

DOORS integration for Teamcenter Enterprise

Using Teamcenter to manage product requirements created under DOORS

fact sheet

Siemens PLM Software

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► Summary

The Teamcenter® Enterprise integration with Telelogic's dynamic object oriented requirements system (DOORS) enables you to define, capture and manage structured product requirements created in DOORS. By allowing you to understand your product in terms of its evolving DOORS-based requirements, Teamcenter facilitates requirements-driven design, Design for Six Sigma, systems engineering and other business improvement initiatives that depend on your ability to build the voice of the customer into your product lifecycle.

Benefits

Enables enterprises to capture, manage, change and audit the evolution of DOORS-created product requirements across every phase in the product lifecycle

Allows enterprises to relate product requirements to design elements, thereby facilitating requirements driven design and ensuring that their product development programs comply with customer and marketplace expectations

Enables enterprises to incorporate Six-Sigma quality goals in the early stages of the product lifecycle, thereby allowing product teams to design-in quality and design-out defects

Allows enterprises to accelerate their take-to-market cycles by ensuring the latest product decisions (such as requirement changes, design changes and their related impacts) are communicated and fully understood by every stakeholder in the product lifecycle

By integrating DOORS-created requirements into a single Teamcenter-managed PLM environment, your enterprise is able to understand what your target markets and customers want in terms of documented expectations, preferences, standards and regulations that you capture as product requirements.

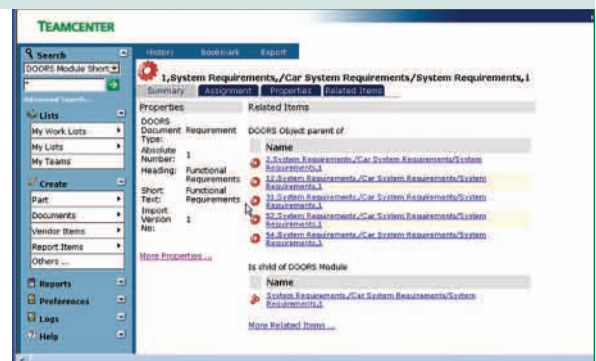
Once you import these DOORS-based requirements into Teamcenter, you can link these requirements to other product knowledge, such as the engineering data/documents that comprise your product/process definitions and populate your information workflows.

By linking your DOORS requirements to fine-grain design elements, enterprise teams are able to access, leverage and trace an auditable set of requirements that can be repeatedly updated and changed as your product lifecycle evolves. Teamcenter facilitates cross-discipline, closed-loop feedback by recognizing when product requirements are in danger of being violated, when changes to your requirements and design elements take place and when design changes impact product requirements – as well as when changed requirements impact product design.

Underlying concepts

The integration uses a data export mechanism that users employ to exchange data between DOORS and Teamcenter. To maintain a high level of traceability, requirement changes must be made in DOORS; users cannot change a DOORS requirement within Teamcenter.

With this integrity protection in place, privileged users employ the DOORS side of the integration by working with two new menu items (Export Data to Teamcenter and Import Data from Teamcenter). These menu items present all allowable DOORS actions associated with the Teamcenter integration. When privileged users want to export requirements to Teamcenter, they can initiate the Export Data to Teamcenter dialog, which enables them to indicate which specific DOORS requirements they want to transmit. Users also can specify that other information – such as detail level and document type – be associated with the data exchange.



Capabilities

Allows enterprises to manage DOORS-created structured text, including product requirements, design documents and test information, in a Teamcenter-driven PLM environment

Enables enterprises to relate DOORS text to Teamcenter-managed product structure elements

Maintains traceability between DOORS data and Teamcenter data

Facilitates change management by enabling Teamcenter users to analyze the impact of changing DOORS requirements and enabling DOORS users to analyze the impact of changing design elements

Facilitates fine-grain requirements management by enabling enterprises to establish performance parameter targets, conduct trend analyses and perform tradeoff analysis

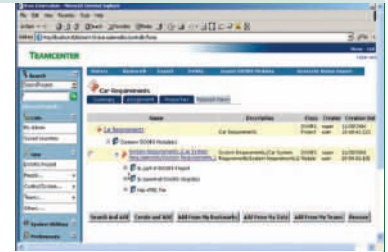
All exported DOORS requirements are collected into a single HTML file that is stored in a temporary location when it reaches Teamcenter. This collected information includes all DOORS formal modules, descriptive modules and link modules. To facilitate a variety of protective and auditing functions, all exported DOORS data must be baselined before it is sent to Teamcenter.

Once the exported DOORS data reaches Teamcenter, privileged users can import these requirements into the Teamcenter vault by using the Import from DOORS menu item. This import action automatically generates Teamcenter business and data items that pertain to the DOORS HTML file location, DOORS objects and DOORS links.

When the import into Teamcenter is complete, privileged users can establish relationships (links) between DOORS items and Teamcenter items (e.g., they can link DOORS items to the design elements associated with a Teamcenter-maintained product structure). Pull-down menus and drag-and-drop options are available to create these linkages.

Once these linkages are saved, the DOORS data is ready for subsequent perusal by Teamcenter users through the system’s standard object viewing capabilities – which include icon, list and tree viewing options.

In addition, the Teamcenter-based relationships can be exported to DOORS to enable DOORS users to see how the requirements data has been integrated into Teamcenter. DOORS users can view this Teamcenter data by selecting incoming links in DOORS modules.



Administrative controls

Privileged DOORS users are able to manage a variety of administrative actions, including who is permitted to exchange information with Teamcenter. In addition, privileged Teamcenter users can instruct Teamcenter to monitor changes that are made if and when subsequent DOORS exchanges impact a Teamcenter-maintained requirement. The Change Check function causes Teamcenter to automatically generate a report when changes are made to any requirement designated by an administrator-defined specification list. Accordingly, every time that new DOORS data is imported into Teamcenter, the system checks to determine whether there is a difference between the imported data and the current Teamcenter data.

These differences can include new DOORS objects, deleted DOORS objects and/or changes to a requirements text or its related attributes. Change checking is also facilitated by Teamcenter’s icon coloring conventions. The Teamcenter DOORS integration automatically creates a baseline (i.e., a set version) of all imported DOORS objects within Teamcenter. The icons associated with the import are highlighted in a different color (e.g., blue) once they have been synchronized to indicate that they supersede all previously imported versions. Privileged users can select the Show Change option to enable end users to determine whether a requirement-related change has been made. Teamcenter users can examine each requirement’s icon coloring for the following references.

Color	Indication
Green icons	Indicate requirement items added since the last synchronized import
Yellow icons	Indicate requirement items changed since the last synchronized import
Red icons	Indicate that no changes have taken place since the last synchronized import

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