

# **CATIA PLM Express**

## **CATIA - Knowledge Expert & Engineering Optimization**

Accelerates design alternatives exploration and optimization for better design in less time

#### **Overview**

CATIA - Knowledge Expert provides a powerful interactive environment to create and manage validation rules in order to ensure that product designs conform to industry, customer or company standards.

Engineering Optimization provides an interactive environment for modeling and solving complex engineering problems.

#### **Benefits**

- Product Engineering Optimizer:
- Quickly investigates and finds options of the most robust designs for product lifecycle quality
- Lowers costs by using extensive virtual prototype testing
- CATIA Knowledge Expert:
- Eliminates inaccurate designs by automating compliance with defined standards
- Eliminates costly and time consuming corrections downstream
- By helping to adhere to company standards, data exchange is easier and inter-process collaboration is facilitated

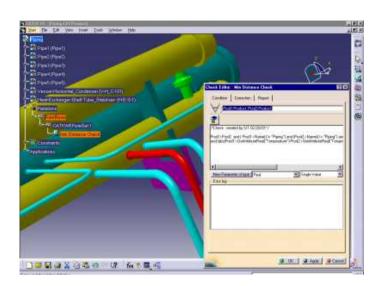


### **Capabilities**

- Product Engineering Optimizer:
- Geometry-based optimizations
- Finite element-based optimizations
- "Design of Experiments" techniques to provide useful information about the product's behavior in order to help solve compromises
- Captures of optimizations within the model's feature tree to launch the optimization again after any design changes
- Constraints satisfaction problem solving



- Checks engineering rules
- Checks Manufacturing rules
- Checks Electrical rules
- Checks Drawing rules
- HTML or customizable XML reporting
- Automatic correction functions
- An infrastructure for merging corporate standards and partner solutions (Q-Checker and iCHECK)



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#### About Dassault Systèmes

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 90,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing and ENOVIA for global collaborative lifecycle management, including ENOVIA VPLM, ENOVIA MatrixOne and ENOVIA SmarTeam. Dassault Systèmes is listed on the Nasdaq (DASTY) and Euronext Paris (#13065, DSY.PA) stock exchanges. For more information, visit http://www.3ds.com

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