

# SocialMedia Experience and Design Lab: Using Advantages from Different LivingLab-Approaches

Jan Hess  
University of Siegen  
Adolf-Reichwein-Straße 2, D-57068 Siegen  
+49 271 740 2098  
jan.hess@uni-siegen.de

Corinna Ogonowski  
University of Siegen  
Hoelderlinstr. 3, D-57068 Siegen  
+49 271 740 3265  
corinna.ogonowski@uni-siegen.de

## ABSTRACT

Within this paper we describe our approach called SocialMedia Experience and Design Lab (SMEDL). Within SMEDL we operationalize different levels of user involvement in real-world settings (at home and on the web) as well as in an artificial lab environment. Because the different approaches have their strengths and weaknesses, we highlight the meaning of a method-mix around a Living Lab as our core concept. We also describe methodological issues that have to be considered in further work.

**Categories and Subject Descriptors:** H.5.1 [Multimedia Information Systems]: Methodology

**General Terms:** Design, Human Factors, Theory

## 1. INTRODUCTION

Social Media has become an actual phenomenon in our modern world. One of the most commonly known definitions of Social Media in its sense of Web 2.0 is based on Kaplan and Haenlein: ‘Social Media is a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content’ [6]. Even though the definition is generally accepted, it has to be seen from a broader sense of media use. Based on this assumption we started a large-scale research project called ‘SocialMedia’ at the University of Siegen, which aims to develop new cross-platform community concepts for domestic environments based on TV-, PC- and Mobile applications. In the project we develop several use cases related to SocialTV research (e.g. chat, annotation and social recommendations). By developing new applications in a Living Lab context, we will support communication and shared content processes in existing communities, as well as provide support to community building.

The participation of users in the design and evaluation process of new technical artefacts is a fundamental approach in building usable and acceptable applications and services. We chose a Living Lab approach in order to bring users, businesses and technology together into a development process that establishes real life environments [7]. According to Eriksson et al [1] such an approach supports long-term cooperation, co-creative research and the continuous involvement of users from an early stage. Living Lab approaches in Home Entertainment can be divided into two different lab structures. One structure uses as an artificial environment, in which real life home structures are simulated in test centres, such as the PlaceLab of the MIT [5]. Such a lab structure offers a controlled environment with multi-observation possibilities over a long period of time, which supplies a wide array of quantitative data. The other Living Lab structure uses real-life households as testbeds without creating an artificial

setting. By utilizing user participation in innovative development processes, the project ‘iiTV@Home: Field trial in Salzburg’ uses such a lab concept in order to gain a deeper understanding of social dimensions in Home-IT [8].

**Table 1. Pro and cons of the two Living Lab approaches**

| Lab approach   | Praxis approach   |
|--|---|
| + quite structured procedure with a formalized output      | + non-artificial lab structure                              |
| + large number of test persons                             | + understanding praxis & context                            |
| + multi-observation (several video sources, observation)   | + long-term evaluation                                      |
| ± predominantly quantitative data (questionnaire, logging) | ± predominantly qualitative data (interview, diary, probes) |
| - artificial lab structure                                 | - multi-observation difficult                               |
| - short-term evaluation                                    | - selection process difficult                               |
|  | - time- and work-consuming                                  |

As described in Table 1, both approaches have their strengths and weaknesses. Based on the experiences of the two lab structures, we decided to use a method-mix for our SocialMedia project to take advantage of both. The lab is called SocialMedia Experience and Design Lab (SMEDL), because user experience and design will go hand in hand when creating new applications and services for Home-IT. With this approach we try to find answers to the following questions: How do we get users involved in the design and evaluation process? Which methods are strong enough to help us ascertain a deeper understanding of media use? And how can we combine these methods in order to approach the challenge, which is affiliated by the Home-IT context?

## 2. OUR APPROACH

Within the SocialMedia project, SMEDL plays the role of an infrastructural toolkit that collects new ideas from the users (Open Innovation) and evaluates early prototypes in the domestic environment. This infrastructure will enable us to conduct qualitative as well as quantitative methods. Because the aim of SocialMedia is the development of new community tools, SMEDL will offer a test bed with different clusters of households. Participants who know each other will form a cluster to evaluate concepts for existing communities. At the same time, SMEDL includes separate clusters of households with the aims of evaluating concepts for community building and of getting new contacts. Thereby the lab will consider households with different levels of technical expertise (Lead User as well as persons with less domain knowledge). However, the evaluation of new prototypical concepts is not the only goal of our research. We also want to use our lab to explore media usage and its possible

changes over a long period. In order to operationalize the several issues, we structured SMEDL in the following way: **SMEDL.Local** is the core of our Living Lab approach. For this part we will choose ca. 20 households in the city of Siegen and the surrounding area and let them continuously participate. These households will get new hardware and software to test and evaluate early prototypes in practical settings over a longer period of time. **SMEDL.Stat** is a stationary laboratory room at the University of Siegen, which is built exactly like a standard living room. Within this environment we can measure user feedback and quantitative data on a very exact level. **SMEDL.Global** is an environment, which supports the innovation process by existing online communities (e.g. Media Center communities). On these platforms we will evaluate our concepts in a distributed manner.

While each part of SMEDL is an interesting lab approach on its own, the full value of our concept will be reached by running the three parts in parallel. By continuously involving and observing users in real world settings (SMEDL.Local), measuring their behaviour in a standardized environment (SMEDL.Stat), and by gathering feedback from a broad online community (SMEDL.Global), we expect to be able to evaluate new prototypical concepts in a full scope of richness.

### 3. CURRENT STATE

The work around SMEDL is embedded in a long-term research strategy. Our agenda on the one hand includes research on prototypes for supporting communities in domestic environments (e.g. [2]). On the other hand we focus on methods and concepts to explore social practise in the field (e.g. [4]) as well as involve online user communities in the design of new products [3]. The experience gathered in the past helps us structure and plan for SMEDL in a realistic way. As one of the first activities, we started to implement SMEDL.Stat and the build up process for SMEDL.Local. While SMEDL.Stat is already running, the setup of SMEDL.Local is an ongoing process. Right now we are performing ethnographical work in the field to explore the current state of media usage and to identify existing networks of participating households. When the build up process on SMEDL.Local is finished, we will start to realize the community portal for SMEDL.Global. Because a critical mass of users within SMEDL.Global is necessary, we want to access existing community portals, which already are established.

### 4. DISCUSSION

Choosing the right method for a given research issue is not a trivial task. Should we evaluate a concept in the artificial lab, in praxis or in both? Should we explain some details of the concept at first or should the user explore it with no additional explanations? Is it more valuable to conduct interviews with single persons or with all members of the household at the same time? Can we gather more insights with rather classical ethnographic methods (e.g. observation) or should users document on their own (e.g. by using diaries or probes)? From our previous experience we can state that the right choice is a trade-off between several conceptual (new ideas vs. evaluate concepts), technological (easy to use vs. complex technological preconditions) and organizational (e.g. budget and manpower) aspects.

Depending on the concrete design goal, the best choice of methods differs from case to case. A potential source to find new ideas is the Lead User approach [9]. Such users are very

experienced in a domain, use an artifact in a regular manner and therefore have good ideas for improvements. We already gathered positive results with community participation based on a virtual platform [3]. In this study interested users could contribute in a distributed manner to define the functionalities of a new media center system. Even if a lot of different ideas and improvements were brought in this way, the process of evaluating new concepts becomes difficult. The procedure will profit from personal contact between user and designer. The common ways to evaluate concepts on site are controlled lab studies and workshops with the users. By conducting interviews, observation, logging etc., numerous of fundamental insight can be gathered. However, even such an approach is limited in different ways (see also Table 1). Many of details will remain unanswered: Is the concept accepted in praxis? Will the user make value of it over longer periods of time? In which way and in which context will it be used? How does the concept change the practise of the user in everyday life? Such insights will observable only in real-life settings. Because all of the introduced lab structures – virtual lab, artificial lab and praxis – have their value for a broad understanding of design issues, we operationalize all three of them for our SocialMedia project as described in the previous sections.

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