Supporting Online Communities with Technological Infrastructures

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INTRODUCTION

A lot of experiences with online communities (AOL, CompuServe, The WELL, Listserv and so forth) pre-date the Web, and some researchers have suggested that *"the origins of online communities were very close to the counter-cultural movements and alternative ways of life emerging in the aftermath of the 1960s"* (Castells, 2001, p. 53). The FreeNets movement, which emerged mainly in the United States (U.S.) and Canada in the second half of the 1980s, was basically aimed at providing citizens with free access to the Internet and providing content free from any form of control. In that framework, both Community and Civic Networks emerged, which are very nearly the same but for emphasis on the empowerment of the proximate community (Carroll & Rosson, 2003), on the "sense of community" and on the promotion of "citizens' participation in community affairs" (Schuler, 2001). FreeNets, Community and Civic Networks also shared features such as bottom-up development and, especially at their beginning, the use of Bulletin Board System (BBS) technologies (De Cindio & Ripamonti, 2004).

Due to the skyrocketing Web development, this type of community gradually evolved, giving birth to communities that cross the boundaries of organizations, countries, age groups and profit and non-profit organizations, and becoming *"a mainstream fixture for focused files, information and knowledge exchanges"* (Terra, 2003, p. 212). As a result, the term "online community" (in all its slightly different declinations: virtual community, Web community, network community, etc.) is currently used to define a wide range of social interactions taking place mainly on the Internet, generating a certain confusion since, as Preece (2000) points out, *"superficially, the term 'online community' isn't hard to understand, yet it is slippery to define"* (p. 9). The concept of online community seems to cover the whole rich panorama that has flourished, starting from the effective and intuitive characterization given by Rheingold (1994):

virtual communities are cultural aggregations that emerge when people bump into each other often enough in cyberspace. A virtual community is a group of people who may or may not meet one another face to face, and who exchange words and ideas through the mediation of computer bulletin boards and networks. (pp. 57-80)

This early broad definition gave rise to debate (e.g., Jones, 1997, Wilbur, 1997, Levy, 1995), since it looks quite weak for distinguishing actual online communities from other kinds of Internet-based social aggregations. To further increase the confusion, too often—especially among computer scientists and scholars—the description of the software supporting online communities has been used as a "shortcut" for defining online communities, implicitly assuming that its appropriate use is the basis for building and maintaining an online community. Obviously, forums, mailing lists, chats, MUDs and so forth may support (physical) communities through the Internet, enriching their possibilities and extending their frontiers, since these communication technologies may favour the rising of (online) communities by scratch. However, setting up a discussion group, a mailing list or a MUD does not necessarily give birth to an online community, as experience has shown.

On the other hand, it has often been said that the technological part of the work related to community building is the "easy one," while careful and detailed planning of the system that regulates social interaction is absolutely fundamental in establishing successful and long-lived online communities.

Both positions have something to say, but we argue that a participatory approach, grounded in multidisciplinary studies and considering socio-organizational and technical aspects together, is indispensable for designing successful online communities (Ripamonti, 2003).

A GUIDING LIGHT IN A SEA OF "TECHNOLOGICAL FOG"

In spite of the different forms online communities may assume and the consequent different impacts they can have from a business point of view, they all share several common characteristics that can be used as a "guiding light" in designing appropriate technical infrastructure to support their development.

Among the major shared characteristics, for example, is that they all are socio-technical structures that place varying degrees of emphasis on belonging to communities of practice (CoP; see Wenger, McDermott & Snyder, 2002). Moreover, when they are built within one or more organizations, they also involve organizational aspects. They all imply knowledge sharing and collective thinking, a strong sense of belonging and mutual trust, a typical life cycle (Kim, 2000) and so forth. Besides these common factors, a number of minor characteristics can better describe any single community and explain the differences among them. For example, an online community may be large and quite loose, while another small and tightly knit, and so on.

The above considerations may sound quite "alarming" when analyzing the characteristics of the commercial technological platforms that support online communities since, at the moment, no technological solution seems to be a perfect fit for the needs of community. Both Preece (2000) and Wenger (2001) note that online communities are too often described in terms of "features," while – on the contrary – it is necessary first to define the critical success factors for community building and only then to find the "right" technological solution. Perhaps the most complete empirical map of these technologies has been traced by Wenger (2001): His analysis focuses on online communities of practice, but can be easily generalized—with some "tuning"—to online communities, since their definition can be seen as a

generalisation of the CoPs' one, where several aspects have been "loosened," such as the strong stress on learning aspects. For this purpose, Wenger has produced an interesting model for classifying existing products that organizes community-oriented technological platforms on a map in relation to eight dimensions (*ongoing integration of work and knowledge, team work, social structure, discussion, fleeting interactions, instruction, knowledge exchange, documents handling*) significantly related to the main focus of the product, which can be combined in pairs representing the different aspects of the social life of knowledge. Applying his model, Wenger stresses that—at the moment—no ideal solution exists, ever for communities built within large business organizations.

DESIGN GUIDELINES FOR ONLINE COMMUNITY ENVIRONMENTS

Technology Does Matter

A general-purpose scheme to develop community-based technological environments, as already stated, should be based on the definition of a set of critical success factors affecting community development. To this extent, works from Wenger (2001), Wenger, McDermott and Snyder (2002), Kim (2000) and Terra (2003) can be of help; they list critical design aspects of three slightly different types of community (respectively, an online CoP, a general-purpose online community and a community for Knowledge Management), among which, as easily predictable, the existence of several common areas is immediately perceivable. These include: *attention to users' profiles, membership and roles; attention to the quality of the contents (use of netiquette, creation of value added); design for growth; presence and visibility (communications plans, promotion of events, etc.)*.

Nevertheless, Wenger is the only one to explore deeply how technological aspects affect critical success factors, with a special emphasis on the platforms aimed at supporting online activity (see Table 1). Thus, in designing a technological infrastructure, these factors should be constantly considered as a term of comparison for correctly translating needs into technological features.

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