Chapter 13
Model Based on Ontological Engineering as Support for Stakeholder Management

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ABSTRACT

The objective of this article is a way of working that is used as an instrument for managing the parts with semantic and conceptual elements, such as mastery of management projects, and the effects of ontological engineering techniques, which solves frequently asked questions with respect to information related to this resource. This is done in an agile, precise, and effective way, facilitating its management in the phases that make up the life cycle of the project. The research will contribute to the integration of ontological engineering and project management, enabling the construction of a stakeholder information structure with semantic components that enable it to be the input of a more complex knowledge management model.

INTRODUCTION

Project management is defined as the discipline to organize and manage resources, the form of a given project that has been fully completed within the scope, time and cost constraints. In a more formal way, project management is the application of knowledge, skills and techniques to execute projects efficiently and effectively. It is a strategic competition for organizations, which allows them to see the results of

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projects to business goals and thus compete better in their market of action (Project Management Institute PMI, 2014). It is the sense of the recommendations issued for the project management of PMI, Prince 2 and IPMA (IPMA, 2015), as well as the report of management methods increasingly like Gantt chart, Pert chart, critical chain, value technique Cattle and Scrum among others, the principles of action to optimize the results of the project through constant improvements, the use of analysis tools, the estimation and measurement of variables.

The theory of these proposals include the management of the factors and variables that can be presented in the life cycle of a project; However, to achieve the total success of the project management is something that is very difficult, due to its nature, complexity, resources and environment, but above all for the actors that are part of it directly or indirectly. The identification, documentation and management of the people or groups and entities that participate in some way and at some point of the project, has become a high priority factor for managers, because of the experience and experience in executing projects, it is possible to conclude that this is one of the components of greater incidence in the success or failure of the same. The implementation of project management technologies in business is promoting a cultural change, because the information is shared among all employees and ownership around it generates new knowledge. This, in turn, is reflected on best practices and the development, implementation and collaboration on future activities and processes. The collaborative management technologies have been introduced in companies not only as a tool to solve problems with employees, suppliers or customers, but have fostered an environment of collaboration between all stakeholders, to share solutions, continuous improvement in time real and more and better attention to both internal and external customers (Díaz-Piraquive, Medina-García, & Joyanes-Aguilar, 2013).

The present paper exposes a supported proposal in the ontological engineering, whose objective is to propose an ontology model that serves as support to the management of the interested parties of a project, since this engineering defines the ontology as a structure and contents of form explicit, where implicit rules drawn from reality are determined, determining a formal and explicit specification of a shared conceptualization (Gruber, 2007). -Other definition is what is provided by Gruber, very relevant in this context where he says that an ontology is a set of terms of knowledge, which includes a vocabulary, relationships and a set of logical rules and inferences about a domain in particular ” (Hendler, 2001).

THEORETICAL FOUNDATION

Ontologies

Since the 90s, ontologies have become a research topic for several Artificial Intelligence communities, including knowledge engineering, natural language processing and knowledge representation. Recently, the notion of ontology is also becoming generalized in fields such as the intelligent integration of information, the retrieval of information on the Internet and knowledge management. The reason why ontologies are so popular is largely because they promise: a shared and common understanding of domains that can be communicated between people and computers. The main motivation behind ontologies is that they allow sharing and reusing knowledge bodies in a computational way. In the Knowledge Exchange Effort project (EIC), ontologies are presented as a means to share the knowledge bases among the different EICs. The basic idea was to develop a library of reusable ontologies in a standard formalism, which each system developer can adopt (Studer & Fensel., 2010).