Chapter 55
Exploding Web 3.0 and Web 2.0 for Sales Processes Definition

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ABSTRACT

The evolution of Web 2.0 and Web 3.0 technologies has lead to a new way of Customer Relationship Management. Web 2.0 provides communication and collaboration elements that can improve on the one hand the quality of the relationships with customers and, on the other hand, the collaboration among the members of the company. Web 3.0 provides semantic information for the knowledge available, as well as shared vocabularies by means of ontologies. In this chapter the main trends and implications of these technologies are summarized. Taking into account the characteristics of social and semantic technologies, a new architecture is proposed in order to facilitate the communication among customers and sales experts. Furthermore a framework for automating sales processes based in the collaborative knowledge representation collected by the experts and, if required, the customers is presented. The proposed framework goes beyond a single recommender system or a social tool. Its aim is to cover the issues related to the necessity of integrate the customer in the overall sales process, exploiting the mentioned advantages of these new Web technologies.

INTRODUCTION

The term Customer Relationship Management (CRM) emerged in the information technology (IT) community in the middle of the 1990 decade and said term is frequently employed to describe technology-based customer solutions, such as sales force automation and sales support (Payne and Fow, 2005). In order to offer the clients new channels of communication, without losing control of the system, and to manage the relationship between the company and the customer, the CRM was gradually integrating the advantages of web technologies in their systems. Thanks to this, the customer has now the power to access to different channels, direct or indirect, to interact with the companies, using blogs, social networks, wikis, RSS, etc.

Furthermore, one of the consequences of the increasing Internet penetration in most domains is the paradigm shift in consumer relations. In these sense, the advantages offered by Web 2.0, as the possibility of collaboration in both directions (company and customer) and the ease of interaction, were not wasted by the CRM community, resulting in what is called CRM 2.0 (Garcia-Crespo, 2010b). The importance of staying close to the customer in 'interesting times' has increased. Recent evidence shows not only the extent of use of the Internet and its perceived importance, but also the extent of use of Web 2.0 (Stone, 2009).

The next evolution of the Web, directed by the World Wide Consortium, is the Web 3.0., being the Semantic Web paradigm one of the most extended (Beners-Lee et al., 2001). Web 2.0 and the Semantic Web have previously been viewed as mutually exclusive, competing paths to the Web of the future, each advocated by a distinct community (Ankolekar et al., 2007). However, Heath and Motta (2007) demonstrate in their research that the two approaches are in fact complementary, and that each faces challenges the other can solve: Web2.0 data is not generally available in forms that facilitate its easy interlinking and reuse, whilst the Semantic Web has yet to embrace the ease of participation that has enabled Web2.0 to reach such wide audience

The basis of the actual well-known concept of Semantic Web was postulated by Berners-Lee (1989) through the World Wide Web Consortium. It was designed as an extension of the current Web with the aim that not only humans, but also machines are able to understand the contents of the documents (Beners-Lee et al., 2001). Thus, in the process of information retrieval, the user should interrogate a software agent that would perform complex tasks of association and inference of knowledge, returning the user accurate results in context. To achieve this, it would be necessary to provide semantics to the Web. This task could be accomplished through the development of ontologies and descriptive labels.

These initial ideas have been endorsed because, in today's information society, precise descriptions of the massive volume of online content available are crucial for responding to user needs adequately and efficiently. The Semantic Web Paradigm has recently advanced across many domains for the assignment of metadata to Internet content, in order to define it with explicit, machine-readable meaning. This content has become so extensive that it must be refined according to user preferences to avoid information overload (Garcia-Crespo, 2010c).

The inclusion of these new technologies in the development of new CRM systems has lead to a new paradigm of interaction between enterprises and customers. In fact, as it will be shown in the next sections, Web 2.0 and Web 3.0 paradigms are converging in several new approaches in order to explode these new possibilities. In this chapter, the main trends in Web 2.0 and Web 3.0 technologies and their use in the field of CRM are reviewed, and the architecture of the framework for allowing the definition of sales recommendation processes with the interaction of the customer is proposed. This framework will allow the process definition with the collaboration of other experts and customers and it will also allow customers to obtain recommendations, establish communications with the experts of the company and share their experiences with other customers.

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

One of the most recurrent questions that appear in the researches focused on this domain is "What is CRM?" The definitions and descriptions of CRM that different authors and authorities use vary considerably, signifying a variety of CRM viewpoints. In this sense, there are several definitions of CRM in the literature and sometimes it is probably easier to say what CRM is not.

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