

A Qualitative Evaluation Method for Business Process Tools

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Abstract. The web plays a central role in such diverse application domains as business. As the use of web grows, organizations are increasingly choosing to use it to provide their services to their clients. Services are the systemization of the business processes in the organization. A bad definition and management of the services makes the systematization fail or not to have the expected success. The business process modeling is the first step in the systematization. Due to the great number of modeling tools in existence it is necessary to identify the information that they allow to specify. In this paper, a set of concepts is proposed to evaluate modeling tools for business process modeling using three levels of abstractions –organizational, conceptual and web. The evaluation compares the modeling capabilities supplied by the different techniques. This evaluation also allows determining what modeling tool is the most appropriate to model specific concepts of interest to a particular organization or problem.

1 Introduction

The development projects fail due to a bad administration of the requirement, lack of abilities of the responsible people and the incorrect use of the techniques to specify requirements. Additionally, organizations confront the problem of integration of different technology at their business process. They should decide how the technology systems support business and how incrementally the technology systems become an integral part of the business process [1, 2]. Models are commonly used to flexibility represent complex systems and to observe the performance in the business process when a technology system is integrated [3, 4, 5].

The documented knowledge about the organization and its business processes is a great help to define the requirements for an information system to be develop. To model a system that meets the organizational needs, must first understand both business organization and the requirements specific to the desired web system. This model must capture the domain without reference to a particular system implementation or technology [4]. Information in the models about the organization and business process allows to define the web system requirements. A business model must include information about the business processes and among other things, the rules that govern the business execution, the process goals, and the problems that

might appear when trying to achieve these goals [4]. This information will support better decision making that result in a correct business performance with the right documentation to specify the web system requirements.

One of the problems in the process modeling is the great number of techniques to model and specify requirements, each ones has its own elements, it makes complex and laborious to compare the techniques. To select an incorrect technique makes that the model of the organization does not represent the organization needs.

Three modeling levels are proposed who integrate a set of concepts to build web application models (fig.1). Each level of abstraction describes the business process in a specific view and certain information concepts are integrated. The concepts are properties that structurally describe types of requirements in a specific level of abstraction [1, 2, 3, 4, 5]. Here, the concept of model is used to indicate a textual or graphical knowledge representation at any of the following levels of abstraction: a)Organizational, its goal is to describe how the organization works and the business process that are going to be systematized with a web information system; b)Conceptual, its goal is to describe the role of the software system and its integration with a particular organizational environment; c) Web, its goal is to describe the business process on the basis of the semantic of web application [6,7].

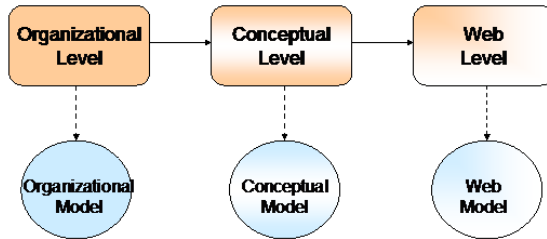


Fig. 1. Levels of abstraction

The basis of our contribution is in the detection and classification of a set of concepts which are used to evaluate modeling tools and to identify the capabilities that each tool has to model at the three levels of abstraction. There are some methods and methodologies to evaluate business process modeling, however, they do not evaluate capabilities but rather the functionality of the application or the modeling tools. Rosemman proposal an ontology to evaluate organizational modeling grammars identifying their strength and weaknesses [8]. Luis Olsina [9] and Devanshu Dhyani [10], their proposal is a methodology to evaluate the characteristics of a web application in operational phases. The evaluation method proposed in this paper is useful for the analyst, designer and evaluator; it allows knowing how many capacities the tools offers and how complex the models obtained are when the tools are used. It is a previous step in the selection of a business modeling tool, and it allows to select a tool by its capacities before to evaluate the functionality that it has.

The structure of this paper is as follows: in section 2 the modeling concepts that comprise our approach are presented, in section 3 the evaluation methodology for