From Goal Models to Software Products
A Conceptual Modeling-Based Approach

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Abstract: A crucial success factor in information systems development is the alignment of the final software product with business goals, business semantics and business processes. Developers should be freed from programming concerns and be able to concentrate on these alignment problems. To assess that the right capabilities are used, sound Conceptual Modeling (CM) techniques within a Model-Driven system Development (MDD) must be applied in order to provide a structured and systematic approach to systems development, where developers can successfully use model transformation technologies to derive models of a lower abstraction level that can be further refined, even generating software code automatically. From the experience got with the use of advanced CM-based MDD platforms, this keynote will show how to start from an organizational goal-oriented (i*-based) model strategy in order to integrate Business Process Modeling (BPM), requirements engineering, and object-oriented CM with the objective of designing a software product that is conceptually aligned with the different types of conceptual models that have to be used in a conventional software production process. Concrete principles, concepts and common MDD-based practices will be presented with a special focus on model-driven requirements engineering, meaning by it how organizational and BPM models can be embedded in a complete CM-based software production process.

BRIEF BIOGRAPHY

Oscar Pastor is Full Professor and Director of the "Centro de Investigacion en Metodos de Produccion de Software (PROS)" at the Polytechnic University of Valencia, Spain. He received his Ph.D. in 1992. He was a researcher at HP Labs, Bristol, UK. He has published more than two hundred research papers in conference proceedings, journals and books, received numerous research grants from public institutions and private industry, and been keynote speaker at several conferences and workshops. Chair of the ER Steering Committee and member of the SC of conferences as CAiSE, ICWE, CIbSE or RCIS, his research activities focus on conceptual modeling, web engineering, requirements engineering, information systems, and model-based software production. He created the object-oriented formal specification language OASIS and the corresponding software production method OO-METHOD. He led the research and development underlying CARE Technologies that was formed in 1996. CARE Technologies has created an advanced MDA-based Conceptual Model Compiler called OlivaNova, a tool that produces a final software product starting from a conceptual schema that represents system requirements. He is currently leading a multidisciplinary project linking Information Systems and Bioinformatics notions, oriented to designing and implementing tools for Conceptual Modeling-based interpretation of the Human Genome information.