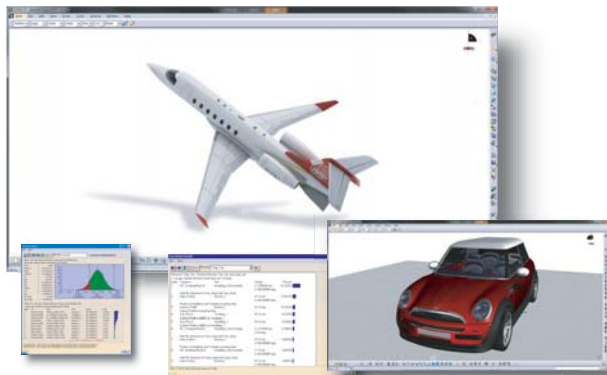# Visually Observe
Dimensional Variation

3DCS CAA V5 BASED

Comprehensive Variation Analysis Solutions

3DCS Variation Analyst CAA V5 Based

3DCS CAA V5 Based is the best-in-class dimensional variation analysis tool for simulating design and manufacturing processes. As a Dassault Systemes Premier Gold Partner, 3DCS is fully integrated into CATIA V5 leveraging its digital prototyping and visualization capabilities.
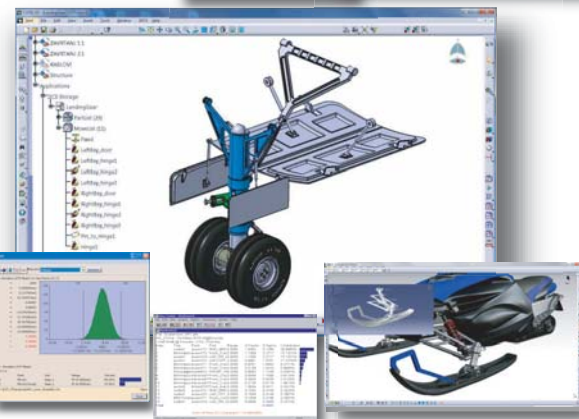
3DCS Mechanical Variation Analyst CAA V5 Based

3DCS Mechanical CAA V5 Based is a specialty tool geared for mechanized products. 3DCS Mechanical allows users to model mechanical and kinematic assemblies with a full range of motion. This makes 3DCS Mechanical an excellent fit for performing variation analysis on engines, switches, gears and other mechanical components.

Predict
the assembly variation of manufactured products with virtual prototypes

Respond
to specific contributors of cumulative variation for optimizing designs

Control
costs and dimensional integrity with proactive variation analysis

3DCS CAAV5 BASED
Solutions

Business Values

Optimize Product Designs and Processes

The cost of design errors increase dramatically the later they are detected in the design and manufacturing cycle. 3DCS solutions allow CATIA V5 users to evaluate design and assembly concepts up front, where problem areas can be identified and corrected early in the product development cycle. Optimizing for dimensional integrity improves the robustness of design and processes by maximizing part tolerances while controlling the dimensional assembly requirements of the final assembly.

Reduce Cycle Time & Rework Costs

Shorten development time, accelerate time-to-market and reduce costs by utilizing the capability of 3DCS for digital prototyping. By maximizing part tolerances while controlling dimensional assembly requirements, manufacturing costs can be reduced with less rework to tools and gages, scrap and number of warranty defects. 3DCS improves your bottom line and your product quality by validating that parts fit and function together before production begins.
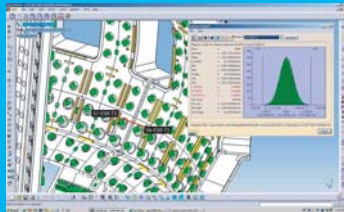
ITER Toroidal Coil Analysis

Targeted Users

3DCS Analyst
A comprehensive tool for specialists who need to perform complex iterative analysis

3DCS Mechanical
A specialty tool geared for mechanical manufacturing

Key Product Features

Three Types of Analysis Outputs - Monte Carlo Simulation, High-Low-Mean (Sensitivity Analysis) and GeoFactor(geometry) Analysis

Perform What-If Analysis - Learn the impact on the final assemblies before costly design changes are made

Evaluate Geometric Factors in critical dimensions of parts and assemblies and enhance the robustness of their designs

Reuse Models - Capture commonly used processes and build your own library of easily accessible models

Update Models Automatically - Direct links to design geometry result in quick and efficient tolerance model updates

Flexible Assembly Compatibility with specialized routines developed for non-rigid parts

Use Manufacturing Data - Import real world data into 3DCS Analyst for root cause analysis to improve existing build processes

Identify Contributors - Locate tolerances and assembly processes responsible for variation

Incorporate embedded CATIA V5 FTA or CATIA V4 FD&T

Animate Build Sequences - Create exploded views and display parts moving sequentially to their final assembled positions

Animate Variation On-Screen - Users can visualize clearances & interferences on solid geometry or through a section by sweeping parts and assemblies within their statistical extremes

Quickly Build Analysis Models with an easy-to-use and easy-to-learn graphical user interface all within a single CATIA V5 window

Create Models Without Geometry - Perform tolerance analysis with 3DCS Analyst before CAD geometry exists

3DCS Mechanical Variation Analyst CAA V5 based contains specialized routines allowing mechanical systems to be analyzed

DCS
ENGINEERING IN NEW DIMENSIONS

SOFTWARE PARTNER
V5 gold partner
3DS

SOFTWARE PARTNER
V5 partner
3DS

3DS