

# Chapter VI

# Social Computing and Social Software

## INTRODUCTION

The World Wide Web or simply the Web is one of the most profound technological inventions of our time and is the core to the development of social computing. The initial purpose of the Web was to use networked hypertext system to facilitate communication among its scientists and researchers, who were located in several countries. When Sir Tim Berners-Lee invented the World Wide Web in 1989, he envisioned it as a mass collaborative authoring environment intended to facilitate information sharing among scientists and researchers. He predicted that when fully deployed, the Web would evolve into an information system capable of fostering unfathomable interaction; effective engagement and efficient document sharing. However, in 1991 when the first Web browser (Mosaic) was released, the Web still remained largely a plane information system for only passively distributing information over the Internet instead of an engaging medium.

Within the few years that followed the release of the first Web browser, Berners-Lee (1996) projected three long term goals for the Web. The first was aimed at ensuring the availability of different technologies to improve communication and engagement. The second goal was to make the Web an interactive medium that can engage individuals as well as enrich communities' activities. Berners-Lee's third goal for the Web was to create a more intelligent Web, in addition to being a space browseable by humans. He planned to develop a Web rich in data, promoting community engagement, and encouraging mass participation and information sharing.

Within this third goal, he envisioned a Web that fosters application sharing and understandable by both human and machines.

These three key goals for the Web characteristically describe the natural evolution of Web technologies. More specifically, the outcomes of the first goal were accompanied by the appearance of a plethora of authoring tools for Web. Current Web 2.0 technologies provide examples of the outcomes of the second goal. And the third goal is represented by the Semantic Web—which also marks the third and the future generation of Web technologies including intelligent software agents.

This chapter describes general trends linked to the development of the World Wide Web and discusses its related technologies within the milieu of virtual communities. The goal is to provide the reader with a quick, concise and easy way to understand the development of the Web and its related terminologies. The chapter does not account for a more comprehensive analysis of historical trends associated with the development of the Web; neither does it go into a more detailed technical discussion of Web technologies. Nonetheless, it is anticipated that the materials presented in the chapter are sufficient to provide the reader with a better understanding of the past, present and future accounts of the Web and its core related technologies.

## **HISTORICAL DEVELOPMENT OF THE NETWORK COMMUNICATION MEDIA**

Communication plays a vital role in creating, developing, integrating and sustaining communities. It helps members of a community to support and maintain their community ties promote social cohesion, build trust and stimulate social connection necessary for building social capital. Communication serves as a critical ingredient necessary for establishing different types of social capital—bridging, bonding and linking. More specifically, communication facilitates diffusion of information, reinforces social protocols, mobilizes people for collective action and creates social support thus providing the necessary foundation for understanding how social capital operates in communities and its overall impact on community affairs.

The art of communication is engrained in all aspects of human societies. History divulges that people have constantly developed various ways to communicate with each other, even long before the establishment of postal services, newspapers, telegraph, and telephone and network communication media. In primal societies for example, communication was only possible through “word of the mouth”—person to person communication system (e.g. through a messenger). In smaller communities people relied on a “crier” (an individual employed normally by a community or town council who made most of the public announcements in the streets and other

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