

Workshop Proposal for ECOOP'04 Oslo, Norway, June 14-18

Evolution and Reuse of Language Specifications for DSLs

Name of the Workshop

Evolution and reuse of language specifications for DSLs.

Organizers

1. Thomas Cleenewerck (Primary Contact)

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Preliminary Call for papers

Overview

Although through frameworks and libraries object-oriented and component technology significantly improved the development of software, the obtained abstraction level still contains a lot of technical details and concerns. Domain-specific languages (DSLs) on top of object oriented and other general-purpose languages raise the abstraction level up to the level of a domain expert. Despite the enormous potential of DSLs, their development is usually feasible only for mature domains because of its cost and required expertise.

Domains evolve over time and we know that “one size doesn’t fit all”. Developing a DSL each time from scratch is too costly. Therefore DSLs must be easily to evolve and the DSL specification be adaptable to a specific context.

The workshop aims to bring together researchers and practitioners to discuss issues in DSL development and evolution with the particular focus on identifying, extracting, and composing reusable parts of DSL specifications. We specifically concentrate on, but not limit this workshop to, the use of object oriented techniques and concepts like encapsulation and inheritance to make DSLs more reusable.

The goal is to share new ideas and experience, consolidate successful techniques, and identify open issues for future work.

Topics of interest include but are not limited to:

- Technology
 - o Transformation systems
 - o Meta-programming
 - o Interpreters
- Reusable assets
 - o Patterns
 - o Transformations
- Reusability techniques
 - o Customization
 - o Configuration
 - o Adaptation
 - o Encapsulation
 - o Compositions
 - o Inheritance

Workshop Organization

This is a one-day workshop. The goal is to have as much discussion as possible. Therefore, the presentation of position papers will be restricted to a few selected ones that are most likely to provoke discussions.

Depending on the interests of the audience, we might split up in working groups. But instead of forcing people into specific groups beforehand, we would like to defer the formation of groups to the workshop itself. We plan to use the open-space technique to identify the discussion topics.

Attendance

Prospective attendees are requested to submit a position paper or an essay on a topic relevant to the workshop to Cleenewerck Thomas (tcleenew@vub.ac.be). Submissions should be 6 pages in length and are demanded to be in .pdf or .ps format.

Important Dates

Call for Papers: March 1, 2004

Position paper due: April 5, 2004

Notification of acceptance: April 26, 2004

Workshop: (to be completed)

About the Organizers

Thomas Cleenewerck is a research assistant at the Vrije Universiteit Brussel. He has been active in the field of object-orientation since the mid nineties. His current research focuses on evolution of DSL implementations in transformation systems. He has also developed a component-based language approach called the Linglet Transformation System (formerly known as Keyword Based Programming). More recently his interests includes also language constructs for distributed programming language concepts.

Krzysztof Czarnecki is an Assistant Professor at the University of Waterloo, Canada. Before coming to Waterloo, he spent 8 years at Daimler Chrysler Research working on the practical applications of generative programming (GP). He is co-author of the book "Generative Programming" (Addison-Wesley, 2000), which is regarded as founding work of the area and is used as a graduate text at universities around the world. He is General Chair of the 2003 International Conference on Generative Programming and Component Engineering (GPCE). His current research focuses on realizing the synergies between GP and MDA.

Jörg Striegnitz received his Diploma (M.Sc.) in Computer Science from University of Technology at Aachen, Germany. He is a research scientist at the Central Institute for Applied Mathematics at Research Centre Juelich, Germany. His research work includes the integration of functional

programming features into object-oriented languages by means of metaprogramming, the application of multiparadigm programming to hybrid programming environments, the optimization of functional programs, and parallel/high performance scientific computing. He authored the FACT! library, a C++ library that allows for functional programming style with C++. He co-organized the highly successful MPOOL'01, MPOOL'02, and POOSC'03 ECOOP workshops; DP-COOL'03 PLI workshop; POOSC'01 and MPOOL'03 OOPSLA workshops, and was committee member for JavaGrande/ISCOPE'02.

Markus Völter works as an independent consultant for software technology and engineering. He focuses on the architecture of large, distributed systems, as well as model-driven software development. Markus is the author of several magazine articles and patterns, a regular speaker at conferences and co-author of Wiley's "Server Component Patterns – Component Infrastructures illustrated with EJB".