DASSAULT SYSTEMES

ENOVIA

CONNECTOR FOR MENTOR GRAPHICS EXPEDITION ENTERPRISE

OBJECTIVE

Connector for Mentor Graphics Expedition Enterprise manages Mentor Graphics Expedition Enterprise designs to accelerate product development. It leverages the design team collaboration capabilities of **Collaborative Innovation** to facilitate a concurrent printed circuit board (PCB) design process resulting in fewer engineering changes and lower production costs.

OVERVIEW

Ensuring that the right designs are being properly shared and managed across the value chain (a company's suppliers, partners and customers) is vital to a company's ability to bring products to market quickly and correctly the first time. In PCB designs, this effort is complicated by several factors including that electronic designs are growing exponentially in complexity (creating several gigabytes of data) and that corporations have geographically dispersed design teams across multiple time zones. As design and manufacturing functions continue to occur outside the walls of an organization, it is increasingly critical that all members contributing to the PCB design process have full access to the most recent design data, when they need it and wherever they are located.

Connector for Mentor Graphics Expedition Enterprise allows PCB development teams to collaborate during the board design process, and to collect, track, protect, and deliver product design information seamlessly across Electronic Computer Aided Design (ECAD) systems and other enterprise applications.

Connector for Mentor Graphics Expedition Enterprise provides a simple, yet secure, workgroup and enterprise data management system that integrates directly into ECAD design environments, allowing a designer to easily share electronic design data with other designers, enterprise users and partners.

Connector for Mentor Graphics Expedition Enterprise is intended to work with **Collaborative Innovation** in order to create a collaborative environment for managing design data from multiple electronic and/or Mechanical Computer-Aided Design (MCAD) tools. Users are able to:

- Manage both DxDesigner schematic and Expedition PCB layout data as a single object
- Enable project managers to release the entire design as one CAD model
- Create derived outputs (i.e. manufacturing data automatically generated by the ECAD application)
- Manage design variants as defined in the ECAD application, each with its own derived outputs
- Assign the design to workspace folders to facilitate collaboration
- Synchronize attributes between the CAD library and parts in **3D**EXPERIENCE® platform

HIGHLIGHTS

Connector for Mentor Graphics Expedition Enterprise enables electronic designers to share design information with the extended enterprise, thereby shortening development times, reducing design errors and introducing products to market faster.

Desktop Cockpit Interface

Users can easily access their ECAD design data and common Product Lifecycle Management (PLM) commands through a desktop application and still work in their native design application.

Task Oriented Commands

Commands are organized into folders depending on the stage the design is in the development process. Within each stage, the most relevant commands are easily accessible. For example, the command to generate a bill of material (BOM) only makes sense if a schematic design exists. Therefore, the command only exists during the schematic development stage.

Event Window

An event window allows the user to see the status of a task or command in **3D**EXPERIENCE platform or the design tool. The events can be saved to a log file to record events automatically in order to provide an audit trail that can be used to diagnose problems.

Flexible Design and Variant Configuration Management

Connector for Mentor Graphics Expedition Enterprise enables better control of design data through check-in and checkout of electrical design data and flexible configuration management. The product also supports unlimited board assembly variants without having to maintain duplicate schematics or manually edit BOMs. This helps ensure there is one source of the truth for manufacturing.

BOM Management

A BOM can be generated automatically anytime during the design process for review by designers, procurement, and component engineers to estimate cost, part status and availability. A preliminary BOM can be created for early concept design collaboration even before an ECAD design is managed formally in **3D**EXPERIENCE platform. The design BOM can be modified by adding and removing parts manually or automatically by importing a parts list in a comma delimited format (CSV). The design BOM can be verified to help ensure that the parts are available for production. When it is ready for collaboration, the BOM can then be made available to users of **Product Engineer** to create markups and add comments of proposed changes. Once approved, BOM markups can be applied to an Engineering Change Order (ECO) to implement the change automatically.

Library Information Management

By synchronizing part data between **3D**EXPERIENCE platform and ECAD libraries, designers can make smarter component choices early in the design process, reducing design iterations and product development times. This feature allows bi-directional transfer of part information, ensuring that data is synchronized as changes are made in either **3D**EXPERIENCE platform or ECAD libraries. Therefore, designers can use native CAD tools to find PCB components and display **3D**EXPERIENCE platform attributes. Furthermore, enterprise users can use **3D**EXPERIENCE platform to find CAD parts and display CAD parameters. Synchronization is based on **Product Engineer** part types or **Classification Manager** classes. Batch mode allows updates to be made periodically or as needed.

Key Benefits:

- Maintain accurate representations of the intended design 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
- Improve design control and business process management to realize truly functional product development and delivery
- Reduce the number of design iterations by enabling enterprise collaboration throughout the design process between electrical and mechanical designers, purchasing, manufacturing and partners while protecting intellectual property from unauthorized access
- Reduce scrap and re-work costs by minimizing data transfer errors between engineering and manufacturing
- Reduce ramp up production lead times by providing component information to your supply chain earlier in the development process through preliminary BOMs

Derived Outputs

Derived outputs such as netlists, drawing plots, milling data, artwork, drill data, and other manufacturing information can be generated automatically and stored with the design. This data can then be securely shared with production engineering and contract manufactures to facilitate the ramp to production.

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