

CUSTOM

ENOVIA DesignSync for Synopses Custom Designer



ENOVIA® DesignSync for Synopsys Custom Designer provides design data management for Synopsys Custom Designer data in Open Access format. It extends the design data management capabilities of both ENOVIA® Synchronicity® DesignSync® Data Manager and ENOVIA® Synchronicity® DesignSync® Central™.

Key Benefits

- By integrating into the Synopsys Custom Designer graphical design environment, designers work in the tools with which they are familiar.
- All vaulting operations are executed with a thorough understanding of the unique structure of a Synopsys data library.
- Manages Synopsys data, along with non-Synopsys project data, letting companies connect to and manage the entire design chain with a unified DDM system.

Product Overview

The ENOVIA Synchronicity for Synopsys CD integrates ENOVIA Synchronicity DesignSync Data Manager and ENOVIA Synchronicity DesignSync Central with the Synopsys Customer Designer graphical integrated circuit (IC) design environment, recognizing and efficiently managing Synopsys library design data. The Synopsys Customer Designer graphical design environment is modified with the addition of ENOVIA Synchronicity menus and commands. Designers are able to perform automatic checkout and check in operations without leaving the familiar Synopsys graphical environment, and without having to manage the actual collections of files and directories on disk which represent Synopsys library objects such as schematic diagrams.

EDA Data Awareness - Synopsys Library Recognition

Data awareness is important because data created and modified by Electronic Design Automation (EDA) tools, such as a Synopsys schematic diagram or physical layout, is typically not stored on disk as a single file. Rather, a design object such as a schematic diagram consists of a specific set of files. In order for a Design Data Management (DDM) system to maintain a version history of changes to the schematic diagram, this set of files must be managed as a group. The group of files is also referred to as a "co-managed" set, or "collection object." These collection objects are stored in a larger directory structure called a "library." A Synopsys "library" consists of "cells," and a cell may contain multiple "views," which are models used for different purposes, such as a schematic view, a layout view, etc.

The ENOVIA Synchronicity for Synopsys CD recognizes Synopsys Open Access libraries on disk so as not to confuse them with ordinary directories and files. Collection objects are managed transparently to the end-user. Collection objects are managed transparently to the end user. So, when a user issues a command to checkout a version of a schematic diagram, the appropriate versions of each of the member files of the collection object are checked out automatically. The member files of the collection are each individually version controlled, and a mapping is maintained between the version of the design object and the versions of the member files which constitute the version of the object. Storage of data in the DDM repository is efficient because only member files of a collection which are modified in an edit operation are stored in the new version of the design object. And because the design object is managed as a "collection," the tool prevents direct modification to individual member files, which can result in the corruption of the object as a whole.

Product Highlights

Synopsys Library Recognition and Processing

Synopsys library directory structures are recognized as such. Users manipulate familiar constructs such as cells or views, while the tool automatically processes the underlying files and directories which comprise data views. Designers need not be concerned with detailed version control bookkeeping, which is handled automatically.

Locking Model Enforced

Because Synopsys design data is binary in nature, a strict locking model is enforced. This prevents the situation in which two designers are making changes to the same version of a cell view, because once the first designer checks in the changes, there is no automated capability to merge the changes of the second designer.

Association with a Library

When libraries are created using Custom Designer, the library is automatically associated with ENOVIA Synchronicity DesignSync Data Manager's version control system so that any subsequent read/edit access is via the DesignSync revision control repository.

Automatic Checkout and Check-in of Cell Views

Auto checkout and check-in of cell views is enabled with functions registered with the Synopsys Version Control system. Custom Designer calls the Version Control System before editing (auto checkout) and after editing (auto check-in), which communicates with ENOVIA Synchronicity DesignSync Data Manager. User preferences control whether auto checkout and auto check-in occur automatically, or query the user first.

Status Reporting in the Library Manager

The Custom Designer Library Manager is modified to include revision control information for cell views including versions, tags, and locking status.

Distributing a Library Across Multiple Data Repositories

A single library can be distributed across multiple data repositories by using ENOVIA Synchronicity's module-based data storage. Local efficiencies are maximized at each design center because the majority of data transfer activity (check-in/checkout) occurs locally.

ENOVIA Synchronicity GUI and Command Line Support

Although most day-to-day data editing operations are performed from within the Synopsys Custom Designer graphical design environment, DDM operations on Synopsys library data can be performed using either the ENOVIA Synchronicity DesignSync Data Manager GUI or command line. Multiple libraries can be processed using one command, which is not possible from within Synopsys.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA DesignSync for Synopsys Custom Designer supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values, which are:

- Global collaboration innovation
- Single PLM platform for intellectual property (IP) management
- Online creation and collaboration
- Ready to use PLM business processes
- 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

