

## DEVELOPER

ENOVIA Studio Developer Edition



ENOVIA® Studio Developer Edition provides software code implementation and quality engineering capabilities for more rapid development of custom applications for Dassault Systèmes (DS) V6 authoring products (ENOVIA® VPM Central™, ENOVIA® VPM Team Central™, CATIA®, DELMIA®, and SIMULIA®).

### Key Benefits

- Full application development processes coverage
- Full integration with Microsoft Visual Studio 2008
- Seamless Microsoft Visual Studio 2008 project integration with CAA workspaces
- Support test and quality control tasks including debug/non debug option and variable setting for custom operations
- A single tool to build customized V6 authoring applications
- Multiple workspace compilation, link and run time creation

## Product Overview

ENOVIA Studio Developer Edition is a rapid application development environment (RADE) on the Windows platform for building C++ applications based on the V6 architecture. It provides a single point of access to the C++ development tools that support the full development cycle, from design and development through test, deployment and maintenance. It defines and supports the V6 architecture concepts of “framework” and “module” to model the logical and physical architecture of the application. Frameworks are aggregated in workspaces, where the developer can perform modifications and reuse frameworks located in other workspaces.

ENOVIA Studio Developer Edition’s tight integration with Microsoft Visual Studio 2008® makes it easy for developers to learn and master. It also enables users to check development compliance with design scenarios and to ensure regression-free modifications with features such as debug/non debug replay, replay environment concatenation, etc.

## Product Highlights

ENOVIA Studio Developer Edition has the following capabilities:

### **Development Studio**

#### *Full Application Development Process Coverage*

Developers are provided with RADE on Windows® XP, Windows® Vista and Windows® 7 for building V6 C++ applications. This dashboard offers a single point access to the C++ development tools that support the full development cycle, from design and development through test, deployment and maintenance.

#### *Full Integration With Microsoft Visual 2008*

ENOVIA Studio Developer Edition is fully integrated to Microsoft Visual Studio 2008. The complete DS Component Application Architecture (CAA) configuration and build capabilities are added or substituted to the standard equivalent functions found in Microsoft Visual Studio 2008. Options for these capabilities are offered through specific menus added in Microsoft Visual Studio 2008.

#### *Seamless Microsoft Visual Studio 2008*

Developers are provided with component behavior identical to those existing in Microsoft Visual Studio 2008. Developers can take advantage of the standard Microsoft Visual Studio 2008 Intellisense mechanism on CAA workspaces. Code generation wizards are provided in the standard Visual Studio 2008® “New ...” menu. Object properties are accessible in the standard “Property” view.

#### *Component Workspace Creation Wizard*

ENOVIA Studio Developer Edition provides automatic generation of the file tree and declaratives set for the framework and modules component. Different types of frameworks and modules can be generated according to the options set in their respective wizards such as education framework, shared library or module.

#### *V6 Component Creation Wizard*

Developers can automatically perform code generation for interfaces and their implementations. An interface is the description of an abstract behavior that is not linked to any specific object. An interface implementation is the concrete implementation of this behavior for a specific object. The wizards generate all the object modeler macros required for both interfaces and interface implementations. Interface implementation skeletons are generated from the interface list imported by the project by means of a dynamic code analysis.

### ***Source Navigator***

The source navigator enriches the standard features of Microsoft Visual Studio 2008 by providing back and forth access to code components without having the whole class and derivate objects in the current project.

### ***API Documentation Access***

Developers can directly access installed V6 Application Programming Interface (API) reference documentation with a simple mouse click on any text string in the source code. Tool documentation for all of the capabilities added to Microsoft Visual Studio 2008 is provided by pressing the F1 function key.

### ***Commands Creation Wizard***

The Command Creation Wizard provides automatic generation of command class skeletons.

### ***Workbench and Command Creation Wizard***

The workbench builder application capability provides a simple way to integrate customer applications into V6 user interfaces using menu and toolbar commands.

### ***3DS Object Browser***

The 3DS Object browser shows the list of code interfaces implemented by each type of object loaded in memory during a V6 authoring client session. It also shows all the object types implementing a given public code interface. Both views help a user understand the provided API.

### ***3DS Workspace Explorer***

The 3DS Workspace Explorer provides a view of the actual tree structure of the V6 workspace, which reflects the architectural decomposition of the edited application: frameworks, modules, and data folders.

### ***Unit Test Definition***

#### ***Supports Test and Quality Control Tasks***

ENOVIA Studio Developer Edition facilitates test and quality control tasks critical to the efficient development of quality software. It is perfectly adapted for testing V6 C++ applications. Capabilities include a debug/non-debug option, variable setting for custom operations and generation of results as ASCII text or as structured xml for better integration to company processes.

### ***Application Builder***

#### ***Leverage Dassault Systèmes Tools***

Developers are provided with a consistent and integrated environment in which to compile, link, and build a V6 application, using the same methods and tools that Dassault Systemes uses to create its V6 products.

### ***Multiple Workspace Compilation, Link and Run Time Creation***

Native compilers are hidden to simplify a developer's tasks. ENOVIA Studio Developer Edition handles multiple workspace compilation, link and run time creation to provide the most efficient way to manage dependencies between separate workspaces. It detects modifications in source code, and displays and tracks these modifications through the entire build time view, along with other prerequisite workspaces. This provides significant build performance improvement by allowing the user to build only what has been modified.

### ***Access to C, C++ and Java compilers***

C, C++, and Java programming languages can be used in program development.

### *TIE Compiler*

TIEs transparently link code interfaces with code implementation interfaces in the V6 architecture. The TIE Compiler is fully integrated through the build process's automatic code generation to ensure multiple derivations do not exist.

### *EXPRESS Compiler*

An EXPRESS Compiler ensures compatibility with the STEP programming standard.

### *IDL Compiler*

The IDL Compiler offers an easy way to provide the necessary "typelibs" for automation. These "typelibs" can then be used with appropriate scripting, to allow the coding interface to be viewed using Microsoft VisualBasic Access (VBA) on Windows. Specific setting of the IDL compiler enables users to select which method will be viewed by Intellisense forward typing when operating within VBA.

### **The Role of ENOVIA V6 and PLM 2.0**

ENOVIA Studio Developer Edition 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.



## Delivering Best-in-Class Products



Virtual Product Design



Global Collaborative Lifecycle Management



3D for Professionals



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Social Innovation



Virtual Production



Online 3D Lifelike Experiences

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Dassault Systèmes, the 3D Experience Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes' collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 150,000 customers of all sizes in all industries in more than 80 countries. For more information, visit [www.3ds.com](http://www.3ds.com).

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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](http://3DS.COM/ENOVIA)**

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