcenter leverages a strong data access toolkit to support both multi-CAD and multi-PLM integrations.

### Scalable solution that grows with your enterprise

The following Teamcenter lifecycle 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.



**Optional add-ons**

- Animation creation
- Path planning
- Analysis
- Illustration
- Adams import motion
- Modeler optimizer
- VSA simulation
- Clearance server
- Quality producer
- Lifecycle visualization JACK™ software
- Concept desktop and showroom

*Lifecycle 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.

*Lifecycle 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).

*Lifecycle 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.

*Lifecycle 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 analysis, clearance server, illustration, Jack (ergonomics), VSA (tolerance analysis), quality, animation creation and path planning.

*iSeries* – an easy to deploy and maintain web browser-based implementation of the lifecycle visualization base, standard and professional service levels.

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