informatik-Kolloquium

Der Fachbereich Informatik der Johannes Kepler Universität Linz[1] lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

Priv. Doz. Dr. Dirk Draheim
University of Innsbruck

On the Pragmatics and a Constraint-based Semantics
of Multilevel Modeling

Freitag, 30. 11. 2012, 13:45 Uhr
Johannes Kepler Universität Linz, Science Park 3, Raum 055

Abstract:
In this talk we discuss practical and formal aspects of the modeling of sets of sets of objects. The modeling of sets of sets is an important issue in domain modeling, because it arises naturally in expert domains. The modeling of sets of sets has been discussed as multilevel modeling in the past. Concrete modeling constructs like powertypes and clabjects have been introduced for it. Unfortunately, concepts from meta modeling frameworks have been accidently identified with concepts of the modeling process in the past. This has led to confusion in important issues of the semantics and pragmatics of multilevel modeling. This status of confusion is still not overcome, which can be seen, e.g., by a closer look to the current UML specification. This talk aims at providing keys to the precise understanding of multilevel modeling constructs and their exploitation in tools and technologies. We provide an explicit and precise formulation of the necessary constraints for set construction as a so far missing link in the discussion of multilevel modeling. We use the well-established constraint language OCL for this. We carve out the crucial aspect of the intuitively intended meaning of powertype and clabject constructions, i.e., in how they impose M2/M1/M0-overspanning constraints that are robust against certain M1-level model updates. We introduce symbolic viewpoints on model manipulation that explicitly overcome the M1/M0-level divide of the current mainstream viewpoint. These

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symbolic viewpoints also achieve a systematic generalization of the schema/object evolution/migration scenario that is practically so important to type/instance-evolution at all internal levels of the combined M1/M0 level. This way we overcome certain inconsistencies and semantic fallacies in the current discussion and want explain the promise and the advantages of constructs like powertypes and clabjects for emerging tools and technologies.

About the Speaker:
Dirk Draheim holds a Diploma in computer science from the Technische Universität Berlin, a PhD in computer science from the Freie Universität Berlin and a habilitation in computer science from the University of Mannheim. Till 2006, he was lecturer and associate researcher at the Freie Universität Berlin. In summer 2006 he was lecturer in human-computer interaction at the University of Auckland. Since summer 2006 until autumn 2008 he was key researcher for database technology at the Software Competence Center Hagenberg. Furthermore, he was guest lecturer in knowledge-based systems at the University of Linz in summer 2007 and summer 2008. Since autumn 2008 he is head of the IT service management division of the University of Innsbruck. Dirk Draheim is Adjunct Reader in software engineering at the University of Mannheim. He is interested in model-driven software engineering, generative programming, business process technology, IT governance and IT service management.

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