



VDM Community Initiatives

www.vdmportal.org

VDM, the Vienna Development Method, is one of the most established formal methods. It has a long history as a vehicle for research in specification, refinement and proof, and has influenced many other formalisms including Z, RAISE and B. Backed by industry-quality tools and an ISO Standard, it also has a strong record of industrial application and a set of commercial tools used for several serious commercial applications. VDM has been extended to VDM++, which handles object-oriented and concurrent systems, and current research is looking at extensions to real-time and embedded systems.

VDM has a very friendly, open and active community of developers, users and researchers. We're pleased to announce several new open initiatives based on VDM, and invite your participation.

VDMTools

VDMTools are now maintained and developed by CSK Systems of Japan, the mother company to one of the successful VDM users (JFITS). Highlights of the tools include:

- ◆ Advanced Parsing and Type Checking
- ◆ Interpreter with Application Programmer Interface, for validation
- ◆ Test coverage analysis
- ◆ Automated code generation to C++ and Java
- ◆ Bidirectional Link to Rose, for UML views of object-oriented models

Licences are available as follows. **All licenses are free of charge:**

- ◆ Limited licenses for non-commercial use are available for download
- ◆ Full functionality Academic and Commercial Licenses from CSK (Email VDM.SP@csk.com).

To start using VDMTools, visit www.vdmportal.org

Promoting Industrial Application

Plans are well advanced for forming a VDM Europe and/or a VDM North America Consortium of industrial developers and users. CSK has already set up such a consortium in Japan. Naturally these new groups will have to establish IPR agreements with CSK. However, there are good signs that such an agreement can be made with a win-win outcome. If you are interested in this please contact Peter Gorm Larsen who is exploring the interest in forming such consortia and has produced a draft charter. **Contact: Peter Gorm Larsen (pgl@iha.dk)**

For details of Research, Academic and Industry Initiatives, turn over



Research and Academic Use

Research Activities:

VDM is used as a vehicle for research in model-based specification, concurrency, real-time and semantics.

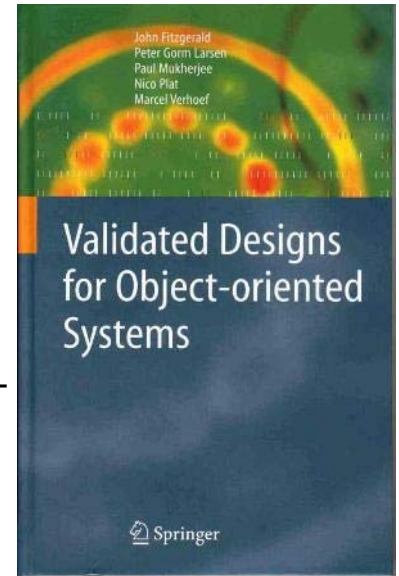
- ◆ Development and analysis of concurrent and real-time systems
- ◆ Semantics and proof
- ◆ 'Lightweight' formal methods
- ◆ Validation techniques: testing, model checking and proof
- ◆ Test generation

We're organising regular open workshops and seminars to promote collaboration, joint projects and papers.

Teaching Activities:

- ◆ Co-development and sharing of teaching materials
- ◆ Co-supervised student projects at all levels up to PhD

We're planning student and teacher exchanges, including EU Erasmus/Socrates programmes.



For information and to get involved, contact John Fitzgerald (John.Fitzgerald@ncl.ac.uk).

The latest VDM book (Validated Designs for Object-oriented Systems, Fitzgerald et al., Springer, 2005) was developed under our academic initiative. It illustrates the use of VDM++ technology, including several studies based on real industry applications. The book's website (www.vdmbook.com), contains teaching resources, exercise material, tool downloads and, where permission has been granted, free downloads of out-of print VDM texts!

Overture: open-source tools for VDM++

Developments in tool support for formal specification languages, new technologies such as XML, the Eclipse framework and open source software have prompted the new Overture initiative to develop next generation tools supporting VDM++ in an framework supporting extensibility and interoperability with a wider range of other toolsets.

A basic parser-based toolset exists and students from Denmark and Portugal are working on improvements and further developments. The open source project is hosted at sourceforge.net. You can download the current binary release of the Overture tools by pointing your local Eclipse installation to www.overturetool.org/updatesite. The fact that VDM++ has a very well-defined semantics and a significant amount of tool building experience behind it makes this an exciting new initiative.

All are welcome to get involved in designing, writing and testing these next generation tools for VDM++. Visit www.overturetool.org for further information and to register your interest.

Latest News:

- ◆ The vdm-forum discussion forum has been re-established. Sign up at www.vdmportal.org
- ◆ The next VDM/Overture Semantics Workshop: 27-28 November 2006 at Newcastle upon Tyne, UK. Details at overturetool.org. Contact John.Fitzgerald@ncl.ac.uk
- ◆ The VDM web sites (vdmportal.org, overturetool.org and vdmbook.com) are being converted to wikis. Visit the sites and sign up to add and edit material.