

Involving users in the wild—Participatory product development in and with online communities

Jan Hess*, David Randall, Volkmar Pipek, Volker Wulf

University of Siegen, Hoelderlinstr. 3, 57076 Siegen, Germany

Received 9 August 2012; received in revised form 8 January 2013; accepted 17 January 2013

Communicated by: E. Motta

Available online 31 January 2013

Abstract

In its traditional stance, participatory design (PD) is centred on certain work/application settings and is concerned with the involvement of representative users from these contexts. Nevertheless, current web technologies enable new forms of distributed participation which might allow PD processes to be implemented in a broader and flexible way, but may at the same time raise new issues in relation to participation. In this paper, we report on a Participatory Product Development project, using social technologies, where new issues were raised—a large population of heterogeneous and globally distributed users; a range of personal and institutional purposes, and the use of these technologies in a largely untested environment. We will reflect on insights that we gathered by through observation of and participation in a software development process driven and influenced by members of an existing online community. By means of participatory observation, analysis of the use of online tools and through semi-structured interviews we identified issues around different notions of timeliness and of process structures that are related to different roles, responsibilities and levels of experience. Our results indicate that the involvement of heterogeneous users in such a context needs to be handled carefully, for the reasons we set out. The role of user representatives acting for a broader online community can become crucial when managing heterogeneity, formulating acceptable compromises and—perhaps most crucially—dealing with different professional and ‘hobbyist’ worldviews. Additionally, we found that the use of standard web technologies only partly support online participation processes. PD ‘in the wild’ needs to be better embedded in use situations and environments (e.g., by linking discussion and design space, using feedback tools, continuous reflection of the current state of development) rather than refining participatory design as a meta-process separate from use.

© 2013 Elsevier Ltd. All rights reserved.

Keywords: Participatory design; User-driven software development; End user development

1. Introduction

Software development is a process which can, of course, take many forms. All of them, arguably, involve the management of different stakeholders. What is crucially at stake is the way in which disparate interests are represented, valued or otherwise discounted. In one version of the development process, one which is very different in a number of respects

from more traditional, top-down or ‘managerialist’ methods, is that of participatory design (PD). PD has many forms and has been controversial in some ways (see, e.g., Kraft and Bansler, 1994) but it would be largely uncontroversial to argue that, as a minimum, it always privileges the ‘user’ in some way. This may be for many reasons, including political commitment, product improvement, design efficiency, ‘work design’, and so on. Regardless, from this perspective, user involvement will be regarded as central in some stages of the design process, e.g., when trying to understand user needs, when defining functionalities or improving usability. Again, however, whatever the merits of the perspective, its success – as with any design perspective – depends on the degrees to which methods can be deployed that meet these objectives. In the following we

*Corresponding author. Tel.: +49 271 740 2098; fax: +49 271 740 3384.

E-mail addresses: jan.hess@uni-siegen.de (J. Hess), david.randall@uni-siegen.de (D. Randall), volkmar.pipek@uni-siegen.de (V. Pipek), volker.wulf@uni-siegen.de (V. Wulf).

will explore some of these methodological considerations and assess the value of a particular approach.

For many years now, research around participatory design (PD) has explored various methods and tools that aim at actively involving users in (re-)design processes (Greenbaum and Kyng, 1991; Bødker et al., 2009; Ehn, 2008; Bjoergvinsson et al., 2010). These explorations have encompassed a number of different but related issues. They include the degree to which it is possible to maintain user involvement across the whole of the design lifecycle; the problem of organisational complexity and the heterogeneity of tasks; the balancing of different stakeholders' rights and responsibilities; problems of knowledge elicitation, and so on. PD has, in sum, proven to be very flexible in its responses to a variety of challenges. In a situation where system design is less a problem for the single organisation, or even for one part of an organisation, we will suggest this flexibility will continue to be tested. It is arguably the case that several different tendencies have informed the shifts we identify. First, there has been a general philosophical move away from 'objectivist' positions towards a more postmodern, engaged, approach in the social sciences (see for instance Clifford and Marcus, 1986; Lassiter, 2005). For our purposes, the important aspects of this move have to do with the rejection of an over-homogenised conception of 'culture', a serious engagement with the problem of representation and a recognition of the subjectivity of the researcher (see for instance the literature on auto-ethnography). Second, it is becoming increasingly clear that a degree of methodological eclecticism has become more acceptable perhaps as a consequence of more interdisciplinary stances. The use of ethnographic methods as a supplement to other knowledge elicitation, or knowledge sharing, strategies (see, e.g., Simonsen and Kensing, 1997; Bødker et al., 2009) is but one example. Third, attention has shifted towards mechanisms by which these more general philosophical and methodological considerations can be systematically applied to the design process (see the literature on co-construction). Having said all this, yet another source of analytic complexity is becoming apparent. The development of a 'digital' world means that, potentially at least, the relationship between user or consumer and producer might be changing, that users are an increasingly heterogeneous population, and that the sheer pace of change might be accelerating.

In what follows we will examine an approach to user participation in a context that reflects this new reality. Specifically, the context we examine is one where a producer organisation adopts participatory methods in partnership with an academic institution in order to solicit feedback from a heterogeneous group of users who are not members of either institution. We then assess the viability of social media as a means to deal with this kind of challenge.

Of course, use of the social media for research purposes is not new. As stated by Ditttrich et al. (2002) and Hagen and Robertson (2010), social technologies give rise to new

forms of participation 'in the wild'. Ideas, concepts and tools can be reflected on and discussed in collaborative discourses to which users from different contexts and different communities of practises can contribute. Product design development can be shifted towards the (distributed) real world contexts of users. "Participatory design is, as we see it, no longer primarily a professional issue for software developers, but has to be extended to the relationships between different user-designers, and, beyond that, between them and their clients/customers/service-seeking citizens in general" (Ditttrich et al., 2002).

Distributed participation, it has been suggested, can be initiated by a company in a more controlled manner from the outset, e.g., by gathering feedback concerning a web-based prototype (Fueller et al., 2006). Equally, design processes can become more responsive to user-generated modifications (Jeppesen and Frederiksen, 2006). Nevertheless, and as we have indicated above, social media on their own will not address the problem of complexity (see e.g., Hendry, 2008). Methods will be required which allow for user engagement in such a way that the issues we have outlined are successfully managed. Questions of how to structure, moderate and scale the process of participation when applied to a heterogeneous and distributed user base have not yet been resolved. We therefore explore an attempt to provide more structured involvement of users in online communities in the development process of a commercial software product. The intention, as we report, was to enable the members of an online community to (co-) design new software for an internet television service and further to engage in a continuous improvement process.

2. The methodological foundations of PD

The importance of a reflexive approach to the 'user' has long been recognised to be an important factor in social and technological change. Some version can be found in the traditions of many different research communities including action research (see, e.g., Hayes, 2011); the 'Scandinavian' tradition; German work design, the post-modern turn in ethnographic research and so on (see Bannon et al., 2011). More specifically, of course, it has been applied to the design and evaluation of innovative software applications by the community of researchers glossed as 'PD'. This gloss disguises a number of different approaches. Muller and Kuhn (1993), for instance, classified participatory design oriented techniques into two dimensions: time and context see also Muller (2002). Users can either be involved in the design process at an early design phase, where some form of 'requirements' are to be elicited or in a later stage, e.g., in mock-up reflections, and where a more evaluative approach is asked. Of course there is no reason in principle why involvement cannot be continuous but as Hayes pointed out (2011) this is difficult to achieve in practice. The second dimension has to do with the context of user participation. That is, there is a range of options available in relation to the location of the

Download English Version:

<https://daneshyari.com/en/article/400860>

Download Persian Version:

<https://daneshyari.com/article/400860>

[Daneshyari.com](https://daneshyari.com)