Keynote

Maximizing the Amount of Information Not Modelled in MDE

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Ideally, a domain-specific modeling languages should allow domain experts to define requirements and solutions with the minimal necessary model content. Any model content that is not strictly necessary for expressing the desired message is essentially "accidental complexity" and reduces the generality and "flexibility" of the model. Therefore, in the same way that agile methods aim to "maximize the amount of work not done" in software engineering, model-driven development should aim to maximize the amount of information not modeled in the fulfillment of modeling goals. This requires the use of languages that are not only optimized to express concepts in the domain of discourse but also possess clear inference and frame rules allowing modelers to infer information that is not explicitly expressed. Examples include "world assumptions" (e.g. open or closed), derivation mechanisms (e.g. inheritance), "completion" statements and elision notations. In this talk Colin Atkinson will clarify what it means to maximizing the amount of information not modelled in MDE, suggest some concrete principles and mechanism for achieving this goal, and explore what consequence it can have for model flexibility.

Colin Atkinson *is leader of the Software Engineering Group at the University of Mannheim (Germany). Before that he held a joint position as a professor at the University of Kaiserslautern and project leader at the affiliated Fraunhofer Institute for Experimental Software Engineering. From 1991 until 1997 he was an Assistant Professor of Software Engineering at the University of Houston Clear Lake. His research interests are focused on the use of model-driven and component based approaches in the development of dependable computing systems. He received a Ph.D. and M.Sc. in computer science from Imperial College, London, in 1990 and 1985 respectively, and received his B.Sc. in Mathematical Physics from the University of Nottingham 1983.*