UNIFIED MODELING LANGUAGE

Unique Methodology Support:

- **UML 2.0 Profiles—**
  Adapt UML to project-specific needs by modeling your own Profiles
- **Color to visualize Semantics—**
  Assign color to Profiles or Model Elements to visualize special semantics
- **MDA Support—**
  Architecture Component Development™—Model Transformation Engine, based on OMG's **Model Driven Architecture™**

Key Features

- Adaptable and customizable open-architecture development environment
- Highly-scalable–Industrial-strength Model Repository supports multiple users and efficient, real-time team collaboration
- Model Management capabilities for distributed and collaborative development
- Pre-defined UML® profiles for the generation of C, C++, Ada95, Java™, CORBA®, COM, EJB
- OMG XMI support for model Import / Export and tool-to-tool integration
- Integration with 3rd Party Products

Platform Support:

- Windows 2000 / XP
- Solaris
- Linux

Ameos™ — The Next Generation Modeling Tool

UML is well accepted in the market and widely used. Nevertheless most software projects still fall short of expectations. According to the latest Chaos Report, in 2002 only 23% of software development projects were finished successfully. Therefore it is time for the next generation of modeling tools and it is high time for Ameos.

Ameos combines UML 2.0 Profile support, MDA based Model Transformation and the usage of color in a unique fashion. This ensures a higher level of abstraction in the models and target-independent modeling.

UML Support -

By implementing the current UML® standard Ameos can be used to describe business processes, to design architectures for software systems and to model dynamic aspects in State Machines with hard timing constraints.

The Model Management of the UML is an integral part of Ameos and allows distributed working, private workspaces and the configuration of new versions. The Ameos Multi-User Repository ensures perfect scaleability from small to large projects.

### UML 2.0 Profile Support -

Profiles are an easy way to extend standard UML notation and to adapt it to project-specific needs. UML 2.0 describes Profiles and defines how to model them in UML notation. The Ameos Profile Editor allows stereotypes and tagged values to be defined and assigned to model elements of the UML Metamodel, ensuring that profiles are well designed, documented and easy to use for the entire project team. Ameos offers predefined Real-Time profiles and solutions to address the modeling needs of specific industries including Automotive, Telecom, and Avionics.

UML 2.0 Profiles

UML

MDA based Model Transformation

Color to visualize Semantics -

Within Ameos, color can be assigned to UML Profiles and to Model Elements. Wherever such a Model Element is referenced, it shows up in the assigned color. This usage of color on a semantic level, results in UML models which are far easier to read.

Aonix
Making Ideas a Reality
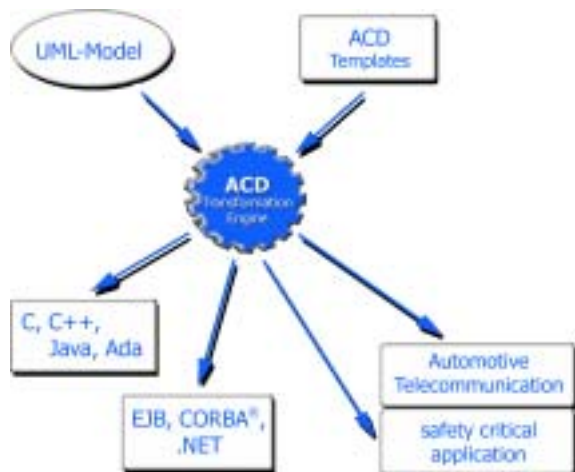
ACD™- Model Driven Architecture (MDA) Development

ACD™ is a powerful Transformation Engine, based on OMG's Model Driven Architecture™ (MDA). The idea behind it is to separate the technical aspects from the domain aspects in the UML™ model and generate code from WYSIWYG templates.

The main MDA benefits as stated by the OMG are:

- Reducing costs of development
- Better quality, better ROI
- Much faster use of new technologies
- Better re-use of domain aspects

Why is transformation of UML™ Models necessary?

Today many systems are described graphically using the UML which provides several diagram types as well as many graphical and textual elements to capture and model the requirements of a system. While this enables a greater understanding of the user and system requirements, only a small amount of these model elements are typically realized in the implemented system as source code. This leads to models which are constructed to achieve maximum code generation, rather than accurately representing the business or user requirements in a maintainable way. Instead of having a Business Model, this will result in an Implementation Model, which is difficult to read and difficult to maintain. Any change of the target technology or middleware will break the model. The separation of the technical and domain aspects of modeling improves the clarity and reuse opportunities for both these aspects of the design.

Model Driven Architecture

OMG's Model Driven Architecture™, a more sophisticated way of using the UML, provides a solution to this kind of problem. Using MDA, the business is modeled in Platform Independent Models (PIM) which are transformed into Platform Specific Models (PSM). This is carried out in a manner analogous to the use of a compiler to transform C++ or Java source code into an executable program. MDA is not a revolution, but

ACD Features:

- Automatic Generation from a high level design
- Increased Productivity – re-usable expert knowledge (architectural aspects, design patterns & component objects).
- Improved Quality – quantum leap in terms of automatic code generation capabilities – less manually generated code means fewer errors and higher quality.
- Effective Resource Utilization –ACD addresses the infrastructure details allowing you to focus on domain-specific business logic.

evolution using the next level of abstraction.

As a member of the OMG, Aonix has promoted the idea of transforming UML models to the target environment using Ameos/ACD for the past several years. As a result we have a lot of experience with this approach and many satisfied customers in various industries.

To obtain more information, please contact Aonix at **www.aonix.com** or your local Aonix office.