DASSAULT SYSTEMES

ENOVIA

COLLABORATIVE

ENOVIA Collaborative Design for AutoCAD

ENOVIA® Collaborative Design for AutoCAD provides a multi-site AutoCAD design data management solution for the extended enterprise. It allows designers to access and share each other's designs from within the native AutoCAD user interface by leveraging the design team collaboration capabilities of ENOVIA® Designer Central™.

Key Benefits

- Maintain accurate representations of the intended drawing in the PLM database
- Achieve centralized management of all CAD files
- Control work-in-process, engineering changes, data, documents, and dynamic configurations
- Give non-engineering personnel direct, task-specific access to current CAD data
- Reduce the possibility of redundant, inaccurate, or out-of-date product information
- Increase information sharing while protecting intellectual property from unauthorized access
- Achieve ISO compliance
- Improve design control and business process management to realize truly functional product development and delivery

Product Overview

ENOVIA Collaborative Design for AutoCAD allows designers to effortlessly access, manage, share, and store AutoCAD data without leaving their preferred environment. ENOVIA Collaborative Design for AutoCAD facilitates process workflow, increases data integrity, and improves change management. From AutoCAD, users can search and browse the ENOVIA system, and lock and checkout designs or drawings to their local drives. After modification, users can upload changes to ENOVIA.

Product Highlights

ENOVIA Collaborative Design for AutoCAD connects the AutoCAD application and ENOVIA Designer Central. It provides the CAD user with a rich set of design data management tools accessible from within the CAD application. ENOVIA Collaborative Design for AutoCAD organizes the native types of parts, assemblies, attributes, etc. in AutoCAD and maps those entities to associated items in ENOVIA that the entire corporation will understand.

Microsoft Windows Explorer-based Interface for Workspace Management

A Microsoft Windows Explorer-based interface lets users access their local workspaces to perform lock/unlock, open, update, revert, copy, move and delete operations. Access is also available to ENOVIA workspaces and folder content, "My Locked Objects", "Collections" and "Recently Checked in Files". All ENOVIA managed data is represented to the user as if it is stored locally on the client. Users are able to utilize standard Explorer user interaction techniques to perform lock/unlock and open designs operations.

Product Structure Data Integrity

The combination of ENOVIA Collaborative Design for AutoCAD and ENOVIA Designer Central provides a powerful solution in maintaining the integrity and timeliness of AutoCAD data in the ENOVIA system. ENOVIA Collaborative Design for AutoCAD controls the relationships between AutoCAD entities and how they are presented in the database. When a drawing is created it becomes the parent by the very nature of the internal reference to the part. Another example is when a structure is being checked out for loading in the Computer-Aided-Design (CAD) application.

ENOVIA Collaborative Design for AutoCAD controls what must be checked out for proper assembly in the CAD application while ENOVIA Designer Central capabilities provide the user interface and business process accesses for the operation to be performed. Once files are checked out, data integrity issues may occur prior to checking the file back in to ENOVIA.

Users attempting edits to designs they do not have locked are presented with a warning message that the local file is read-only. The user may then attempt to lock the design in order to save it to ENOVIA or continue editing to perform what-if scenarios. If editing is continued, the user is presented with a final warning at the time of check-in to either attempt to lock the design or save the design to a new revision stream.

If neither is selected, the design changes will not be stored into the ENOVIA database. ENOVIA Collaborative Design for AutoCAD also provides an auto-recognition capability that gives the user confidence that on check-in the file will be associated with the same revision/version stream in from which it was checked out. Another aspect of maintaining data integrity is the synchronization between the CAD designs and the objects stored in the PLM database.

Product Driven Designs

Utilization of ENOVIA Collaborative Design for AutoCAD and ENOVIA® Engineering Central™ allows the automatic synchronization of a CAD design structure to an Engineering Bill-of-Materials (EBOM). This link is critical to the correct representation of the intended design. While saving designs to ENOVIA, there is an option for users to automatically create and associate an engineering part to the corresponding CAD design.

The CAD design is available immediately to the engineering community as a specification to the engineering part. Engineers may view a graphical representation of the associated specification.

Quick Access

ENOVIA Collaborative Design for AutoCAD has been designed to allow users to manage their CAD files with minimal effort. The user interface allows users to remain in the context of the CAD application while performing daily routine tasks that interface with ENOVIA. During a save operation, the user is presented with only preselected new and modified designs, which eliminates the need to traverse the structure to locate the desired items. Added flexibility is provided to save the active design "Save Active" or save all loaded designs "Save All". In addition, a "Quick Save" command saves the active in-session design without any further display or user interaction. Additionally, users may manually input the revision sequence for the stored designs. Opening designs is also easy. Users may search ENOVIA, access designs from previously stored queries, workspace folders, and stored collections, or from recently accessed designs directly from the "Open" dialog.

Exploring in ENOVIA

With the "Explore in ENOVIA" command, users may quickly review related Parts and associated drawings, perform "Where Used" and "Lifecycle" operations, and interrogate associated Engineering Change Orders.

Baseline Structures

ENOVIA Collaborative Design for AutoCAD provides a "Baseline" capability that permits users to preserve a specific configuration of a structure. Baselines can be created from the CAD application or ENOVIA for any stored configuration of a design. A baseline may be retrieved at any time for further investigation or used as the design's final representation for release.

Product Structure Maintenance

ENOVIA Collaborative Design for AutoCAD represents and maintains accurate product structures throughout the product's lifecycle. The product maps and maintains relationships among drawings and linked entities, and other application-specific items as users check-in and check-out items, or users browse the ENOVIA Designer Central vault contents. In addition ENOVIA Designer Central can store previous drawing versions for retrieval if required.

Revision Control

Organizations can maintain multiple revision trees of drawings within ENOVIA Designer Central without manually creating new subdirectories or changing filenames. When ENOVIA Collaborative Design for AutoCAD users create a new revision, ENOVIA Designer Central automatically saves it as a new business object, adds the sequential revision code to the item name, and relates it to the previous release. There is no need to propagate name changes interactively in the CAD application across files that reference the revised item.

Auto-Recognition of Design Files

One of the challenges in today's global environment for enterprises is sharing files with external resources that do not use the PLM system. Once a file is checked out it is possible for the file to be moved to other locations outside of the normal PLM processes. In order to retain proper security and data integrity when the files are returned to the PLM system there must be a mechanism to distinguish the design object for the file. ENOVIA Collaborative Design for AutoCAD automatically recognizes a file when checked in and associates it to the correct business object revision/version.

Design Team Collaboration

ENOVIA Collaborative Design for AutoCAD works with ENOVIA Designer Central to provide the critical connection between the mechanical computer-aided design (MCAD) process and effective product development. By uniting the management power of ENOVIA Designer Central with the design and engineering power of ENOVIA Collaborative Design for AutoCAD, users are provided real-world control of the work-in-progress product design environment. ENOVIA Collaboration Design for AutoCAD users benefit from the following collaboration features in ENOVIA Designer Central:

- CAD structure and EBOM synchronization validation
- Advanced CAD structure management in PLM
- Design data workspaces
- Quick access to most-recently used design data
- Mixed design flows between mechanical and electrical disciplines
- Notification of design modifications of interest
- Online collaboration meetings
- Web based design visualization without native CAD tool

To ensure that designers that do not overwrite each other's work, it is possible to query for the status of locally referenced designs from the context of the CAD tool. This display shows the design's type, name, current revision, current version, latest version available, and the user that has the design locked. Right mouse button commands allow users to lock, unlock and display design properties. Once this window is activated, it may stay on the desktop while the user continues to work in the CAD application. When a user changes work designs, the PLM status window may be 'refreshed'' to update the display with the current active design status.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA Collaborative Design for AutoCAD supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values: global collaboration innovation, single PLM platform for intellectual property (IP) management, online creation and collaboration, ready to use PLM business processes, and lower cost of ownership.

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Europe/Middle East/Africa
Dassault Systèmes
10, rue Marcel Dassault
CS 40501
78946 Vélizy-Villacoublay Cedex
France

Asia-Pacific
Dassault Systèmes
Pier City Shibaura Bldg 10F
3-18-1 Kaigan, Minato-Ku
Tokyo 108-002
Japan

Americas
Dassault Systèmes
175 Wyman Street
Waltham, Massachusetts
02451-1223
USA

Visit us at
3DS.COM/ENOVIA

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