



SERVICES & SUPPORT



PROCESSES & INITIATIVES

creo™ elements/view™

SOFTWARE PRODUCTS



INDUSTRY SOLUTIONS



Visual Collaboration Software

Creo Elements/View*

Visual collaboration software

Product development is an ongoing contradiction. Customer requirements are ever evolving but must continuously be met. External partners and internal teams use different authoring tools but must be able to collaborate effectively. Product complexity skyrockets, yet these massive product designs must be readily accessed around the world with increasing speed.

You must thrive in this world while helping your company compete and meet its financial objectives. At PTC we hear manufacturers grappling with these and other dilemmas every day:

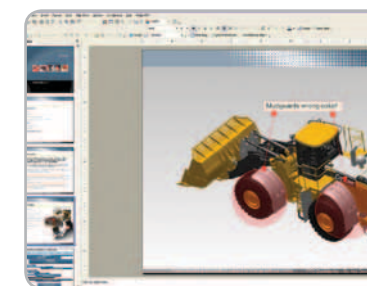
- > How can I visualize and interrogate our company's most massive digital assemblies?
- > How do I ensure high productivity of my team which includes electrical and mechanical disciplines using a variety of MCAD/ECAD tools?
- > How do I facilitate innovation within my distributed product development team?
- > How can I interact with and evaluate complex products without committing to making expensive prototypes?

Creo Elements/View offers a solution. It features superior integration to Windchill®, Creo Elements/Pro**, a variety of mechanical CAD and electrical CAD applications and over 200 other document types. With Creo Elements/View, everyone who needs to can view, markup and interact with all forms of digital product data.

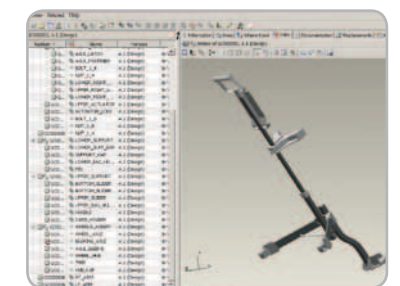
Creo Elements/View is:



Fast



Open



Interoperable

*Formerly ProductView

**Formerly Pro/ENGINEER

Why visualization matters

“In returning visualization to its roots, some software providers have developed...applications that offer more advanced engineering and design capabilities, in addition to visualization’s ability to read design data from multiple native formats. The best-in-class (manufacturers) are clearly taking advantage of this technology. Overall they are 2.5 times as likely as laggards to use it.”

Aberdeen Group,
Multi-CAD Design Chain
Benchmark Report

“The ultra-scalable architecture of Creo Elements/View clearly demonstrates superlative performance for opening and displaying large 3D models.”

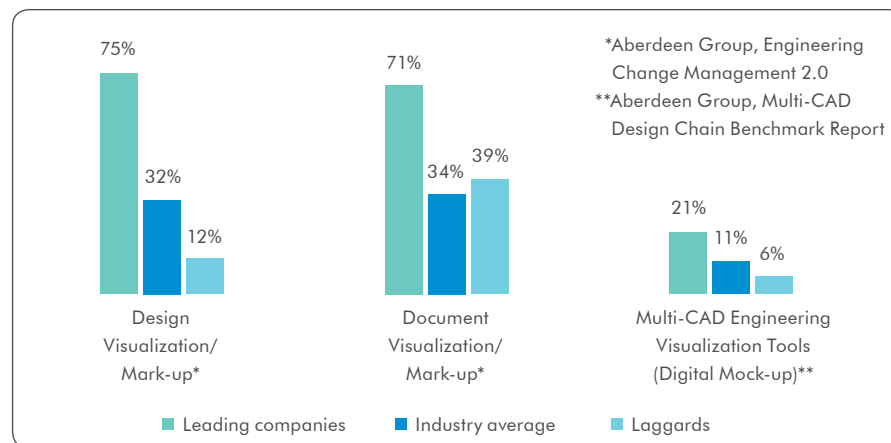
Jeff Zemsky,
PLM Program Manager,
PlugPower

The role of visualization in product development

Most of the cost and time-to-market in product development is determined before a digital product is manufactured. Thus, it is essential that the digital product representation be validated and agreed to by all stakeholders—before being committed to manufacturing or prototype development. In fact, industry research confirms that the highest performing companies make proficient use of visualization capabilities throughout their product development processes.

Creo Elements/View, PTC’s visual collaboration software, helps companies efficiently collaborate on a multitude of product information types, across mechanical and electrical disciplines. With its amazingly compact, yet accurate 3D viewable format, Creo Elements/View allows complex product information to be accessed with lightning fast speed. And, with its ultra-scalability, Creo Elements/View supports a range of customer needs spanning simple desktop viewing of single CAD models, to the interactive evaluation of massive digital mockups.

Now, everyone can collaborate on all forms of product information, either in real time or by using markups. The result: reduced rework and accelerated decision-making across the enterprise and beyond.

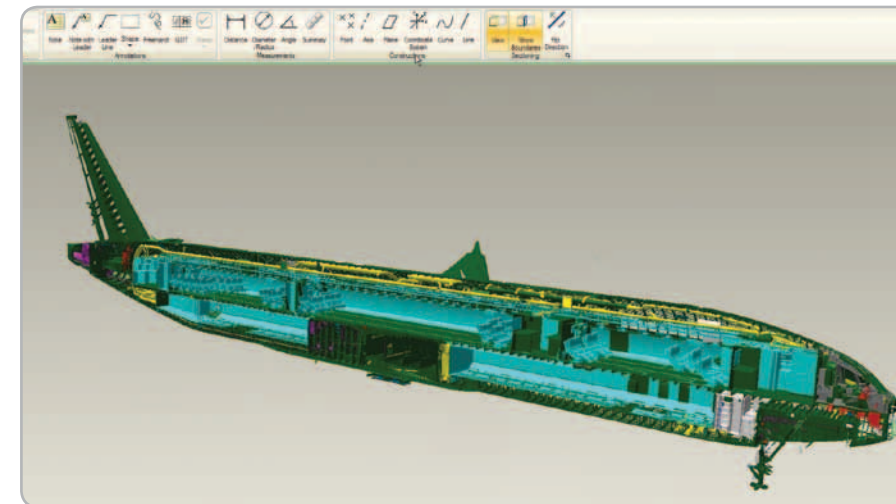


Leading companies are more frequent users of visualization capabilities for design visualization/markup, document visualization/mark-up, and multi-CAD digital mock-up.

The key capabilities and value of Creo Elements/View

- Provide product information access to all team members—in an accurate, high-performance, ultra-scalable format
- View a myriad of product data (e.g., MCAD/ECAD files, PDF documents) without requiring the native authoring application
- Accurately measure, section and compare 3D models, and assemble parts and complex product structures
- Collaborate on centrally organized digital product information through markups and real-time collaboration
- Improve productivity and reduce cycle time by allowing users—across the enterprise—to share visual information, gain insight, and make better decisions faster

Creo Elements/View spans the complete range of customer needs



Data courtesy of The Boeing Company

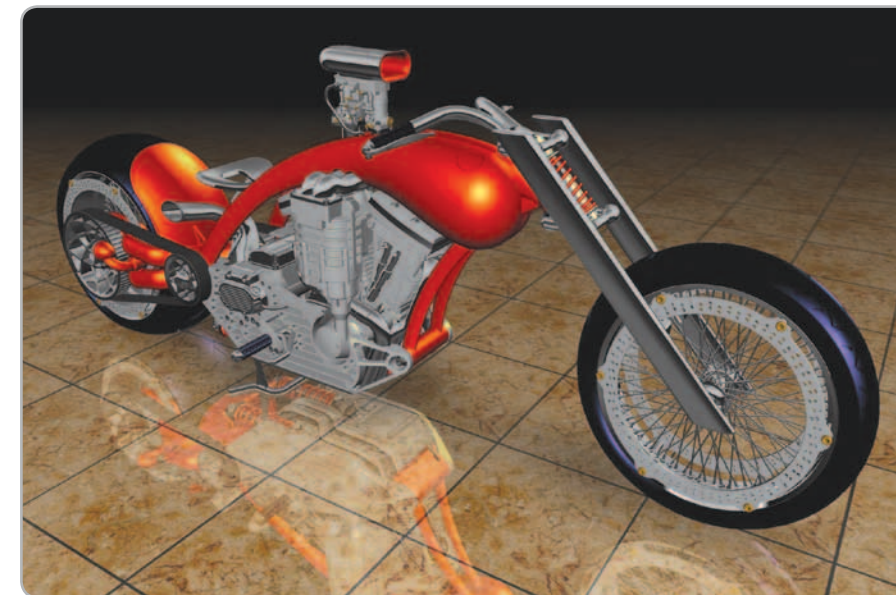
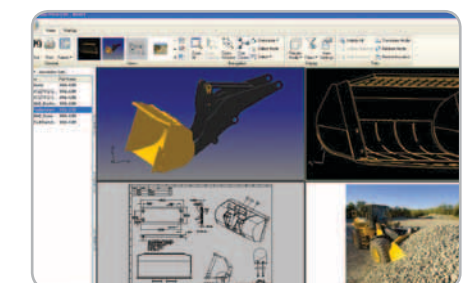
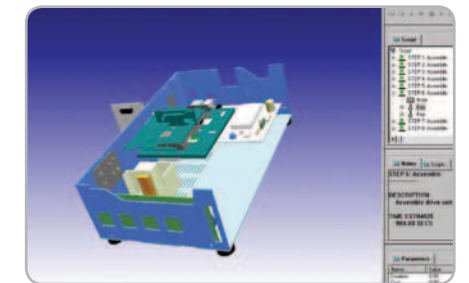


Image courtesy of Siemens Corporation

Whether it’s used to visualize a single part design or a massive mockup of an airplane; to interrogate electrical and mechanical CAD data; or to view and markup images or documents, Creo Elements/View delivers clarity to the entire product development team.



Data courtesy of John Deere

Creo Elements/View: one technology. infinite clarity.

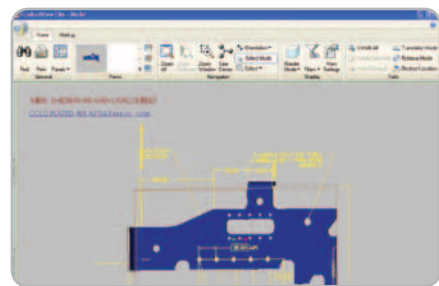
PTC's solutions for visual collaboration include:

Mechanical CAD (MCAD) and document visualization and validation

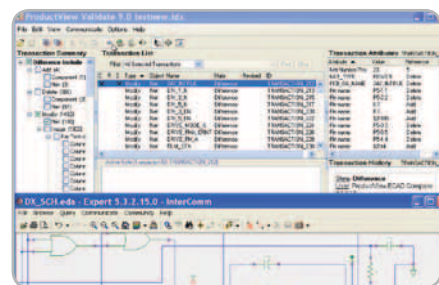
- Creo Elements/View MCAD Professional – Rich visualization tools for the enterprise
Creo Elements/View Lite – Integral (embedded within Windchill) lightweight visualization for the enterprise
- Creo Elements/View Composer – Create and deploy interactive assembly and disassembly sequences
- Creo Elements/View PDF Collaboration – Full document collaboration capabilities, including annotation, viewing and watermarking. Includes a limited Adobe Acrobat license.
- Creo Elements/View Realizer – Create and deploy interactive animations, perform rapid interference-checking, create kinematic mechanisms, compute motion envelopes, and output movies
- Creo Elements/View Toolkits – Create customer-specific, high-performance visual applications and interactive web pages by reusing PTC's Creo Elements/View technology
- Creo Elements/View Express – Free, downloadable tool for simple viewing of Creo Elements/Pro (formerly Pro/ENGINEER) parts, assemblies and drawings
- Creo Elements/View MockUp – Conduct real-time design collaboration, analysis and simulation – regardless of location
- Creo Elements/ViewReality – Allows engineers to develop virtual worlds, animate them with intelligent and realistic properties, and experience the resultant virtual environment using advanced input and display devices

Electrical CAD (ECAD) visualization and validation

- Creo Elements/View ECAD Compare (formerly InterComm EDACompare) – Compare two versions of printed circuit board (PCB) designs
- Creo Elements/View Validate (formerly validation manager, a part of InterComm EDACompare) – Methodically step through changes made between ECAD designs or across ECAD and MCAD design
- Creo Elements/View EDAconduit™ – Automates electronic markup exchange between ECAD authors and non-authors
- Creo Elements/View Expert™ – Allows quick verification of electronic design intent between Engineering, Design, Fabrication, Test and Assembly departments



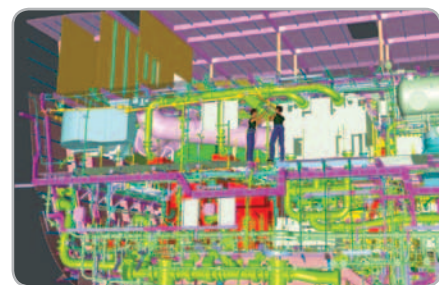
Provide richly annotated 3D drawings to shop floor, eliminating reliance on 2D drawings



Assess impact of version to version iterations of ECAD designs



Markup and watermark documents



Develop complete, interactive mockups for performing maintenance studies

Realize the most value from Creo Elements/View

Through services delivered by PTC and our partners

Realize more value, aster

With 20 years of product development consulting and training expertise, PTC Global Services helps leading companies of all sizes realize the full value of Creo Elements/View. That's because our focus is on customer value, not just the installation of our software. We provide customers with a blend of process consulting, system implementation services, innovative education solutions, and value management that ensures customers have the right processes in place to fully leverage our technology. We also ensure that customers have the right education program in place to drive adoption.

Services and training solutions for Creo Elements/View customers:

Value identification and planning

PTC can help you determine the priority of your business objectives linked to Product Lifecycle Management, create a roadmap for achieving process improvements, and provide the technology, infrastructure and adoption guidance required to support them.

Implementations

Achieve product development objectives through the effective deployment of one or more components of the PTC Product Development System. Each implementation includes a blend of process consulting, technology deployment, education and value management services that customers need to realize the most value.

Education

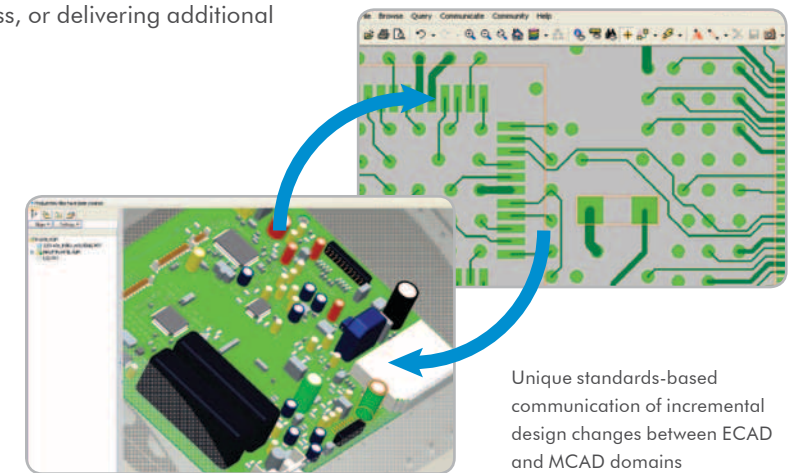
Learn from the experts. PTC University training is available in over 100 PTC University Training Centers around the globe, or online through our eLearning solutions. Over 25,000 students each year turn to PTC University for all their PTC technology training needs, and another 30,000 use our eLearning subscriptions to improve their skills. Plus, for larger Creo Elements/View customers, we offer personalized, corporate learning programs that maximize user productivity, while minimizing training downtime. Visit www.ptc.com/training for information about Creo Elements/View training options.

Expansion

A structured methodology to build on an existing PTC technology investment, whether it be upgrading technology, maturing a process, or delivering additional training.

The Right Team, Tools and Technology – PTC's comprehensive Maintenance Support program that delivers additional productivity benefits:

- A carefully coordinated system that helps your organization reach its full potential, reduce downtime and ensure maximum ROI from its PTC software investment
- Software releases that can include new features, as well as architecture, performance, and infrastructure enhancements
- Access to 240+ ISO-certified technical experts in our worldwide call centers who are all connected to a single database, available 24 hours every business day, with multiple language support
- Award-winning, online, self-service support tools with access to more than 45,000 documents that are updated regularly and can be automatically emailed based on your preferences



Unique standards-based communication of incremental design changes between ECAD and MCAD domains

The Power of PTC

PTC provides leading product development solutions to more than 25,000 customers worldwide.

Software Products

- Broadest integral suite of solutions that enable companies to:
 - Create product information
 - Collaborate in a globally distributed environment
 - Control product development processes
 - Configure product content
 - Communicate product information to multiple systems and audiences
- Rigorous testing to ensure that products work together – and work for you
- Designed for incremental deployment to ensure successful adoption

Product Development Processes and Initiatives

- Unique process-oriented approach utilizes best practices to deliver maximum value
- Product Development System supports end-to-end processes out of the box, to enable achievement of business initiatives

Industry Solutions

- Extensive expertise across a broad range of industries
- Demonstrated customer success in providing tailored solutions for specific industry needs
- Solutions support industry-specific business processes both within the enterprise and across the supply chain

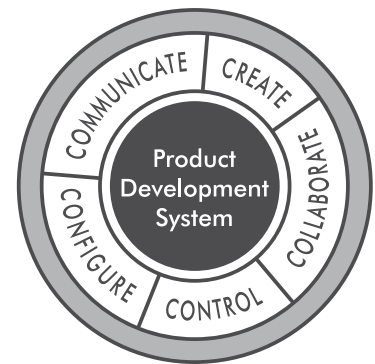
Services & Support

- Product development consulting to define and develop best-in-class processes
- Assessments and implementation services to deploy technology with minimum disruption
- Education curricula to accelerate adoption and boost productivity
- Global maintenance support that delivers the right team, tools and technology – available anytime, anywhere you need them for product development success

To learn more about PTC's visualization solutions, please visit:
www.PTC.com/go/creo-elements-view

Complete Product Development System

PTC's integral Product Development System delivers the key capabilities manufacturers need to realize more value from product development. And our proven, incremental implementation approach can help companies of any size accelerate adoption, minimize risk, and speed time-to-value.



Creo Elements/Pro™

Integrated 3D CAD/CAM/CAE Software

Windchill®

Product Lifecycle Management (PLM) Software

Arbortext®

Dynamic Information Delivery Software

Mathcad®

Engineering Calculation Software

Creo Elements/View™

Visual Collaboration Software

InSight™

Product Analytics Software

Relx®

Quality Management Software

Creo Elements/Direct™*

Direct CAD & PDM Software

PTC®

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*Formerly CoCreate