Policy-Enabled Goal-Oriented Requirements Engineering for Semantic Business Process Management

Ken Decreus

Marwane El Kharbili

Geert Poels

Elke Pulvermueller

July 2009

2009/599

* Corresponding author. Ken.Decreus@UGent.be. Dept. MIS and Operations Management, Faculty of Economics and Business Administration, Ghent University. Tweekerkenstraat 2 B-9000 Gent Belgium
† marwane.elkharbili@uni.lu. ARIS Research, IDS Scheer AG. Altenkesselerstrasse 17 D-66115 Saarbrücken Germany
‡ Geert.Poels@UGent.be. Dept. MIS and Operations Management, Faculty of Economics and Business Administration, Ghent University. Tweekerkenstraat 2 B-9000 Gent Belgium
§ elke.pulvermueller@informatik.uni-osnabrueck.de. Institute of Computer Science, University of Osnabrueck. Albrechtstrasse 28 D-49076 Osnabrueck Germany
Policy-Enabled Goal-Oriented Requirements Engineering for Semantic Business Process Management

Marwane El Kharbili*
ARIS Research, IDS Scheer AG
Altenkesselerstrasse 17
66115 Saarbrücken, Germany
marwane.elkharbili@uni.lu

Ken Decreus*
Geert Poels
Faculty of Economics and Business Administration, Ghent University,
Tweekerkenstraat 2, 9000 Gent
Belgium
ken.decreus@ugent.be
geert.poels@ugent.be

Elke Pulvermueller
Institute of Computer Science, University of Osnabrueck,
Albrechtstr. 28, 49076, Germany
elke.pulvermueller@informatik.uni-osnabrueck.de

Abstract
Business process management (BPM) develops into a new paradigm for enterprise computing that uses information technology (IT) not only to support or execute business processes, but also to continuously monitor and improve these processes in order to better achieve business objectives. BPM’s variant Semantic Business Process Management (SBPM) is meant to further close the gap between business and IT by attaching business semantics to the IT artefacts used for BPM. A current problem in SBPM is that the specification of the business requirements that the business processes must respond to and that follow from the enterprise’s strategic decisions, is not fully integrated with the design of the business processes themselves. In this paper we propose an approach in which business requirements for business processes are formally modelled and the skeleton of the designs of these business processes is automatically generated from these models. The approach presented here focuses upon the modelling of policies (i.e. a kind of business requirements for business processes) and on the subsequent design of business processes that comply to these policies. A first contribution is extending an existing goal-oriented requirements specification language, i.e. Formal Tropos (FT), to incorporate policies, called Policy-extended Formal Tropos (PFT). A second contribution is offering an automated transformation to create business process design skeletons out of the PFT models. The paper also reports upon a case study that was conducted as a first, though preliminary, empirical test of our approach.

Keywords

* Both authors are first authors.