

Cadence DECM Design Environment Configuration Management

For Cadence Allegro, Encounter, Incisive, Virtuoso Platforms, and Cadence DFM Solutions

The Design Environment Configuration Management (DECM) solution enables efficient, transparent, and consistent configuration management and maintenance of design environments and flows. Provided as Virtual Integrated Computer-Aided Design (VCAD) Productivity Package, the DECM solution includes project, user, and version management and is fully compatible with the Cadence® Allegro®, Encounter®, Incisive®, and Virtuoso® platforms as well as Cadence DFM solutions.

VCAD Design Environment Configuration Management

The VCAD Design Environment Configuration Management solution (Figure 1) enables the configuration management and maintenance of design environments and design flows. The two big challenges of setting up design environments and flows are the complexity and the consistency of the setup. An easy-to-use graphical user interface addresses the complexity by offering usertype-specific access levels. Implementing the DECM solution for the entire design system ensures that all software products, flows, design projects, and users are set up in a consistent, easy-to-maintain way. The setup of the software products used in the design environment is a one-time task (Figure 2). For example, Virtuoso Schematic Editor needs to be set up only once. From this point on, every project setup can use this building block by simply using a reference to it. The same applies for all reference data, such as process design kits and libraries. This approach guarantees that a building block, once set up, is used in the same fashion everywhere in the design system. It also reduces the risk of

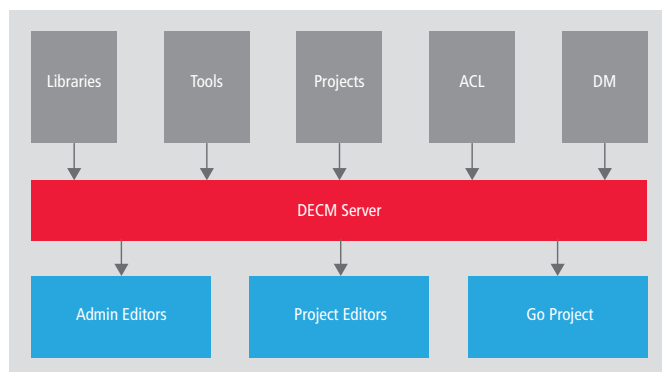


Figure 1: DECM system structure

introducing errors and inconsistencies in the setup of new projects, because they are built upon tested components.

All projects generated with the DECM solution are setup in a similar way, ensuring that the designer finds a familiar working environment when entering a new project (Figure 4). The complete work area for the design team is set up based on a unique pre-set DECM project definition, which guarantees that all designers are working with the same tool versions and using exactly the same reference data.

Benefits

- Allows the setup of complex design environments without shell scripting knowledge
- Creates work areas for designers automatically when they enter the project the first time
- Ensures the design environments for all design team members are identical
- Unifies the design environments for different projects and eliminates flaws caused by incorrectly referenced data
- Improves maintainability by reuse of software solution setup and data setup when creating several projects

Features

Project configuration

The DECM solution implements a formal and fully configurable approach to project configuration. It uses a structured and reusable description of the requirements for tools, sets of tools, and design flows, as well as a similarly structured description for the features of libraries and process design kits.

Automated script generation

The DECM solution automatically generates customized scripts based on current selections in the project definitions. This completely eliminates the need to manually prepare project or user setup scripts.

Graphical user interface

The graphical user interfaces (GUIs) are easy to use and tailored for the different roles and responsibilities of the project members, project managers, and site administrators. There is a clear and structured way to define the setup of design flows and process design kits centrally within the GUI view of the site administrators. These definitions are then used in the GUI view of the project managers as they set up new projects.

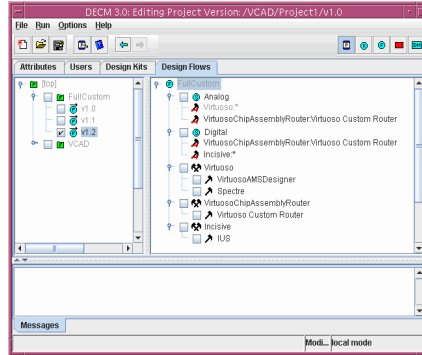


Figure 2: Software environment setup

Access control mechanism

The DECM solution has a built-in access control mechanism and supports flexible access models and security profiles per user or per project. The access control mechanism can be disabled.

Data management support

Support for data management is available by using pre- and post-action triggers on file operations, configurable data management definitions, and UNIX wrappers written in perl and cshell. With the DECM solution, multiple data management solutions can co-exist at one site.

Specifications

DECM server

- Server provides network transparent access to DECM project files

DECM client

- GUI-based editor for the DECM database
- File access provided by the DECM server

Go project client

- Easy-to-use client allows engineers to enter projects

Access levels

- Site administrator
- Project manager
- Project member
- Visitor

Project configuration items

- Software solutions
- Design flows
- Process design kits
- Libraries
- Version control
- Work area
- Data

Supported platforms/OS

- Sun/Solaris
- Linux
- HP-UX
- Microsoft Windows (Client only)

VCAD Productivity Packages

VCAD Productivity Packages are a set of pre-packaged generic core solutions that increase design system productivity. Productivity Packages are available within services contracts, which include the package integration and maintenance of the customized solution. Cadence VCAD services targets the development, implementation, and ongoing improvement and maintenance of productive design systems to ensure short time to market and silicon success.

DECM is available through Cadence VCAD Services. For more information, please contact:

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