Chapter VIII

Using UML Notation for Modeling Business Interaction

Sandra Haraldson, University College of Borås, Sweden
Mikael Lind, University College of Borås, Sweden
Jan Olausson, University College of Borås, Sweden

ABSTRACT

Business modeling is concerned with asking questions and giving answers to these questions. In systems development, different types of diagrams, notational rules, are used to document answers and to give inspiration to new questions. Popular notations used today are diagrams, such as use case diagrams and activity diagrams, within the unified modeling language (UML). UML is claimed to be methodology-independent. Such a claim means that there is a need for theories to guide the analyst to direct attention towards desired aspects. This chapter deals with the issue of how business interaction and its support by information systems could be modeled by modeling techniques put forward in UML. A conceptual analysis has been performed that reveals that it is possible, and there is a need to use UML.
together with the proposed theories in order to arrive at an intentional and conscious design. The analysis has been structured around the concepts of action, actor, and business process. The analysis shows that some basic foundations could be covered in the chosen diagrams, but that there is also a need to complement those diagrams with richer properties concerning all these concepts.

INTRODUCTION

When developing information systems, it is common to begin with some sort of business modeling in order to get an understanding of the business context in which new systems are to be used (e.g. Bubenko & Kirikova, 1999; Jacobson, Ericsson, & Jacobson, 1995). It is considerably less common to make explicit use of the results of such modeling when defining system requirements. Information systems are used to perform and support business actions and therefore, requirements ought to be derived explicitly from business models if the information system is to contribute to the effectiveness of the business and organizations’ interaction with each other.

The purpose of business modeling is to generate models of the business under consideration. To generate the models, the modeler needs to gather information about the business, and therefore we can say that business modeling is about asking and answering questions. The concept of a model implies a simplified description of an object, hence, a business model is a simplified description of a business that illustrates different aspects relevant for the purpose of the model.

One purpose of using models (diagrams) in the process of business modeling is to document the answers to the questions. Different types of models are used to document the answers depending on the desired aspects that are focused. Documented answers are important sources of inspiration when deriving new questions. In this context, it is important to find arguments of what questions to put forward in order to capture the desired aspects. Such arguments can be found in theories. A theory contains concepts and categories with clear interrelations. It is thus necessary that there exist modeling primitives in the business models for capturing the concepts and categories focused in the theory.

Of course, there are approaches to information systems development (ISD) that show awareness of the connection between business and information systems (e.g. Jacobson et al., 1995), awareness in the sense that they make use of conceptual business modeling when defining requirements concerning the informational content of a system, as well as deriving the places where support from information systems is needed from the identified business tasks. One thing they seem to miss is that the intentional/social actions forming business tasks are also crucial when deciding appropriate information content as well as designing user interfaces. A system that is unclear about the business actions it is able to support and maintain information about is most likely unusable.

A systems development method could be seen as a set of guidelines to achieve certain goals (Goldkuhl, Lind, & Seigerroth, 1998). Methods advocate modeling techniques consisting of procedure, notation, and concepts. The notation helps the modeler in directing attention towards the desired aspects. A key question is, of course, about knowing what aspects to address in a certain development situation. There is thus a need for theories that help in directing such attention (c.f. Dietz, Goldkuhl, Lind, & Reijswoud, 1998; Lind & Goldkuhl, 1997).
Related Content

Collaborative Business and Enterprise Urbanization: Towards a Production-Oriented Urbanization Strategy
[www.igi-global.com/article/collaborative-business-enterprise-urbanization/3948?camid=4v1a](www.igi-global.com/article/collaborative-business-enterprise-urbanization/3948?camid=4v1a)

Understanding the Justice Fairness Effects on eWOM Communication in Social Media Environment
[www.igi-global.com/article/understanding-the-justice-fairness-effects-on-ewom-communication-in-social-media-environment/220399?camid=4v1a](www.igi-global.com/article/understanding-the-justice-fairness-effects-on-ewom-communication-in-social-media-environment/220399?camid=4v1a)

Risks Evaluation and IT Audit Aspects of Business Intelligence Solutions
[www.igi-global.com/chapter/risks-evaluation-audit-aspects-business/36589?camid=4v1a](www.igi-global.com/chapter/risks-evaluation-audit-aspects-business/36589?camid=4v1a)
A Methodology for the Auditing of Technological Knowledge Management
www.igi-global.com/chapter/methodology-auditing-technological-knowledge-management/37912?camid=4v1a