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Teamcenter gateway for ECAD part library

Application interface for menu-driven ECAD part library integration

Benefits
- Integrate commercial and/or custom ECAD parts libraries
- Reduce or eliminate development time for tool integrations
- Standardize the use of parts from preferred vendors
- Provide a uniform "look and feel" across tool integrations
- Eliminate the use of obsolete or unapproved parts
- Ensure data model compatibility

Features
- Flexible configuration files
- User-configurable parameters and data types
- Menu-driven attribute mapping tables and dialogs
- Structured workflows and library synchronization processes

Summary
The Teamcenter® gateway for ECAD (Electronic Computer Aided Design) part library integration enables one or more ECAD part library application to interface with your Teamcenter PLM environment to provide enterprise-wide management of ECAD parts data, customizable configuration files, and the relationships between those objects.

Enterprise-wide ECAD parts library management
With today's shortened innovation cycles, environmental requirements and distributed product development, enterprise management of your ECAD parts library is becoming a critical success factor in the design of electronic products.
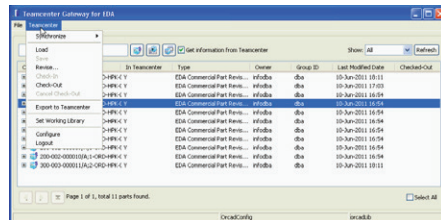
Teamcenter enables companies using multiple ECAD tools to:

- leverage a single library which ensures the consistency of ECAD part and component data across sites
- control library access which reduces part duplication
- manage part change and approval processes which prevents use of obsolete or unapproved parts
- leverage Teamcenter supplier management option for accessing commercial part and vendor relationships to focus procurement from approved or "preferred" vendors needed for volume discounting
- leverage information from Teamcenter substance compliance option for accessing environmental compliance data to avoid regulatory violations

Integrate with commercial or custom ECAD library tools
Teamcenter ECAD parts library management provides the ability to manage the ECAD parts library, as well as parts attributes and relationships with a "gateway" for ECAD parts library integration with Orcad CIS, Altium, Mentor Expedition DXDatabook or other Open Database Connectivity database applications (ODBC).

With flexible configuration files; a menu-driven interface; and a well-defined mechatronics data model that supports ECAD part library data; the gateway enables both tool integrators and users to create and deliver "plug and play" integration with a wide variety of ECAD tools' part libraries.

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Teamcenter gateway for ECAD part library

Menu-driven integration

Using the ECAD part library gateway does not require a detailed understanding of the ECAD tool or how to store data in Teamcenter. Instead, the gateway enables you to work with Teamcenter through easy-to-navigate menus and configuration files.

ECAD library administrators can populate libraries, map attributes, modify data, save and check-in/-out ECAD parts, define access rules and enforce approval processes, all from the desktop using the gateway's menu-driven user interface. Using application tabs and dialogs, you can identify or select the location of the ECAD tool's part library data to incorporate into Teamcenter. This approach enables you to specify the physical location of the data and select the specific action you want to execute.

Structured workflows reduce part duplication

The parts in your ECAD parts library are constantly undergoing change. To prevent design teams from using unapproved, obsolete or out-of-date parts, Teamcenter enables you to control access to the library and establish specific processes and procedures for incorporating changes. To ensure information consistency, you can use Teamcenter to manage access permissions to specific users or library administrators. As parts are added or attributes modified, you can apply structured review and approval processes. The library administrator can browse modified parts and verify that the local EDA libraries are updated. Leveraging Teamcenter, your change processes become part of structured workflows that help you reduce part duplication; prevent use of obsolete or unapproved parts; and source components only from approved vendors.

Configuration files automate processing

Configuration files control the actions and processes executed by the gateway. Through the use of configuration files, ECAD librarians or administrators can:

- automate the library import and export process
- add or update parts
- synchronize attribute data with the ECAD tool data
- access other gateway commands
- exit the system

These configuration files define the characteristics, actions and information used by the interface including the target Teamcenter ECAD parts library name and location, which ECAD tool local library to use, and what part metadata to synchronize.

To make certain design teams use only the most current data, library administrators can establish specific synchronization schedules and processes (or execute the process on demand) between Teamcenter and an ECAD tool's local library. The synchronization process identifies any new or updated parts that need to be exported to local libraries. Prior to executing a synchronization process, the library administrator can browse the list to verify which parts should be updated in the local ECAD tool libraries.

Classification and search increase re-use

Design engineers and library administrators spend large amounts of time searching for parts that may be spread across multiple ECAD libraries and then comparing their attribute data. Based on a RosettaNet standard, the Teamcenter classification and search capabilities enable you to rapidly identify and compare parts data. In Teamcenter you can configure library and catalog formats and apply customizable classification schemes.

After the parts data is imported into Teamcenter, all ECAD parts are automatically classified in targeted libraries or catalogs using classification and attribute mapping tables. By using the gateway for ECAD part library to import the libraries, engineers can use the classification capabilities in Teamcenter to quickly identify and select the "right" part, while also ensuring the use of existing "preferred" parts.

Once the design is completed, Teamcenter supports BOM grading features that enable manufacturers to monitor and maintain control over the accuracy of the BOM being turned over to internal or contact manufacturers. You can define company specific sets of criteria such as whether all the parts have an approval status, a preferred vendor listed, manufacturability locations identified, or a compliance status against which the BOM will be evaluated.

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