Utilizing Firm-Hosted Online Communities: Research Challenges and Needs

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Abstract

The increased popularity of Firm-Hosted Online Communities (FOC) has initiated a radical transformation of customer-producer relationships in many industries with important implications for product business and product development. The purpose of this paper is twofold. Firstly, we will introduce a recently established research project focusing on the challenges and opportunities with FOCs. Secondly, we will present early results of company interviews illustrating research challenges and needs that have been found relevant for companies in their own FOC development. Based on the gathered data, we categorized these needs and challenges under five themes: 1) Internal alignment, 2) Culture, 3) Individual Users, 4) Technology and 5) Changing environment.

1. Introduction

With the second generation services available in the World Wide Web, often referred to as Web 2.0, the Internet lets users to collaborate and share information online [1]. The emergence of such information and communication technologies has enabled the formation of broad communities in virtual environments. In the past years, online communities have been established by many types of users and organizations for a large variety of purposes [9, 13]. In this paper, we define our research scope by adopting Porter's typology of virtual communities [9]. We make a distinction between member-initiated and organization-sponsored communities and narrow our focus further to *Firm-Hosted Online Communities (FOC) -* communities that are hosted by organizations for commercial purposes.

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2. Firm-Hosted Online Communities in Conjunction with Software Products

The increased popularity of FOCs has initiated a radical transformation of customer-producer relationships with important implications for product business and product development [8]. Such transformation has taken a wide variety of forms. For example, past experiences on FOCs show that under the right conditions, a firm may gain a competitive advantage by having a community of innovative users connected with the firm's product [4, 11]. Such user involvement may add value in several ways. For instance, online communities have been found to enable the end users to provide peer support [3] and innovations [11] regarding the firm's product. For some firms, online communities have proved to be useful in their brand building enabling them to sense market forces with unprecedented accuracy and efficiency and allowing them to respond to nuances in conversations that hint at unarticulated needs [7]. It has also been acknowledged that FOCs enable international reach - that is, help companies gain access to potential customers and co-developers all over the world [10]. Furthermore, some firms have begun to explore the idea of utilizing online communities to guide their product development [6]. What seems to be common with different types of FOCs is that they may turn into a strategic asset: "an imperfectly imitable resource that can hardly be purchased but must evolve" [4].

Even though FOCs have demonstrated to provide direct or indirect benefits for firms on various natures of objectives [10, 15], the firms are still struggling with the challenge of how to achieve such benefits in practice. Each community is unique, and there is no

single guaranteed recipe for a successful community [12]. In particular, firms appear to be concerned on how they should establish a FOC so that it 1) achieves its objectives, 2) adds value and is attractive to the members and 3) avoids unintended consequences.

3. The PROFCOM project

Given the largely unexplored opportunities with FOCs and the challenges of establishing and maintaining one, we have chosen to conduct research in close collaboration with firms in their attempt to develop FOCs for their product-related activities. In this section, we will describe in closer detail the planned research efforts to be conducted within a recently established research project, PROFCOM – Product Internationalization with Firm-Hosted Online Communities.

3.1. Project description

The PROFCOM project (2008-2011) addresses the research questions of: 1) How to create an attractive and value-adding online community? 2) How FOCs can be utilized in Firm's real-life activities in terms of product business or product development? The project is a joint effort between researchers in Technology Business Research Center (TBRC) at Lappeenranta University of Technology and Unit of Human-Centered Technology (IHTE) at Tampere University of Technology. This consortium of researchers provides the opportunity for a holistic and multi-disciplinary view to the important aspects of FOCs and their development. While research at TBRC combines issues from technology and business oriented

problems, IHTE holds the expertise on usability and sociability aspects, a viewpoint that is vital in any type of online community. The research activities will be conducted with three industrial partners. Company 1 is the world leader in mobility, driving the transformation and growth of the converging internet and communications industries; Company 2 is a European media group operating in diverse fields of media in over 20 countries and Company 3 is a globally operating software product company having customers in approximately 80 countries.

3.2. Research methods and objectives

We are seeking long-term collaborative research partnership with the industrial partners throughout the development of their FOCs. Action research thus provides a solid framework for the research of firms' online community development activities. Ethnographic research techniques, such as observation of online communication and user interviews will be applied in order to gain a deeper understanding of online communities and the personal experiences of the users. Multiple case studies are performed to understand the influence of variability in context and to gain more general research results than single cases [12]. We will be searching for common themes and the unique aspects of FOC development across and within different business domains. In the cross-case analysis, three distinct viewpoints will be taken: 1) Supporting sociability in online communities, 2) Methods for Firm-hosted Online Community development and 3) Utilizing Firm-hosted Online Communities in software product business (Table 1).

Table 1. Viewpoints taken in cross-case analysis

VP 1: SUPPORTING SOCIABILITY IN ONLINE COMMUNITIES	
Motivation:	To understand user needs and personal motivations for participating and contributing in online communities.
Goals:	To provide information on how to create and maintain an attractive, value-adding and successful online community.
Research Questions:	How do online communities evolve and become attractive? What motivates user participation and contribution? How to support sociability, participation and sense of community with the design of User Interface? How the success of online communities can be increased by improving users' self-expression and identity-building in computer-mediated environment?
VP 2: METHODS FOR FIRM-HOSTED ONLINE COMMUNITY DEVELOPMENT	
Motivation:	Preece [10] has given valuable guidelines and techniques for the development of online communities (often referred as Community-Centered Development, CCD). However, the work with CCD is still on-going and the challenge of defining an efficient and effective methodology for the development of online communities still remains to some extent [2].
Goals:	To continuously develop experience and refine methodology for the development of online communities in the context of product related activities.
Research Questions:	How can firms' efforts of developing online communities be supported in terms of practical guidelines, heuristics and methodologies?
VP 3: UTILIZING FIRM-HOSTED ONLINE COMMUNITIES IN SOFTWARE PRODUCT BUSINESS	
Motivation:	To investigate how online communities can be utilized in product-related activities
Goals:	To understand what are the opportunities with online communities and how the potential benefits could be achieved in product-related activities.
Research Questions:	How FOCs can be utilized in Firm's real-life activities in terms of product business or product development?

3.3. Expected results

In addition to the research results to be published in academic forums, the PROFCOM-project will also develop the research results into such form that is easy to use and apply. We will develop and disseminate these practical guidelines in the project's own online community.

4. FOC Research Challenges and Needs

The PROFCOM project has started in March 2008. At the beginning, an initial meeting was conducted with each of the project's three industrial partners. The purpose of the meetings was to probe companies' research challenges and needs with respect to FOCs. Each meeting lasted for approximately two hours. In total, 6 researchers and 8 company representatives participated in the meetings. Each of the company representatives had a close relation to real-life development of FOCs. Each meeting resulted with written notes that were reviewed by everyone that participated at that meeting. These written notes have then been cross-analyzed in order to identify common themes of FOC related research challenges and needs across the companies. The cross-analysis has started by extracting the research challenges and needs from the written notes and categorizing them by two independent research teams. The final categorization has resulted through a dialogue between the two research teams.

In this section we will present early results of such cross-analysis and illustrate an overview of five relevant themes to FOC research (Figure 1): 1) *Internal alignment,* 2) *Culture,* 3) *Individual users,* 4) *Technology* and 5) *Changing environment.*
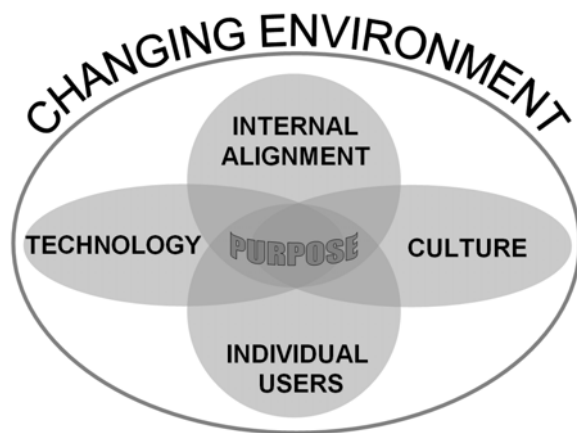

Figure 1. Overview of FOC-related research challenges and needs

While some of the identified challenges and needs are distinct to a specific theme, some issues appeared to overlap with other themes. At the heart of the identified themes, where the overlapping is the greatest (Figure 1), we have added one more theme, namely purpose, in order to suggest that all aspects of FOC development are ultimately influenced by the decisions made on FOCs purpose. The importance of determination and articulation of FOCs purpose did not strongly originate from the cross-analysis of the gathered data, but is advocated by existing literature on online community development (e.g. [5, 10]). In the remaining part of this section, the five identified themes will be discussed in greater detail.

4.1. Internal alignment

The companies felt that the utilization of FOCs in their real-life activities may introduce significant benefits. However, the companies were still rather unclear how exactly they could realize such potential. It was also believed that the introduction of FOCs could cause significant changes to the way people collaborate in their daily tasks. One of the companies was concerned whether they should train and motivate their own resources for online participation. Furthermore, the community-related responsibilities appeared to be unclear. It was not yet clearly seen what the company's responsibilities in online communities are; how to organize the work internally and how to draw a line between internal and public discussions.

4.2. Culture

The companies acknowledged the importance of sociability in developing online communities. They were particularly concerned of how to create and maintain a collaborative culture in their FOCs and how the roles and responsibilities affect the community's culture. It appeared to be difficult to understand to what extent moderation would be needed in the communities and how to find a balance between the end users and the company.

4.3. Individual users

It is ultimately the users that make a collaborative system into a community. But how can a company understand users' desires and needs? What motivates users to join, participate and contribute? How can technology support users' self-expression in different types of communities? Supporting the development of users' identity over time was also considered to be important. Companies appeared to struggle with questions such as: how does the sense of community develop; how can an online community respond to the

user needs as they evolve over time and experience, and what are the preferred practices in creating user profiles, presenting one's identity and communicating with other members in online community?

4.4. Technology

The main question with technologies appeared to be how to use technology to enhance the user experience. The companies wanted to know more about questions such as: how could User Interface (UI) support users' motivation; how technologies may support sociability and communication; which are the most applicable tools (blogs, wikis etc.); how to utilize the tools in each type of community and what is the need of mobile services in community development?

4.5. Changing environment

Developing a FOC is to adapt to a continuously changing environment. Anticipating changes appeared to be difficult. In particular, companies were concerned with how users will react to changes, such as expansion of the community or introduction of new functionalities.

5. Conclusion

In this position paper, we have narrowed our research focus into Firm-Hosted Online Communities (FOC) - communities that are hosted by organizations for commercial purposes. We have described in closer detail planned research efforts to be conducted within a recently established research project, PROFCOM – Product Internationalization with Firm-Hosted Online Communities. Furthermore, we have presented early results of company interviews illustrating research challenges and needs that have been found relevant for companies in their own FOC development. Based on the gathered data, we categorized these needs and challenges under five themes: 1) Internal alignment, 2) Culture, 3) Individual Users, 4) Technology and 5) Changing environment. We will in future continue developing our understanding on the important aspects of FOC development.

We wish that this paper increases our opportunities to exchange FOC-related ideas with the research community and with the companies.

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