



ARTiSAN Studio™

Features

- **Robust and mature**, for assured enterprise-wide deployment.
- **Easy-to-use and intuitive**, for trouble-free adoption.
- **Scalable multi-user repository**, for unhindered project ramp up.
- **Interoperability** with industry-standard CM and RM tools.
- **Flexible and extensible**, to match your project needs.
- **Conformance to UML/OMG standards**, for future proofed assurance.
- **Fast, customizable code generation**, to match your coding standards.

Standards and Languages

- **UML2** for component-based development and architectural modeling.
- **Advanced SysML features** for model-based systems engineering.
- **C, C++ ,Java®, Ada and Spark Ada** in a single tool.
- **Target code generation** for VxWorks and win32.
- **XMI® 2.1** and Rational Rose® import/export for model interchange.
- **Architectural Frameworks**, e.g. DoDAF and IMA.
- **MDA®** through open architecture and pattern-based code generation.

ARTiSAN Studio is an integrated suite of UML® modeling tools targeted to meet the development needs of technical systems, embracing the latest UML 2.1 and OMG SysML™ standards, it is the tool of choice for complex mission-critical systems and software engineering.

ARTiSAN Studio is highly scaleable and suitable for use on small and large technical projects. Its proven multi-user repository provides a stable, robust working environment ensuring high availability of model information, while securing all valuable data. Engineering teams using Studio's powerful suite of tools can model systems and software, document legacy systems, and generate new code with complete control.

ARTiSAN Studio is non-intrusive and flexible, mandating neither a specific methodology nor process. Recognizing the importance of your existing assets we've ensured seamless and open integration with your tools of choice. With many years of customer-led enhancements, ARTiSAN Studio is a mature development environment and a proven solution for thousands of developers and development teams.

Whether your goal is increased reliability, faster time-to-market, or you're aspiring for CMMI®, ARTiSAN Studio is the right tool.

B E N E F I T S

Higher quality and shorter time-to-market:

Avoid building the wrong system. Use models to communicate requirements and design throughout your full project lifecycle.

Ramp up from small to large, with ease:

Move from proposal to production with absolute confidence. Our scalable approach is proven in small and large teams, including collaborative primary/subcontractor projects.

Work productively in a multi-disciplinary team:

Unite your team in our proven, multi-user, environment. Share knowledge across your systems, software, testing, and hardware organizations.

Avoid project overspend and overruns:

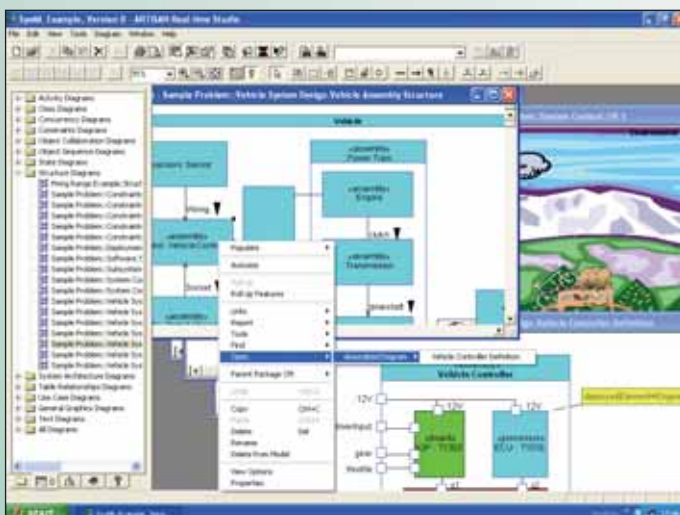
Solve problems during requirements and high-level design, rather than during integration and test when they're more expensive to correct.

Yield reusable components for future projects:

Make use of UML2 and advanced SysML to build and deploy components across projects and platforms. UML2 supports scalability to large, systems-of-systems architectures.

Designed to fit your processes:

ARTiSAN is focused on building pragmatic, easy-to-adopt tools. We provide a flexible and extensible tool-kit, designed to work with existing processes.



Pioneering support for systems engineering with UML2 and advanced SysML features

Component development and architectural modeling with UML2 and OMG SysML™

By leveraging the latest industry standard UML and SysML notations, Studio has explicit support for modeling scalable architectures and systems-of-systems.

Complex systems can be recursively decomposed to any level expressing, for example, the Electronic Control Units (ECUs) in a modern vehicle, or the decomposition of an advanced satellite communication system. Using parts and ports, you can also build and deploy reusable components across products and platforms.

As a result of our active technical involvement in SysML we've incorporated advanced features, including a SysML profile and support for deep-nested structures. SysML is recognized as the standard to extend UML2 for systems engineering, with support from the International Council on Systems Engineering (INCOSE) and the OMG™.

Ergonomic profiling, scripts, stereotypes and tags

Profiles, i.e. a collection of stereotypes and tags, are an important mechanism for the domain and organization specific extensions to the UML.

With Studio's Ergonomic Profiling, the user interface can be extended creating a compelling environment for your domain creating domain specific types, menus and even explorer panes. Because profile-based extensibility is part of the standard UML, your models remain compliant to a UML metamodel.

ARTiSAN Studio includes a wide range of standard UML profiles, and you can easily create your own. The DoDAF profile, for example, provides a compelling environment for the modeling of Department of Defense Architectural Frameworks.

ARTiSAN supports in-process activation of VB scripts, enabling improved 3rd party tool support, and highly integrated add-ins. Access to the model is provided through a mature COM-compliant automation interface (API), enabling the development of tools tailored to specialist needs.

Full lifecycle requirements management

ARTiSAN Studio enables you to analyze and model system requirements in a number of UML diagrams. By capturing functional and nonfunctional requirements, you reap the true benefits of an object-

orientated methodology, including expressing understandable requirements across your systems, software and test teams.

ARTiSAN Studio has an established and mature interface to Telelogic DOORS® and other RM tools making it the de facto standard for high-integrity, safety or mission-critical systems. Any model elements can be traced to any textual requirements managed in your tool of choice, unleashing the full power of impact and trace analysis.

ARTiSAN Studio includes a Requirements Profile (RP) for working directly with textual requirements in a model using the SysML standard. You can also make use of SysML «requirement» modeling to associate modeling elements with requirement objects in the modeling domain. You can navigate the bi-directional links with ease, from either Studio or your RM tool, ensuring your system is a complete realization of the original requirements.

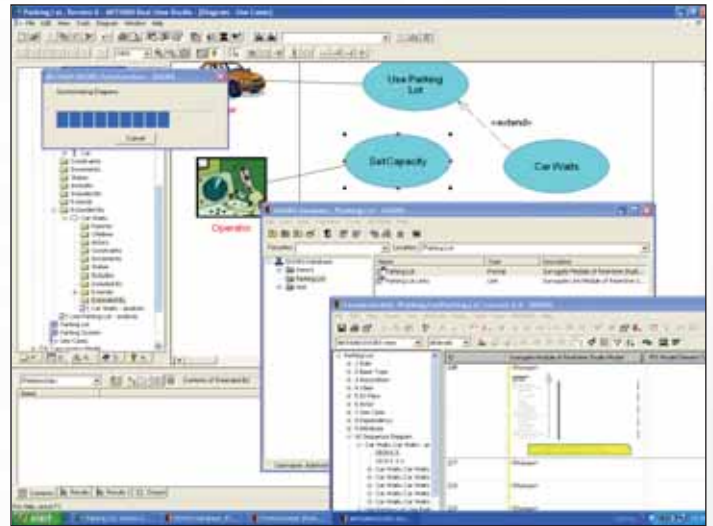
Fast and flexible template-based code generation

ARTiSAN Studio supports two different paradigms for managing model to code synchronicity. Because code generation is template-based, it is customizable to match your in-house coding standards. Different parts of the model can be implemented in different programming languages, including C, C++, Java, Ada 83/95 and Spark Ada 83/95.

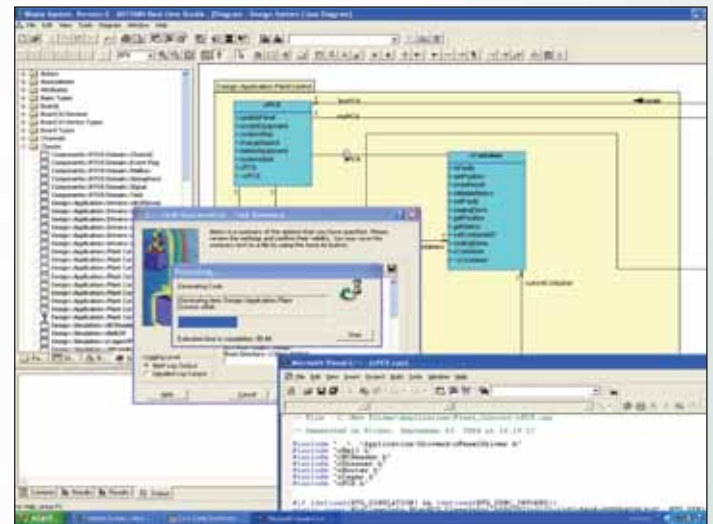
On-demand Code Synchronization (OCS) supports forward generation, reverse engineering and round-tripping. This enables you to work on the code independently and then synchronize those changes with the model using a visual differencer. Synchronization requires no 'magic tags' in the code and you're not dependent upon any inefficient or inflexible middle-layer code.

Automatic Code Synchronization (ACS) supports the instantaneous synchronization of code and model in a model-driven paradigm. Any changes to the model are automatically propagated to the code. It supports seamless use of Studio with your coding IDE of choice and provides a strong mentor for software developers new to UML.

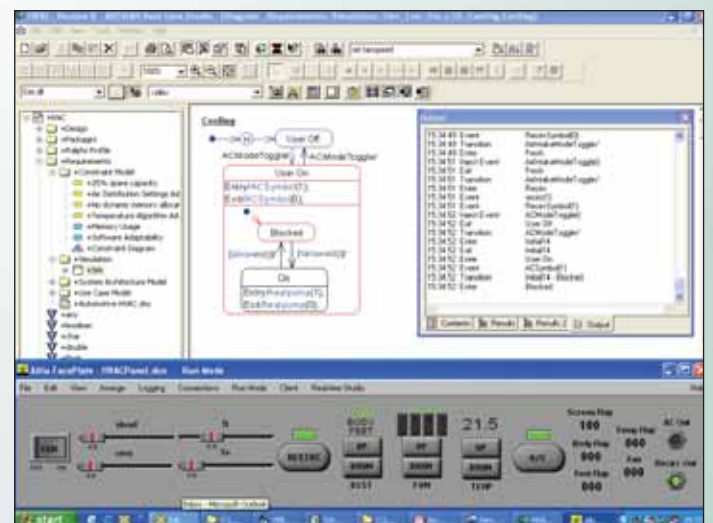
Using our Template Development Kit (TDK) when you change the model-based definition of your templates they can be compiled into a DLL that runs as part of the code generation framework. This offers the unparalleled combination of both user control and fast code generation.



Advanced Telelogic DOORS® synchronizer and Use Case diagram making use of Iconic Stereotypes



Code-synchronizers supporting mixed languages in a single model and your IDE of choice



System simulation and state machine animation with an Altia GUI front-end

SYSTEM REQUIREMENTS

- IBM compatible Pentium PC (1GHz minimum)
- SVGA graphics, 800x600 minimum (1024x768 recommended), 256 colors
- TCP/IP

Multi-user Client or Single-user

- 256 MB minimum, 512 MB recommended
- Windows 2003 SP1, Windows XP SP2, Windows 2000 SP4

Windows Multi-user Server

- 256 MB minimum, 512 MB recommended
- Windows 2003 SP1, Windows XP SP2, Windows 2000 SP4

Terminal Server Support

- MS Terminal Server: Windows 2003, Windows 2000 or later
- Citrix® MetaFrame XP™: Windows XP or later

INTERNATIONAL

Suite 701, Eagle Tower
Montpellier Drive
Cheltenham
Glos GL50 1TA, UK
Tel: +44 (0) 1242 229300
Fax: +44 (0) 1242 229301
E-mail: info.uk@artisansw.com

Eupener Str. 135 - 137
50933 Cologne
GERMANY
Tel: +49 (0) 221 4852260
Fax: +49 (0) 221 4852261
E-mail: info.de@artisansw.com

THE AMERICAS

16055 S.W.
Walker Road #422
Beaverton, OR 97006 - 4942 USA
Tel: +1 503 245 6200
Fax: +1 503 296 2281
E-mail: info.us@artisansw.com



www.artisansw.com

State machine generation, simulation and animation

ARTiSAN Studio has extensive support for model-driven software engineering with fast and customizable state machine generation technology.

State machine generation is a single step performed from the code generation templates allowing you to build and simulate executable models both as a demonstration tool to your customers, and to validate and verify system behavior at key reviews. Simulations can also be hooked to GUI prototyping tools, such as Altia® Design.

Studio also allows you to animate sequence diagrams for validating system requirements upstream, and helping to ensure valuable time and effort is not wasted building the wrong system.

Advanced repository-based model management and CM

ARTiSAN Studio offers both Configuration Management (CM) tool integration and advanced repository based version management of models.

ARTiSAN Studio's repository-based CM includes support for efficient model versioning/baselines, import and export and cloning. Models can be securely zipped-up and emailed between sites with ease. Using Studio's advanced model differencing and change tracking you can track changes as part of an iterative development lifecycle freeing your developers to concentrate on modeling.

In addition a wide range of CM tools are supported from IBM Rational®, Serena®, Microsoft®, and Telelogic®. Other CM tools can be integrated through the Microsoft SCC interface standard, or a script-based solution. Please check our website for an up-to-date list.

If you don't want to use a CM tool our private sandbox technology offers built-in support for developer isolation, including the ability to create private 'views' of the model and to reconcile or rebase them with a trunk model.

Real-time and embedded systems focus

Studio's code generation templates for VxWorks and win32 enable the transformations of platform independent models into specific Operating System (OS) implementations based on use of a UML2 active object pattern. This is extensible to other target platforms and even in-house OS.

Many of Studio's features are ideal for developers of real-time systems and ensure that aspects such as task synchronization and the mutual exclusion of resources are not neglected in product definition. There are timing annotations on diagrams, explicit model element properties, and a full implementation of the UML Real-time Profile (which ARTiSAN helped to define).

We also have a System Architecture Diagram (SAD) profile for modeling physical hardware using a UML2.1 compliant metamodel. This offers explicit support for modeling electronic hardware, including processor boards, buses and memory maps.

Document generation and model publishing

Recognizing that many industries still use documents in parallel with their modeling process, Studio provides a powerful Document Generator.

High-quality documents can be easily configured to meet your project standards. Through a graphical user interface, you can manage the definition of documents, easily construct new templates and edit Microsoft® Word style-sheets.

In addition ARTiSAN Studio's Web Publisher allows you to generate XML-based models that can be browsed outside of the tool, ideal for delivery of models to stakeholders for review.

XMI® and Rational Rose® import/export

The XML Metadata Interchange Format (XMI) specifies an open standard for exchanging modeling data and ARTiSAN Studio supports

the XMI 2.1 standard for interchange of model data with other tools supporting the XMI standard.

An explicit Rose import/export feature is also included to share information between tools in a mixed tool environment, enabling migration of your data between toolsets.

First-class support and ongoing training

We recognize that ARTiSAN Studio is a critical component in your tool-chain, and we invest heavily in ensuring a robust and reliable product for each release. We also pride ourselves on providing world-class technical support through the ARTiSAN help desk, which provides near round-the-clock coverage.

Different organizations have different levels of UML experience. Whether this is your first move to UML or you are transitioning to UML2, ARTiSAN can offer mentoring and an extensive range of training courses tailored to meet your needs. With our wealth of experience we can help make any transition both smooth and satisfying.

Pioneering support for systems engineering with UML2 and advanced SysML features.