

The 14th Workshop on Domain-Specific Modeling

<http://www.dsmforum.org/events/DSM14>

SPLASH

21 October 2014

Portland, OR USA



Objectives

- Share new insights and observations
- Identify new areas of DSM research and practice needs
- Intensive collaborative sessions
- Attempt to discuss, share and solve challenging problems
- See others' work, DSM languages, tools etc.
- Have something to report to the community
- Have fun!

About past workshops

- BOF at OOPSLA'00
- First DSVL workshop at OOPSLA'01
- ...



- 13th DSM workshop at SPLASH'13

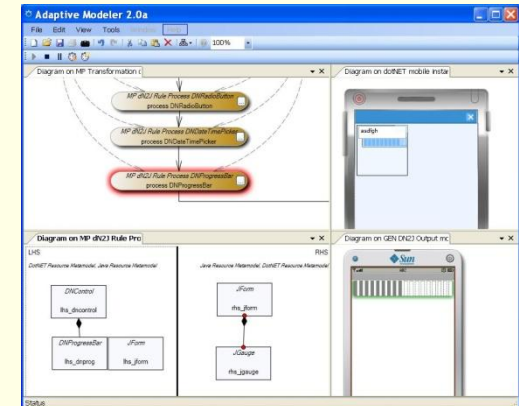
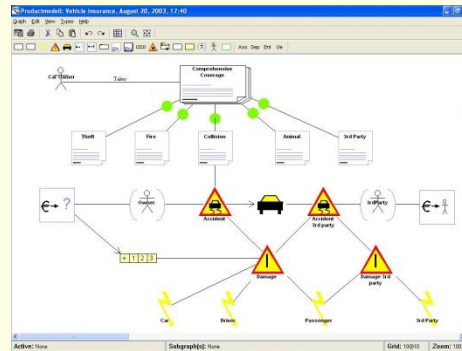
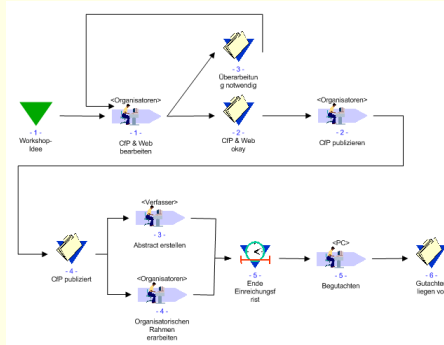
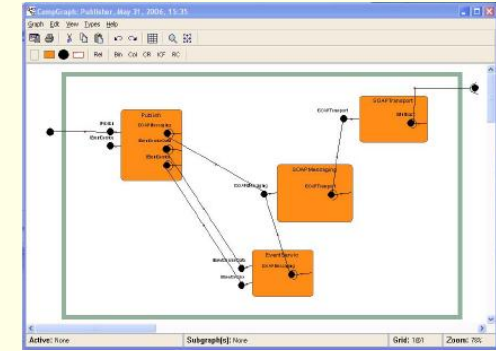
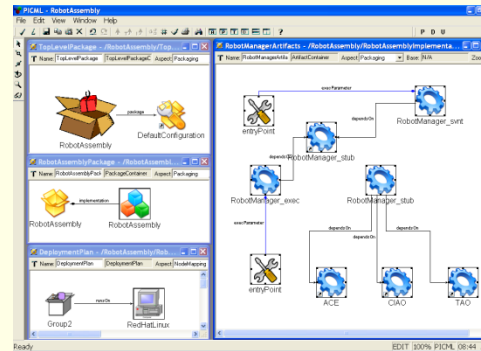
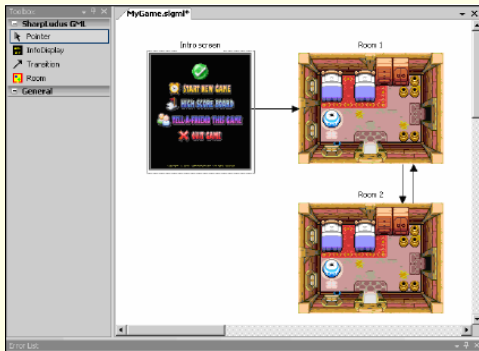
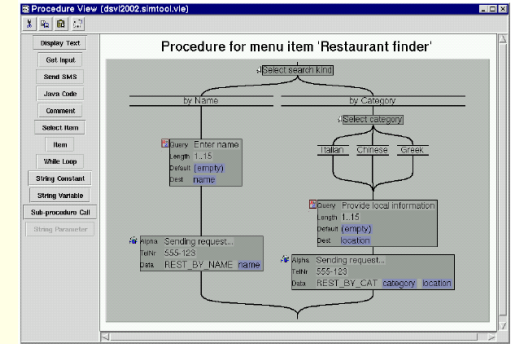
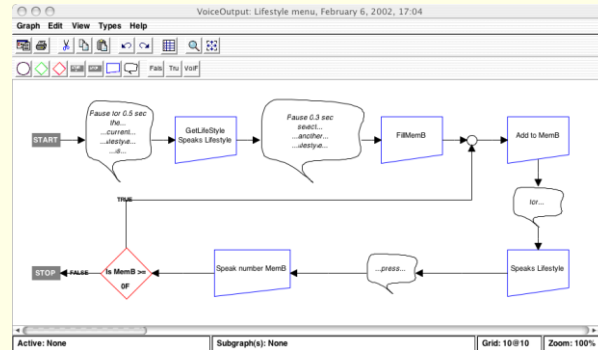
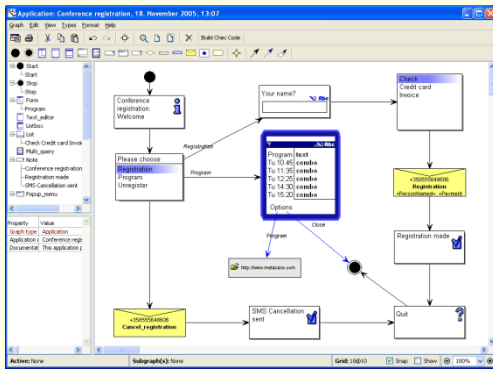


- Special issues on Domain-Specific Modeling
 - Journal of Visual Languages and Computing, Vol. 15., 3-4, 2004
 - IEEE Software, Jul/Aug, 2009
 - Software and Systems Modeling, Vol. 13(1), January 2014

What is Domain-Specific Modeling

- Captures domain knowledge (as opposed to code)
 - Uses domain abstractions
 - Applies domain concepts and rules as modeling constructs
 - Narrow down the design space
 - Focus on single range of products
- Lets developers design products using domain terms
 - Apply familiar terminology
 - Solve the RIGHT problems!
 - Solve problems only ONCE!
- Often aims at generation of full production code

Some demonstrated languages



About submissions and review

- 15 submissions
- 36 authors
- 11 countries
- 3 reviews/paper
- 8 accepted
- 2 visa issues

Program Committee

- Robert Baillargeon, Sodius
- Ankica Barisic, Universidade Nova de Lisboa
- Christian Berger, University of Gothenburg
- Marco Brambilla, Politecnico di Milano
- Dejiu Chen, KTH
- Joachim Denil, McGill University
- James Hill, Indiana University
- Steven Kelly, MetaCase
- Heiko Kern, University of Leipzig
- Mikko Riepula, Aalto University
- Yu Sun, Cal Poly Pomona
- Eugene Syriani, University of Montreal
- Naoyasu Ubayashi, Kyushu University
- Timo Wegeler, Fraunhofer

Schedule and format

- 08:30 – Overview and introductions
- 09:00 – Paper presentations: **Topics in Model Transformation**
- 10:00 – *Break*
- 10:30 – Paper presentations: **Tools and Language Design**
- 11:10 – *Group Photo and Group Topic Selection*
- 12:00 – *Lunch*
- 13:30 – Paper presentations: **Modeling Cyber-Physical Systems**
- 14:10 – Group work begins
- 15:00 – *Break*
- 15:30 – Group work continues
- 16:15 – Group work reporting and discussion
- 16:45 – Wrap-up and closing

Publishing results

■ Workshop web-site

- www.dsmforum.org/events/DSM14
- Papers and Presentations
- Workgroup results
- Photos

■ Twitter: #dsm14

■ ACM DL

- Due in late November; more details forthcoming
- The SIGPLAN WORD/TeX template must be used:
<http://www.sigplan.org/authorInformation.htm>
 - Authors are instructed to use the 9 pt template & formatting (per the SPLASH'13 chairs).
 - 6 pages for full papers

Program 1/3: Topics in Model Transformation

- 08:30 **Introduction**
- **Session Chair: Christian Berger**
- 09:00 **A Closed-loop Model-based Design Approach Based On Automatic Verification and Transformation**
 - Kun Zhang and Jonathan Sprinkle
- 09:20 **Generating Code using Reflection in the Context of Computer-assisted Legacy System Analyses and Reengineering**
 - Peter Krall
- 09:40 **Omniscient Debugging for Model Transformations**
 - Jonathan Corley, Brian Eddy and Jeff Gray
- 10:00 **Break**

Program 2/3: Tools and Language Design

- **Session Chair: Jonathan Sprinkle**
- **10:30 Development of Modelling Frameworks and Viewpoints with Kitalpha**
 - Benoit Langlois, Daniel Exertier and Boubekour Zendagui
- **10:50 Mapping-Based Exchange of Models Between Meta-Modeling Tools**
 - Heiko Kern, Vladimir Dimitrieski, Fred Stefan and Milan Celikovic
- **11:10 Group Photo and Group Topic Selection**
 - Using <https://todaysmeet.com>
- **12:00 Lunch**

Program 3/3: Modeling Cyber-Physical Systems

- **Session Chair: Jonathan Corley**
- **13:30 Generating Model Transformations for Mending Dynamic Constraint Violations in Cyber Physical Systems**
 - Sean Whitsitt, Jonathan Sprinkle and Roman Lysecky
- **13:50 SenseDSL: Automating the Integration of Sensors for MCU-based Robots and Cyber-Physical Systems**
 - Christian Berger
- **14:10 Group Work Begins**

Introductions

- Please take 10-15 seconds, and say a few words about yourself, and where you're from
- Keep it short!