Customer Relationship Management in Social and Semantic Web Environments

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ABSTRACT

The growing influence of the Internet in current 21st-century everyday life has implied a paradigm shift in terms of relationships between customers and companies. New interaction means in the Web 1.0 have undergone a dramatic change in quantity and quality with the advent of the so-called Web 2.0, the Social Web. The upcoming Web 3.0, the Semantic Web will also impact tremendously in how companies understand Customer Relationship Management (CRM). In this dynamic environment, the present work presents a combination of both Social and Semantic Web Technologies and their application in the particular field of CRM. Tool and technology analysis both prove the challenging opportunities for these cutting-edge innovation trends in the CRM domain.

Keywords: Customer Relationship Management, Ontologies, Semantic Web, Social Web, Web 2.0

INTRODUCTION

The Web is undergoing significant change with regards to how people communicate. A shift in the Web content consumer-producer paradigm is making the Web a means of conversation, cooperation and mass empowerment. Emerging killer applications combine sharing information, social dimension, undermining the very principles where content have relied for decades, namely information asymmetry and top-down content delivery. In this changing environment, companies are also changing the way in which they communicate with their customers.

Thus, the traditional paradigm of Customer Relationship Management (CRM) has also been changed with the emergence of new forms of interaction. CRM has become a research focus in the academic field since Ives and Learmonth (1984) put forward customer relationship life cycle (CRLC) concept. CRM refers to a customer-focused business strategy. There are
several definitions of CRM in the literature. Although all CRM definitions differ somewhat, they all focus on such individual and longitudinal buyer-seller relationships that both parties benefit in the relationship established (Sin, Tse, & Yim, 2005). Thus, a good definition to CRM could be the one provided by Dyché (2002) who defines the concept as “The infrastructure that enables the delineation of an increase in customer value, and the correct means by which to motivate customers to remain loyal, indeed to buy again”. According to Sinisalo et al. (2007), the origins of CRM can be traced back to the concept of relationship marketing (RM) (Gebert et al., 2003; Zablah et al., 2004). The term RM was initially coined by Berry (1983), who defined it as attracting, maintaining and - in multiservice organizations - enhancing customer relationships. For a full explanation of RM origins see Osarenkhoe and Bennani (2007). CRM is the outcome of the continuing evolution and integration of marketing ideas and novel available data, technologies, and organizational forms with the goal of engaging in a meaningful dialogue with individual customers (Boulding et al., 2005; Campbell, 2003). While RM does not acknowledge the technology underlying the management of customers, CRM uses technology to implant RM strategies (Ryals & Payne, 2001).

Thomas and Sullivan (2005) pointed out that CRM requires the company to manage and coordinate communication with customers across different media. And the internet is one of the leadings channels today. Due to its potential for interactive communication, the Internet is considered a promising tool for RM in the early 2000 (Thorbjornsen et al., 2002), and more recently (Wang & Head, 2007). As an extension, the internet is one of the leading channels for CRM. Chen and Popovich (2003) cite the internet as a channel to maximize the profitability of customer interactions. For Mendoza et al. (2007), the internet lowers costs, broadens market range and boosts the quality of service. As a result of the importance, the internet as a channel for CRM is a very prolific research field (Fjermestad & Romano, 2003; Wang & Head, 2007; Ngai et al., 2009; Galitsky et al., 2009).

In the environment described, in this paper is studied the interaction of CRM with two technologies that are changing the world through the Internet, namely the Social Web or Web 2.0 and the Semantic Web or Web 3.0. The remainder of the paper is structured as follows. First, it establishes the relationship between the so-called Web 2.0 or Social Web with CRM. Secondly, it explores the connections between the so-called Semantic Web and the CRM universe. The fourth section sets out what can be considered as future trends in the interaction of technology and CRM. Finally, Section 5 discusses the conclusions drawn and the future work to be realized.

WEB 2.0 AND CUSTOMER RELATIONSHIP MANAGEMENT

Social interactions have recently found an exceptional vehicle in the recent breed of user generated content aware technologies encompassed by the coined “Web 2.0” buzzword (O’Reilly, 2007). Web 2.0 technologies as outlined in (Laudon & Laudon, 2006) are exemplified by blogs, namely easy to update websites about a particular subject where entries are written in chronological order, picture-sharing environments such as Flickr or Photobucket, social bookmarking sites such as Del.icio.us, video-sharing such as YouTube or music preferences such as Last FM. Web 2.0, social software, social computing, online communities, peer networking, immersive web... Their meanings overlap, and definitions are somewhat fluid (Parameswaran & Whinston, 2007). But according to O’Reilly (2007) the term Web 2.0 is slightly different in that it includes more technologies within its scope and does not bind itself closely with the social aspect. Table 1 shows some descriptions of Web 2.0 technologies:

The Web 2.0 phenomenon made the Web social, initiating an explosion in the number of users of the Web, thus empowering them with a
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