



Answers for industry.

NX Check-Mate

Knowledge-driven validation enhances product development processes and quality

Benefits

- Reduces costs related to engineering change orders, warranty repairs and product recalls
- Ensures adherence to company standards
- Eliminates costly and time-consuming downstream corrections
- Identifies noncompliance to company standards
- Alerts designers to inconsistencies in CAD model geometry
- Facilitates validation as an automatic practice rather than an afterthought

Summary

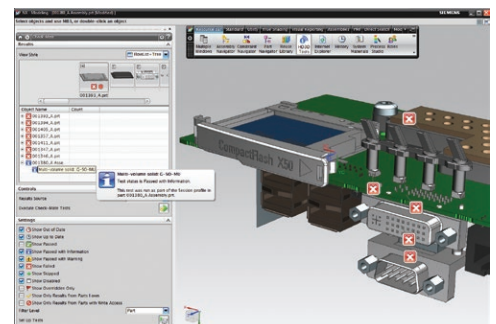
Knowledge-driven product validation is an innovative approach that encompasses the effective capture, management and re-use of knowledge within your company, allowing you to significantly improve your products and processes. Based on NX™ software's Knowledge Fusion technology, NX Check-Mate from Siemens PLM Software provides an automated, customizable tool that helps companies proactively improve product quality.

Next-generation validation

NX Check-Mate simplifies the work of design engineers by automatically ensuring that computer-aided design (CAD) data and product designs adhere to industry, customer or company standards. With continuous monitoring of developing designs, Check-Mate helps engineering professionals produce their deliverables right the first time. The organization can use Check-Mate to set up customized design checking and manage outsourced projects so that they comply with their organization's standards

and practices. The result is higher quality products developed more quickly and at lower cost.

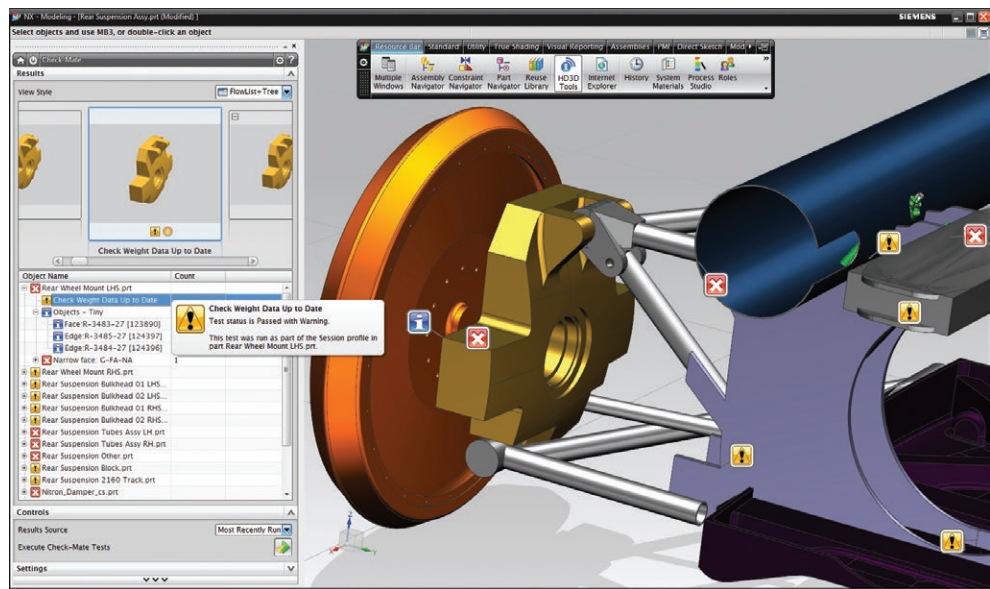
Traditional validation tools don't adequately address product and process complexities that designers face daily. Check-Mate uses the embedded knowledge technology in NX to capture standard processes and design methods, and re-use them in automated checks to improve quality and consistency. Companies can add and update checking rules at any stage of product development to expand the company knowledge base and achieve continuous improvement.



NX Check-Mate

Features

- Validation integrated with NX using HD3D user interface
- Model quality checking
- Assembly, file and drawing checking
- Extensive library of standard checks
- Authoring capabilities for custom checks
- HTML-based reporting dashboard
- Interactive or batch mode checking
- Full integration with Teamcenter



Enhancing product data quality

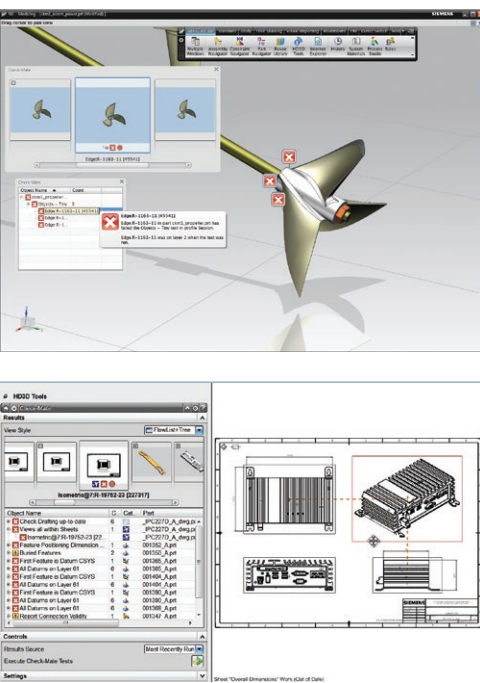
NX addresses file, geometry, assembly and drawing data quality with Check-Mate. It checks CAD files and models for conformance to company, industry or customer standards. Noncompliance to company standards can hinder data sharing and supplier collaboration. Inconsistencies in CAD model geometry can cause downstream manufacturing problems. Check-Mate includes tools for creating knowledge-based rules and profiles. A customizable reporting dashboard provides engineering data quality metrics to engineers and management that supports company-wide quality and continuous improvement initiatives.

Automating validation

Check-Mate's automated validation eliminates manual, error-prone processes that require designers to remember standards, requirements and validation procedures. Design validation can be consistently performed more easily and often. Enabling designers to discover problems earlier in the product development process means that they can make changes when costs are more manageable.

Creating a sense of urgency

Check-Mate uses the latest NX HD3D tool set to provide a unique user experience that aligns with the Siemens PLM Software's HD-PLM corporate strategy. The enhanced graphical feedback provided by HD3D tags and tool tips, tiles, structure trees and flow lists – complemented by customizable, drill-down information provided by Info View, fully in context with the operation taking place – guides the Check-Mate user seamlessly through their validation workflow. The visual impact of HD3D tags identifying critical errors helps create a sense of urgency to address the issues as soon as possible. The HD3D style result output can be organized and filtered to align with workflow and improve clarity. Dynamic interaction with graphical results (nodes and tags) using the mouse buttons enables the user to automatically zoom to a problem area and open an application to address the issue. As a result, validation is intuitive, interactive and effective.



Standard and custom checks

Check-Mate provides many out-of-the-box checks. These checks can have built-in parameters that allow them to be tailored to the organization's specific industry and product requirements. In addition, Check-Mate Author gives your organization the flexibility to convert your knowledge of industry-specific, corporate or customer standards into checks that are incorporated within the validation process. With these checks, quality requirements are clearly defined and documented, resulting in unambiguous communication and fewer interpretation errors throughout product development.

Quality monitoring and reporting dashboard

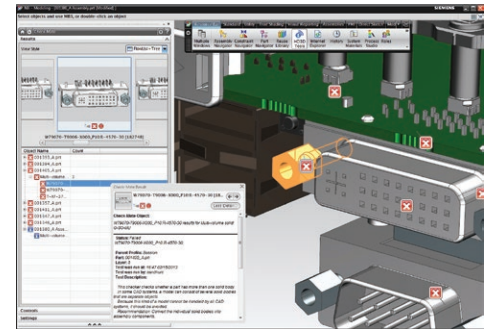
Collecting data is not time well spent unless you are able to view and examine the information so that it can be used to improve methodologies. The results from Check-Mate can be used to identify training needs, evaluate suppliers' performance or recognize improvement opportunities. Check-Mate provides a set of reporting tools that allow you to turn the data collected into dashboard information, useable for assessing the progress of your quality initiatives. Dashboard reports can be tailored to enable you to view quality metrics data in various formats, including tables, charts or graphs. Tailored reports can then be exported to web-ready HTML for distribution throughout the organization.

Batch checking

Check-Mate can be run interactively in a NX user session or in batch mode from a command line or a script. This means that hundreds of parts can be validated without any human interaction. The results can be examined using the reporting tools provided with the product. Batch checking can also be used to preprocess the quality of any parts that have been received from suppliers without the designer having to load them into an interactive session. (Only pre-checked parts are used, assuring that standards and quality measures have been met).

Integrating with Teamcenter

When Check-Mate is run from NX there is an option to save the generated results to Teamcenter® software, a collaborative product development management (cPDM) solution, also from Siemens PLM Software, which is the hub of the company's product lifecycle management (PLM) architecture. The results saved in Teamcenter can be chosen as the source to be displayed in NX. Check-Mate profiles (the way that a chosen set of checks is grouped together and stored) can be stored and accessed from Teamcenter. Check-Mate can also be run from within Teamcenter using the validation manager. The results can be viewed inside Teamcenter and used to initiate workflows.



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