VIsualize all moDel drivEn programming

The VIDE project is to improve methodologies and tools for application development focusing on data-intense business applications. A UML-based language will be designed and implemented to enable fully visual and platform independent software development.

At A Glance: *VIDE*

Full Title:

Visualize All Model Driven Programming

Project Coordinator:

Prof. Kazimierz Subieta

Polish-Japanese Institute of Information Technology

Tel: +48 22 5844 500

Fax: +48 22 5844 501

Email: subieta@pjwstk.edu.pl

Project website: http://www.vide-ist.eu/

Partners from: Poland, Germany, France, Greece, United Kingdom

Partners: Rodan Systems S.A. (PL), Institute for Information Systems at the German Research Center for Artificial Intelligence (DE), IESE Fraunhofer (DE), Bournemouth University (UK), FIRST Fraunhofer (DE), SOFTEAM (FR), TNM Software GmbH (DE), SAP AG (DE), ALTEC (GR)

Duration: July, 2006 – December, 2008

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€2.3m /€4.0m

Further Information:

- **IST-2005-2.5.5 Software and Services**
- **Europe's Information Society: Thematic Portal:**
  http://europa.eu.int/information_society/

VIDE abstract

The UML-compliant action language VIDE to be researched, developed, evaluated and disseminated during the project will enable fully visual prototyping, programming, debugging and documenting of future applications.

With VIDE, the application logic will be specified within UML (Executable-UML approach) eliminating the semantic gaps between UML and 3GL/4GL languages, making the applications fully platform-independent and hence surpassing most current approaches to OMG's MDA both in research and industry. VIDE follows the path of model-driven programming increasingly making 3GL/4GL code a read-only artifact and raising the level of abstraction (similarly to what 3GL languages once did to assembly languages).

In contrast to today's focus of MDA development on real-time systems, VIDE will be developed primarily with data-intense business applications in mind. However, the majority of its constructs can be considered domain neutral.

VIDE vision

To enable the development of flexible, robust and evolvable software based on UML. Build a fully visual action programming platform, aimed especially at data-intense business applications offering:

- expressiveness
- user friendliness
- high automation of the coding process

Draw your software – go beyond the limitations of interactive textual code editors.

This will enable the next generation of software to be supported by high-level development method in the context of UML.

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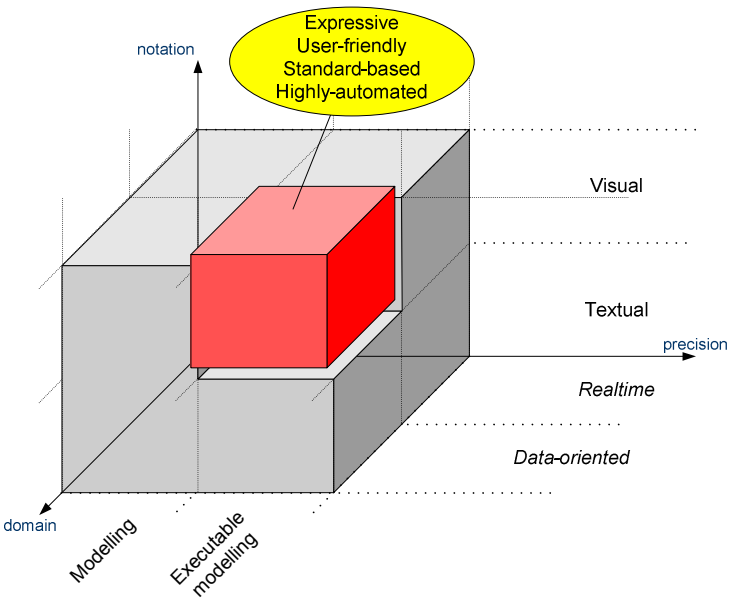

VIDE approach

The VIDE approach will provide a fully visual toolset to be used both by IT-specialists and individuals with little or no IT-experience, such as specific domain experts, users and testers. This will support their common efforts in the faster development of more reliable systems of the future. The innovative user-friendly code editor of VIDE enabling both visual and textual coding of platform-independent models (PIMs) will increase the reliability of systems by limiting the number of possible bugs already at the coding stage.

The VIDE project will research the areas of visual user interfaces, executable model programming, action- and query-language-semantics, aspect oriented programming and quality assurance on the platform-independent level, service oriented architecture (especially Web services and integration) and business process modelling. Finally, a functionally complete prototype of the VIDE system will be implemented, validated and evaluated.

The project will be open source with the exception of the adaptation of commercial solutions of (mostly SME) consortium members. The SME needs will be researched and based on them a reference library of reusable model components will be composed.

VIDE technology

The VIDE language will follow the vision of Model Driven Architecture and will attempt to build on the respective modelling standards. This is to achieve interoperability and synergy with existing UML-based CASE tools. Particularly, the VIDE module will be integrated with existing Partners' development tools (Objecteering, mySAP All-in-One, ONAR, TNM WebFace and OfficeObjects Workflow).

VIDE partners

PJIIT provides world class expertise in language semantics, meta-modelling, visual interfaces for databases and object-oriented models. IWi is experienced in the field of business integration, procedure models and conceptual modelling which will be used to develop the models on the computation independent level and a process model. IESE provides competences to develop integrated technologies for the discovery of quality defects (architectural smells, design flaws, etc.) on the PIM level. BU will provide expertise in visual interface research and in use case- and process modelling. FIRST with competences in model-driven and generative software construction technologies, will integrate aspect oriented modularization concepts at the PIM level. The research centre of the industrial partner SAP, with high competence in business applications, programming- and MDA- technologies and tools, will actively participate in research activities and contribute from an industrial perspective to the research conducted in the project. SAP will include the prototype implementation into it's tools stack (SAP Netweaver Platform) to prove the generality of the approach. ALTEC will integrate VIDE with its ONAR platform. SOFTEAM will use its experience of one of the first CASE tool developers in the field of MDA to implement an integrated version of a UML tool with the VIDE support. TNM will use its experience in developing its innovative TNM:WebFace product for Web service integration. RODAN will integrate VIDE with its workflow solution OfficeObjects Workflow.