

Multi-Perspective Goal Modelling with MEMO-GoalML

Ulrich Frank and Sietse Overbeek, University of Duisburg-Essen, Germany

Goal creation and achievement is intertwined with strategy formulation and management of contemporary enterprises. At first glance, it seems a straightforward task to formulate goals and to determine how to achieve them. However, upon closer look it becomes clear that there are specific challenges that need to be overcome.

First of all, there is a need for context as goals without relationships to contextual elements do not make much sense. This includes, for example, determining how goals are related to measures, projects, processes, IT concepts, performance indicators, stakeholders, costs, risks, and when exactly people are satisfied with goal accomplishment. Secondly, there is a need for providing additional support in the form of a process model to guide the construction and analysis of goal models. Thirdly, in the context of goal analysis many different concepts exist that are in one way or another related to each other. For example, concepts like: Target, motive, objective, norm, destination, aim, and purpose are just a handful of concepts that are somehow related to the goal concept. As more than one employee oftentimes deals with a certain goal in an enterprise, it may happen that different interpretations of these goal-related concepts lead to conflicts in goal achievement. From a modelling perspective, the conceptualisation of goals is challenging for various reasons. They relate to questions such as: “What is the difference between (meta) goal types and goal instances?”, or: “What aspects of goals should be part of a respective DSML and what should be defined with the DSML?”.

To address these problems, an elaborate goal modelling language has been developed as part of the method for Multi-Perspective Enterprise Modelling (MEMO). This language is coined the goal modelling language (GoalML). MEMO-GoalML users can constitutively develop, structure, and visualize goals and their relationships with each other and with elements from other enterprise models, as a multi-perspective enterprise modelling approach implies that the concepts of the GoalML should be integrated with other languages for enterprise modelling. This tutorial gives an introduction to goal modelling with the GoalML and provides the opportunity to learn how to create a multi-perspective goal model. The tutorial is aimed at researchers who are interested in goal modelling and analysis in general and who would like to learn how a multi-perspective view on goal model design is beneficial in solving problems.

Overview

- GoalML: Background and meta model
- Understanding how to mutually enrich goal models by integrating with other EM languages
- Walkthrough: Creating a multi-perspective goal model with GoalML
- Analyzing the created goal model supported by an adaptable process model
- Discussion of selected concepts

Ulrich Frank holds the chair of Information Systems and Enterprise Modelling at the Institute of Computer Science and Business Information Systems at the University of Duisburg-Essen. His main research topic is enterprise modelling, i.e. the development and evaluation of modelling languages, methods and corresponding tools. Further areas of research include method engineering, models at run time and methods for IT management. Ulrich Frank is Editor in Chief of the Journal Enterprise Modelling and Information Systems Architectures and associate Editor of the Journals Business &

Information Systems Engineering, Software and Systems Modeling and Information Systems and E-Business Management.

Sietse Overbeek is an Assistant Professor in the field of Information Systems and Enterprise Modelling at the University of Duisburg-Essen, Germany. His main research interests include the conceptual modelling of information systems, enterprise modelling, service-oriented and event-driven architectures, formal methods, and matchmaking mechanisms. Sietse received his Master's degree from the Radboud University Nijmegen, the Netherlands in April 2005, and received his Ph.D. from the same university in April 2009. Sietse has (co-)authored several journal papers, conference publications, and books. He has also co-chaired a number of international scientific conferences and he is a member of several international editorial boards and programme committees. More information: www.sietseoverbeek.nl.