A Virtual User Community: Cultural Backgrounds in the Design of an Internet-Based Service

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ABSTRACT

The aim of the research work presented in this paper is to explore a virtual-user community’s influence on the design of a new, multimedia-based Internet service. The virtual community considered here are the researchers and associated administrative staff who are working on, or managing, collaboration projects or common tasks in distant laboratories all over the world. The acceptance and the attitudes of the community were studied and applied in the design of a new service offered by the Virtual Conference Centre Portal (VCCP) – Global Plaza. In this study, the cultural backgrounds of the user community were considered and the findings are discussed. The studies were carried out with communities coming from three continents: Africa, South America and Europe. The paper gives a brief presentation of the VCCP’s service facilities and an analysis of the results of the performed studies.

Keywords: Collaborative Environment, Internet Service, Service Acceptance, Service Design, Virtual Community, Virtual Video-Conferencing Center

INTRODUCTION

In recent years, services offered by Google, Flickr, YouTube, LinkedIn, Facebook, MySpace, Skype and many more have become extremely successful. This has triggered the growth of large, virtual communities, which are frequently referred to as social networks. One of the factors in this success was the user-friendly interfaces used by these services, together with the services’ ease of use. As these communities are accustomed to use simple user interfaces, the service providers, when launching new services or new facilities, generally try to aggregate their collected knowledge and the wisdom of crowds, without conducting any serious study about the real needs of users, needs that are sometimes reflected in their cultural backgrounds. Services such as video-conferencing and the associated collaboration tools have become increasingly popular in the past decade due to the availability of sufficient network bandwidth, even in less-developed parts of the world. The most frequently used tool for video-communication is Skype, which offers simple video-conferencing services, although these are usually restricted to

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a small group of virtual community members. Other, more sophisticated, video-conferencing tools do not usually inter-work among them or with other services in most cases and are mainly used for relatively simple tasks, like working meetings, substituting for popular audio-call conferences, connecting remote speakers at co-located conferences or meetings, etc. Recent research in this area showed no publications or studies that have looked at this phenomenon, especially in terms of user acceptance and user attitudes to high-tech systems for organizing large, distributed events at a distance. A usability and user-friendliness study of these systems is expected to be applied during the lifecycle development of the service, especially when integration is being envisaged with some popular Web 2.0 tools (GLOBAL, 2011), but usually this is not the case.

Reporting about these studies and the user acceptance after the development phase are very rare and cases dealing with this type of collaboration and Internet-based service are missing in the literature. In particular, this applies to researchers and teams working on scientific projects. The existing studies in the area of Computer Supported Collaborative Work (CSWC) mainly focus on human computer interaction (HCI) (Olson & Olson, 2000; Dourish, 1996; MacDonald, 2012) and the published findings are based on studies of closed, relatively small, cooperating teams belonging to a single organization. Other studies mainly addressed the behavior of virtual team members and the interactions of a group belonging to a matrix of organizations with a hierarchical management structure (Daim et al., 2012). Few studies that involved some aspects associated with cultural differences were carried out only on a sample of interviewed participants, selected with the use of the snowball sampling method, without any framework for collaborative work (Dekker et al. 2008). The study presented in this paper differ from the exiting reported research as the work presented highlights some aspects of the collaborative work of a large user community composed mainly of researchers, administrators and policy makers from three continents collected around the new, dedicated Internet-based service developed to facilitate the collaboration on distance of this type of virtual community.

Members of virtual teams from the scientific community usually collaborate on a particular project by performing various actions during a project’s lifetime and discussing and working on events such as conferences, workshops, symposia, etc. The significant increase in the number of scientific publications within a number of scientific collaborations between distant teams that span fields, institutions, sectors, and countries is a clear indication of increased levels of collaboration in the scientific community working at a distance. These collaborations are crossing institutional and national boundaries and contribute to an increased number of published scientific papers. For example, the percentage of published papers that involve international collaborations increased from 9% in 1983 to 33% in 2007 (Walsh & Maloney, 2007). This increase in team science has been driven by a variety of factors, including a growing interest in scientific problems that span disciplines (e.g., mapping the human genome or studying global climate change), but most probably due to advances in communication technologies, e.g., web-based services and the Internet, which make remote collaborations easier to sustain. As the scientific work with these tools becomes increasingly collaborative, scientists are facing problems that come with organizing the division of labor, overcoming scheduling problems, monitoring and coordinating progress, and ensuring that the information flows among the participating teams. Factor that sometimes influence the working process flow has origin in the diversified cultures, languages, and worldviews of the team members. Science is a social process; therefore, contacts and communications are vital ingredients of a successful collaboration (Kraut et al., 1990). While intense face-to-face communication has many advantages in science and research, collaborative tools over the Internet have reduced the problem of the researcher having to be physically close to the research. However, in the design of new, more advanced
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