Participatory Design in an Open Web Laboratory Owela

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Abstract
In this paper we describe the process and tools for distributed participatory design in an open web laboratory called Owela. We discuss the benefits and challenges of online tools that were used for the design of a collaborative feedback service together with users.

Keywords
Distributed participatory design, social media, online laboratory, feedback service, open innovation, case study

ACM Classification Keywords
H.5.3. Group and Organization Interfaces: Asynchronous interaction, H.5.2 User Interfaces: User-centered design.

Introduction
In participatory design (PD) it is crucial to find end users that are committed to participating, preferably throughout the whole design process. When designing business applications, the participants can be selected from the customer organization. But when designing consumer products and services it is harder to find enough people to get involved.

Another challenge for PD is authentic context of use during the design sessions. For digital media services the context of use is the Internet – regardless of the physical space. Therefore it is both practical and natural to research the services and their users on the Internet. For the users it provides an easy way to participate the research whenever it fits in their schedule.

Owela (Open Web Lab) is a participatory research laboratory for designing especially digital media products and services on the Internet [3]. It aims at being a conversational web community that connects users with developers and researchers and promotes open innovation. Owela offers various social media tools for different phases in user-centred design process. The tools include blogs, chat, questionnaires, IdeaTube for ideas, feedback and comments, and TestLab for prototype testing.

Owela provides methods for iterative user-driven design. The laboratory itself was launched in beta and is continuously developed according to user feedback and researchers' experiences. Thus the methods and tools that it provides for distributed participatory design (DPD) are being developed participatory by using them in practice.

Case BetterWorld in Owela

The first case study in Owela was an iterative development of the BetterWorld service concept. The BetterWorld is a collaborative and context-sensitive feedback service for commenting all kinds of services, products, companies, and organizations. The service works both on mobile and web, and utilizes collective intelligence of its users in order to refine given feedback and redirect it to the right recipients.

Design process
The BetterWorld service concept was designed participatory with researchers and users. The design process consisted of five phases during which the application was iteratively developed at the same time.

1.   Analysis of needs and contexts for giving feedback (in IdeaTube)

2.   Evaluation of the first iteration of the BetterWorld concept (in IdeaTube)

3.   Beta testing of one component (in TestLab)

4.   Usability evaluation of the first version of a mobile application (in a usability laboratory)

5.   Evaluation of the second iteration of the BetterWorld concept (in IdeaTube)

All phases of the process were conducted in Owela despite of the usability test of the mobile part that happened in a real world usability laboratory.

Recruitment of users
The participators were not particularly recruited for the BetterWorld case but as permanent users to Owela, and no special interest for feedback services was required. Advertisement for Owela was done via blogs, flyers and a social media seminar. Many participants in Owela may be considered as early adopters or lead users [5], when it comes to using social media services. Movie tickets were given as rewards.

Ideas, scenarios and prototypes in Owela are open for everyone, but in order to participate in evaluations and idea development users must register to the service. All registered users have also a profile page with statistics

about their participation and optionally a description of themselves.

Tools
IdeaTube is a featured blog that was used in this case for three different purposes:

§   *Elicitation of needs and requirements*

§   *Comments, evaluation and improvements* for the comic style scenarios

§   *Test users feedback* for the prototype

In IdeaTube the researchers of Owela posted discussion topics with text and images. The users were supposed to rate them with thumb up or down (Figure 1) or to comment with text and emoticons (Figure 2).

Figure 1. Scenario presented in IdeaTube with voting thumbs.

Figure 2. The nine emoticons used in IdeaTube.

TestLab was used for the evaluation of one component of the BetterWorld service. TestLab is a web site with

instructions for test users, links to tested applications and needed downloads, chat and feedback channel.

Users were encouraged to tell their ideas and comments in the chat, but the chat was mainly used for feedback about Owela itself. Blog and emails were used for communication with the participants.

Lessons learned
As the BetterWorld concept was the first case done in Owela, it provided a lot of valuable information about utilizing social media tools for participatory design.

Benefits
The participation is easier for users on the web, as they can access the web laboratory anytime anywhere. They may also stay anonym in discussions, which may lower the threshold to participate.

Doing DPD in Owela makes it easier to get quick feedback for different ideas and scenarios. The users already are there, and no recruitment for one small case study is needed.

Open discussions give the users stronger feeling of participation and a possibility to see, how own ideas turn into design solutions and prototypes. The users are more interested to communicate with others than answer a questionnaire alone.

Challenges
The tools are not enough but there should also be a feeling of community. The users should feel that they are innovating with others, like sitting around the same table. This kind of feeling can be done for example with web camera, using avatars, seeing others online status, and via a possibility to build own groups. Also

researchers must actively take part in the discussions as moderators and give feedback to users, but still not affect too much the opinions of the users.

In an online environment, attracting users is challenging task [1]. In general, the clear concept and strong brand are needed to attract users. When considering Owela, a question raises that people may or may not want to participate in an innovation environment run by one research organisation. After attracting users, a second step is to activate and commit users, which is also even harder online.

Users' motivation should come from the community and participation, not from external rewards [2]. A direct contact to users could be more effective than communication through web site and emails. Furthermore, the design process must be clear to the users: they must see how their participation affects the design.

Other considerations
In such environment as Owela is, it is important to bind customers somehow into the process with registering, regular messages and seeing the development process. The optimal situation would be that the whole R & D process should be linked with Owela. However, users find registration uncomfortable and would like to comment more freely like in blogs.

Moreover, the quality of content should be consistent in a public lab, including high quality pictures and descriptions. Also open, creative and trustful atmosphere with motivating innovation objectives is important in aim to motivate users.

Conclusions

In order to make it easy for users to participate, the design tools and methods must be easy to access and use. Social media tools, such as blogs, chat, and sharing images and videos are familiar to the most web users nowadays, which makes it sensible to utilize them in DPD. However, the tools do not make a successful DPD community alone, but active participants are needed.

In the future we will develop Owela further with features that motivate people to get involved. We are also going to study possibilities to link Owela into existing online communities where people already innovate together.

Acknowledgements

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