

Chapter 6

BORM:

Agile Modelling for Business Intelligence

Martin Molhanec

Czech Technical University, Czech Republic

Vojtěch Merunka

Czech University of Life Sciences, Czech Republic

ABSTRACT

The business intelligence system gradually became of vital importance for many organizations nowadays. But unfortunately, the traditional static modelling may not be able to deal with it. One solution is to use an agile modelling that is characterized with better flexibility and adaptability. The introduced BORM (Business and Object Relation Modelling) method is just an object-oriented and process-based analysis and design methodology, which has proved to be effective in the development and simulation of large and complex business systems such as business intelligence represents. This chapter describes BORM method and presents it on an application example created in Craft. CASE analysis and modelling tool. At the beginning the authors introduce fundamental principles of BORM method and explain the most important concepts of the method. Finally the authors make clear the method in more detail by means of simple and descriptive, but nontrivial, example from real practice.

INTRODUCTION

As Ventana Research (2006) stated, “Most organizations use BI and BPM technologies to serve separate purposes that seldom overlap. For the most part, BI deployments don’t focus on process, and BPM technology doesn’t provide metrics or

an aggregate view of business. This situation reflects the predominant view that these are different technologies that each stands alone, delivering value to the business each in its own way.” The modelling of business intelligence nowadays is such a case, it is still so concentrated on traditional data modelling for creating of data warehouses, but the modelling of flexible business processes is repressed.

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The business intelligence applications still face failures in determining the process model adopted. As the world becomes increasingly dynamic, the traditional static modelling may not be able to deal with it. But our business projects not only became larger, but also began to place considerable emphasis on integration with already existing information systems. More advanced techniques of business process analysis such as *Business Process Modeling Language* (BPML, 2009), *Business process Modeling Notation* (BPMN, 2010) have been created. Unfortunately, they do not meet fully analyst requirements from viewpoint of software developers.

Our approach – BORM (*Business and Object Relation Modelling*) tries to fill in the gap between “Business and IS” and minimize the failure rate of information systems through the application of object-oriented process modelling before the system is built. There are some recent works that confirm our idea to use process models as the skeleton of a unified approach to model and analyze business and IT (Margaria & Steffen, 2009).

Further, the business intelligence systems needs appropriate tools for timely decision making. The BORM method comprises the unique ORD (*Object Relation Diagram*) graphic tool amalgamating state transition and activity diagrams together. This holistic approach strongly supports the main concept of the BORM method formulating an opinion that data and processes are very closely interconnected together. Furthermore, this approach is notably supported by Craft.CASE (Craft.CASE 2009) tool containing a simulator of ORD which allows running simulation scenarios including step-by-step operation. This way the BORM method helps to do a timely decision making in the frame of business intelligence systems.

That is why we introduce BORM method as an object-oriented and process-based analysis and design methodology, which has proved to be effective in the development of business intelligence systems. The effectiveness gained is largely due to a unified and simple method for presenting

necessary aspects of the relevant business model, which can be simulated, verified and validated for subsequent software implementation. Also the BORM method makes extensive use of business process modelling towards the area of software engineering.

This chapter describes BORM and demonstrates it on an application example from real business engineering created in Craft.CASE analysis and modelling tool.

BACKGROUND

One of the biggest problems of creating a good business model lies in the initial stages of model development cycle. The initial stages of business modelling methodologies are concerned with two tasks.

The first is the specification of the requirements for the system.

The second is the construction of an initial business model; this model is often called an essential or conceptual model and is built out of the set of the domain specific objects known as essential or conceptual objects.

We must not forget that both these tasks should be carried out with the active participation of the stakeholders, in order to ensure that the correct system is being developed. Consequently, any tools or diagrams used at these early stages should be meaningful to the stakeholders, because many of them are not “*software engineering literate*”. Finally, these diagrams must not deform or inadequately simplify the requirement information.

The most frequent technique for requirements’ specification in nowadays software development methodologies is *Use Case modelling* as a part of UML (2009) standard. The Use Case method has been created by Jacobson (1992) and is concerned with the identification of external actors, which interact with the software part of the system. This means that is necessary to know the system boundary and distinguish between entities, which

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