DASSAULT SYSTEMES

ENOVIA

SYNCHRONICITY

ENOVIA SYNCHRONICITY for CTS

ENOVIA® Synchronicity® for CTS (Custom Types System) provides design data management for commercial and customer proprietary Electronic Design Automation (EDA) tools beyond those supported by predefined DesignSync® interfaces. The ENOVIA Synchronicity for CTS extends ENOVIA® Synchronicity® DesignSync® Data Manager and ENOVIA® Synchronicity® DesignSync® Central™.

Key Benefits

- Leverages the complex EDA design data management knowledge of the undisputed industry leader
- Provides a programming interface that allows customization of ENOVIA Synchronicity products to recognize and manage complex data types generated by any EDA design tool

Product Overview

ENOVIA Synchronicity for CTS is a programming interface used to customize ENOVIA Synchronicity products to enable data recognition and management of arbitrary EDA tool data structures. ENOVIA Synchronicity for CTS allows you to customize ENOVIA Synchronicity products for use with your in-house design tools, or to integrate with other tools for which an ENOVIA Synchronicity product is not available. Using the ENOVIA Synchronicity for CTS, Custom Type Packages (CTPs) are developed. These CTPs can be registered with ENOVIA Synchronicity products to support the recognition and management of complex EDA data structures.

EDA Data Awareness

Data created and modified by EDA tools, such as a schematic diagram or physical layout, is typically not stored on disk as a single file. Rather, the data may be distributed over multiple files, and or directories. Such "complex" data structures pose a challenge for the deployment of a DDM system. For example, a given version of a schematic diagram might consist of a specific set of directories and files which must be managed as a "co-managed" set, also referred to as a "collection object." Without built-in EDA data awareness, one would have to navigate to the correct directory, and then individually check out each of the files which define the data view.

Collection objects may be organized in a larger data structure typically referred to as a "library." The data structure is often a well defined hierarchy of directories. For example, a Cadence® DFII library directory contains subdirectories which represent "cells." In a standard cell library, a cell might be an "and" gate. Each cell directory can contain sub-directories, each of which represents a cell "view."

Different views are different representations of the same cell. The "and" gate, for example, might contain views representing both a schematic diagram and a physical layout. The "view" directories representing a schematic or a layout each contain multiple files, i.e. the aforementioned collections.

ENOVIA Synchronicity for CTS lets you define special object types and group files into abstract objects, such as a design view encompassing a number of files. You can check in, check out, and tag this abstract object, called a collection, as a single object. Your data is safeguarded by preventing users from checking in the constituent parts of a collection. Instead, users have to operate on the collection as a whole, because operations on collection objects are atomic.

ENOVIA Synchronicity for CTS can also be used to define special object types (files or folders). For example, particular object types might need to be checked in together or listed in a special way. In effect, ENOVIA Synchronicity for CTS is used to instruct ENOVIA Synchronicity products on the nature of the design data so that they can efficiently traverse the data hierarchy, performing revision control operations on special objects or collections of your data. ENOVIA Synchronicity for CTS allows for the use of special icons within ENOVIA Synchronicity products.

The CTS is used in ENOVIA's integration products to commercial EDA tools. Customers can use ENOVIA Synchronicity for CTS to integrate ENOVIA Synchronicity products with other EDA tools for which an integrated product is not available.

CTS Development

To model data, customers create a CTP, a Tcl file containing procedures that recognize and traverse your custom data hierarchy, creating new object types and grouping the data into collections. The CTP is installed within the ENOVIA Synchronicity custom hierarchy. When an ENOVIA Synchronicity product is invoked next, ENOVIA Synchronicity for CTS registers the CTP so that each revision control operation can recognize and manage the special types and collections defined in the CTP.

Product Highlights

Model any Dataset

Because ENOVIA Synchronicity for CTS is a programming interface, any dataset may be modeled for the purposes of design data management. Once complex structures have been modeled as "collections," users can perform DDM operations such as checkin/checkout on the collection objects, letting the tool manipulate the underlying data sets transparently.

Maintain Data Integrity

Data integrity is maintained. Safeguards prevent DDM operations on objects in folders where the collection mapping by a CTP has failed. Operations on collection objects are atomic, such that a partial checkin or checkout of a co-managed set of files cannot occur.

Customize the DesignSync GUI

The ENOVIA Synchronicity GUI can be customized to display special purpose icons for the display of complex data types.

Built in Debugging Procedures

ENOVIA Synchronicity for CTS helps you find the errors in your CTPs before you use these procedures on your production data.

The Role of ENOVIA V6 and PLM 2.0

ENOVIA Synchronicity for CTS supports PLM 2.0, product lifecycle management online for everyone, and the ENOVIA V6 values: global collaborative 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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