Developer–User Social Distance as a Guiding Concept for User Involvement

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ABSTRACT
Social media changes the conditions for user involvement in service development. Active user communities, fast paced iterative development after market launch, developer access to users’ digital trails, and low cost software distribution are well known facets that bring substantial changes. This paper articulates how these and other changes shape user involvement routines, including usability evaluation and user experience design and evaluation methods, based on an in-depth case study of an over decade-long service development in industry, Habbo Hotel by Sulake Corporation. As a benefit of its longitudinal approach, this study brought a neglected slowly changing contextual aspect in focus: developer–user social distance. The argument is that developer–user social distance could become a guiding concept for user involvement, thus supporting the transfer and adoption of methods between design contexts.

Author Keywords
User involvement, methods, routines, context, social media

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION
Social media is all but a clear-cut case for interaction designers. Despite many interesting phenomena—e.g., user-created content, user-driven or participatory web, wikinomics [1, 7, 12, 15]—we do not know whether it is feasible to design social media with a user-centred design process, nor to which degrees social media is ‘user-driven’ or ‘participatory’. Contributions to the social media user experience provide some details [2], but little design process guidance in relation to when which usability and user experience design and evaluation method could be applied. Blind spots in the literature include assuming the design context to be a ‘one-off project’, the unclear role of developers’ informal engagement and personal experience, and user involvement after market launch. [5, 13, 14, 16]

As HCI professionals face the challenge of the expanding scope of interaction design, a pertinent question is how lessons can be transferred between cases. What are the relevant aspects of generalization, and do the traditional frames of usability evaluation methods hold when the research field expands? Vice versa, can traditional wisdom guide social media development and bridge differences between work and leisure?

In this paper, we explore a large-scale social media case. The empirical data was collected during 2003–2010 by the author, who studied the vendor organisation in several research projects. This online service started out with the developers developing for themselves and their friends, and, like other success stories, found that there was a more general demand for their service. Over time, significant changes in the relationship between developers and users occurred, and the forms of user involvement transformed accordingly. The lessons learned from this case are distilled with reference to HCI method adoption themes: understanding which, why, who, what, when, where and how users were involved in design. The contribution of this paper is a new guiding principle for user involvement, developer–user social distance, to support HCI method deployment.

HOW SOCIAL MEDIA CHANGES USER INVOLVEMENT
User involvement is typically framed in two ways: either how to manage a particular interaction situation with one or more users, or the planning process when one decides how to approach users. We know a lot about particular methods to learn about users—interviews, observation, surveys, focus groups, field visits, cultural probes, and so on—and a fair deal about which factors drive the use of a method in research settings. However, we know very little about the factors that drive the selection of methods use in the long run, in a series of projects in product or service development organisations.

Users are often assumed to contribute through the means of user research, user requirements definition, context of use models, use case and scenario modelling, persona descriptions, and evaluation with users. However, anecdotal evidence from social media startups suggests that many developers did not start with typical user-centred design methods, but rather by developing the service for themselves [4]. On the other hand, many prominent social media companies have hired user experience designers and user researchers to learn from the users of their services. These weak signals intrigue us and lead to the question, what exactly is the role of users and user involvement methods in the design of social media?
Social media is here treated as a computerisation movement, a concept by Kling and Iacono that considers three components that interact with and shape each other: technological frames, public discourse, and organisational practice and use. First, specialised and mainframe computers, then mini and micro computers, computer networks, and related software were taken into use by organisations for different reasons (productivity, democratisation, collaboration). This time it is a combination of useful and usable computer-based technologies for consumers, services for groups of people, business model innovations, and active content-sharing users that is changing society. [2, 11]

Social media is relevant to design contexts in at least two different ways. First, all product and service developers can benefit from various collaborations with users through social media. Second, development of social media services for consumers can be delineated in terms of (1) software business (e.g., low cost of construction, modification, distribution, considerable development after market launch, unconventional revenue models), (2) features for group communication that make social media more than groupware (e.g., open-ended messages and other user-created content, support for a collection of groups, and high degree of awareness of other users’ activities), and (3) use and users: active user communities, peer production, and high degree of voluntary use. [11] The case reported here exemplifies this latter setting.

In usability and user experience design and evaluation methods so far, a number of factors that influence method use have been proposed. The ISO standard entitled Usability methods supporting human-centred design [6] lists a number of factors in an appendix that influence method choice. In the standard these factors are structured by software lifecycle, project, user, task, and product characteristics, as well as, available skills. For instance, does the designer have access to users or are they too remote—geographically or organisationally? What ergonomics/human factors skills does the design team have? And, how much time and money is available?

While some of these factors are related to the context of use and some to the development context, not all aspects have been fully developed. For instance, the design team’s expertise is only visible through human factors skills, while developers’ familiarity of the use context is not noted. In this paper we also engage with two other concerns: the role of informal engagement between designers and users (in contrast to formal methods), and new sources of data about users in social media contexts. These concerns have been raised in recent debates on the design context and designer subjectivity. [13, 14]

In the following we will be looking at the relation between design and use context, and, based on the observations, propose a guiding principle for user involvement.

**CASE HABBO: DATA, METHODS AND OVERVIEW**

Habbo is one of the oldest and most popular social media services where children and teenagers meet, socialise, and play many types of games. The service is designed as a virtual hotel that encourages players to get a virtual hotel room, purchase virtual furniture and decorate their hotel room to their own taste and as a meeting place for games and socialising with other players (Figure 1). During 2003–2010 the service expanded from 4 localised hotels and 1 million monthly users to 11 language versions with 15 million monthly users from over 150 countries. Instead of an entrance or a monthly fee, the business model is free-to-play—revenue is based on micropayments and advertising in the hotel. Players, called ‘Habbos’, are encouraged to create their own objectives alongside chatting, room decoration, and meeting friends. Most of the teenage players log on after school, and according to Sulake, the developer company, on average they spend around forty-five minutes per day in the hotel or on its related discussion forums.

Our data was gathered both from developers and users during 2003–2010 through a multi-method approach with varying intensity during eight years and has been reported in detail in a PhD thesis [11]. The research started in the fall of 2003 with pilot interviews and participant observation in Habbo user communities. During 2004 the focus was on visitor profiles, studied through a survey that reached 10 000 users, and online texts written by Habbo users on websites, blogs and in discussion forums—so called Habbo fansites—to understand the consumption and user activities in Habbo. In 2005 ten theme interviews with Habbo developers and three focus group interviews with altogether twelve Habbo users were organised. In 2006 the author participated as researcher in the development of customer feedback methods at Sulake. From 2007 the research has concentrated on analysis, trying out new features in Habbo and keeping up-to-date through additional interviews with Sulake developers.

The data analysis proceeded in multiple waves over the years. A survey provided quantitative information of the use of Habbo. Analysis of texts written by Habbo users on fansites explored different Habbo consumption styles, popular activities, and hotel history. The topics of the user interviews were their participation histories, changing motivations, and meanings given to membership and
reference groups in Habbo. Taken together, these bodies of data provide us with an excellent view of the varying forms of interchange and dialogue between the users and developers of this social media service. This case is representative beyond its target group and games to social media in general, because of similarities in software business, group communication functionality, and active user communities. [8, 9, 10, 11]

The following account of deployed methods extends beyond standard usability and user experience evaluation methods to include other encounters between developers and users that serve similar functions in providing developers with information about the use and users.

KEY THEMES IN HABBO HOTEL SERVICE EVOLUTION
What Sulake–Habbo consists of has changed significantly over the years. Habbo started as a pet project for a few developers and their friends, grew to become a popular online world among new media people and within a few years it became mainstream for a teenage target group. Technical, economical, and organisational bottlenecks were solved so that the service could grow and scale up to become a transnational service. We group the service evolution into five stages (Table 1).

<table>
<thead>
<tr>
<th>Stage</th>
<th>Years</th>
<th>Monthly users</th>
<th>Hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept</td>
<td>1999–2000</td>
<td>&lt; 10 000</td>
<td>1</td>
</tr>
<tr>
<td>Beta</td>
<td>2001–2003</td>
<td>&lt; 1 million</td>
<td>4</td>
</tr>
<tr>
<td>Expansion</td>
<td>2004–2005</td>
<td>1–5 millions</td>
<td>16</td>
</tr>
<tr>
<td>Complexity</td>
<td>2006–2007</td>
<td>5–10 millions</td>
<td>19</td>
</tr>
<tr>
<td>Competition</td>
<td>2008–2010</td>
<td>10–15 millions</td>
<td>12–18</td>
</tr>
</tbody>
</table>

Table 1. Habbo Service Evolution

Concept refers to the first prototypes in 1999 and 2000: Mobiles Disco, Lumista, and Hotelli Kultukala. At this time, the development resources were minimal as the two founding developers created the first prototype on their free time after work and during weekends. Beta refers to the time period between 2001 and 2003, when much of the basic functionality was completed. Internationalisation started through a UK partnership, followed by a Swiss partnership. Expansion refers to 2004–2005 when the product was packaged so that it made a roll out possible in more than 10 new countries during one year. Before that different code was used in different countries. Complexity refers to 2006 and onwards when the product was extended to a social networking service. Competition reflects the increased amount of social media services for children and an increased teenage adoption of Facebook.

Strategy Change Due to Shifts in Developer–User Social Distance
During this service evolution, what was designed and developed changed. The concept stage started with making Habbo a cool hangout online and the developers were developing the service for themselves, their friends and their new media colleagues. Developers had easy access to users in the Finnish user community as developers could log on to Habbo and check what was going on. While the developers also used the service themselves, the informal engagement with the user community gave the developers a good implicit understanding of the users. Various informal evaluation practices, such as the slogans ‘easy access, easy play’ and ‘where else’ which had a shared meaning among the developers, guided the design early on. During the first year developers received abundant e-mail feedback by users, which became a handy source for design inspiration for the developers, who used to return to it periodically to browse for good ideas.

During the beta stage, designers focused on typical usages and the changing target group. With too many users to keep track of, the developers turned to typical usages: logging in, learning to navigate in Habbo, connecting with others, creating a room etc. The user base extended to a younger demographic and an age gap emerged, which had fundamental consequences to the service. Means for safe playing were implemented and the parent of the user became a key stakeholder in website communication. The fading insider perspective necessitated market and user studies to understand the new target group and a typology to communicate it. A back-end service that kept track of furniture sales across hotels was developed, allowing a comparison of Habbo features on the basis of their economic performance, not only based on functional or aesthetic properties. Fansite discussion forums were an additional important source for design inspiration. These means to learn about users were used to compare user bases in different hotel countries.

As the monthly number of users approached 1 million in four different countries, hotel-specific country organisations emerged as intermediaries between end-users, volunteers, and the increasingly centralised game development. These country offices would take care of the local technical configuration of the hotel, community management, customer support, local campaigns, and advertising.

Active Users and Emergent Developer Strategies
A key factor for service success in the early stages of its lifecycle was the emergence and continuous management of the fansites and volunteers programme. Already from the start of the service, groups of active Habbo users teamed up and created Habbo-themed websites in the form of blogs, online magazines, or discussion forums. These fansites emerged around all Habbo Hotels in their respective countries or language regions. They varied in size and temporality, from small sites with a few web pages that operated for a few weeks to the biggest fansites with hundreds of thousands of page views, readers in more than one country and that operated for many years. While most fansites remained fairly underground phenomena, the more popular ones got recognized by Sulake as “Official Habbo Fansites”. This programme of giving special status in the
community to certain fansites started after the first three years of the service, during which the developers had operated their own official online fansite, which also served as a model for later user-produced fansites.

The Habbo fansites served important community-building purposes, as they were run by active users and subgroups formed around them. For instance, they complemented the official website, strengthened the governance policies of the producer, reproduced and reinforced social positions (like potential Habbo career paths or legitimised user groups), and improved the Habbo users’ awareness of the fan cultures around Habbo. In this case the developers could benefit from the massive amounts of online discussion about Habbo, which transformed qualitative inquiry in user research from being a prime means to gather data to being a means for source critique of what the users write about Habbo, and taking actions to fill in the gaps and skews in the users’ online reports.

For the first five years of Habbo, Sulake leaned on volunteers to moderate the online activities. Volunteers were called ‘Hobbas’ and their function was to mediate in conflicts, send warnings to misbehaving users, kick them out of the hotel rooms, or ban them from the hotel. To share experiences and moderation policies, the volunteers created an online forum for themselves. Along with the internationalisation and more organised volunteer management, Sulake started hosting a local volunteer forum per hotel country. The volunteers soon got an important role as mediators of user opinions: the developers knew that as the volunteers spent the most time in the hotel, they were always the first to know about the current user concerns, wishes and emergent activities.

During the expansion stage, many development practices became more formal and cost-efficiency became more important. As the organic beta testing phase changed into a more controlled release management process, Sulake started piloting the release for one month in one hotel country, before diffusing the release to other hotel countries. Playability testing was used to assess various playability aspects, such as gameplay, game mechanics, appearance, sound, and social playability. During 2004–2005, focus groups were conducted to evaluate the applicability of Habbo pixel style graphics and use of colours for the Asian market. The target group of the first usability evaluation was new users and business critical service features.

As some hotel communities grew larger, pressure emerged for customer service to automate their responses. For instance, in a country with several hundreds of thousands of users, a new feature might spawn several thousands of inquiries per day. In 2005, a new customer relationship management system was introduced. It featured a set of standard questions and responses, which reportedly reduced inquiries by 90 percent. In 2005–2006 Sulake brought the moderating function in-house, by employing moderators in their country offices. The volunteer program changed, and experienced Habbo users could apply to become so-called Habbo eXperts, who did not have moderating powers anymore, but could get into a room that was full.

**Cumulative and Strategic User Categorisations**

In the complexity phase, many ways of understanding the diversity of the users were developed. In an effort to gather systematic feedback before the implementation of new features, Sulake recruited 200 volunteers in one country to form an online panel. Market research surveyed users’ lifestyles, favourite brands and media usage patterns across different countries. User and group homepages and dynamic indexing systems (e.g. tags) served both the communication between users and the developers’ interest in learning about the users. In 2008 the volunteer program changed again, and eXperts became Habbo Guides, who volunteer to welcome new users and explain Habbo's features. In 2009, Guide "Bots" were introduced, answering basic questions about Habbo.

In the competition stage, global competition and multi-sided business grew in importance. In 2009, when the Personas method was implemented in a data-driven fashion, the focus became to ensure that six persona descriptions should reflect the growing and declining market areas as well as have an even gender and age spread. The idea was that developers have an updated reference to the goals and needs of Habbo users at hand, which could inform design solutions and evaluations. The process of learning from surveys had been significantly developed with the aid of automation and web analytics techniques.

Table 2 summarises the above observed user involvement routines, and pinpoints their first occurrence to service evolution stages.

<table>
<thead>
<tr>
<th>Stage</th>
<th>User Involvement Routines, First Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concept</td>
<td>Avatar activities, Developers as users, Informal evaluations, E-mail feedback, Volunteers</td>
</tr>
<tr>
<td>Beta</td>
<td>Volunteer forum, Weekly newsletters and polls, Fansites, Official Fanzine, Summer meetings, Sales statistics, Customer service</td>
</tr>
<tr>
<td>Expansion</td>
<td>Market survey, Focus groups, Usability evaluation, Playability testing, CRM system, Release pilots</td>
</tr>
<tr>
<td>Complexity</td>
<td>Online user panel, Global youth survey, User and group homepages, tags</td>
</tr>
<tr>
<td>Competition</td>
<td>Data mining, Automated surveys, User experience testing, Personas</td>
</tr>
</tbody>
</table>

Table 2: First occurrence of User Involvement Routines by Service Evolution Stage [8]
When studying the accumulation of user knowledge in the development organisation over several years, it became apparent that project phases did not structure the deployment of usability and user experience methods. Instead the question became one of turning attention to shifts in developer–user social distance and a number of other contextual factors.

**Developer–User Social Distance**

The concept of developer–user social distance emerged from this case, as I had the opportunity to learn about a social media company’s user involvement practices over several years and I became witness to a gradual, but significant, change in how users were involved in design. With an increasing number of users, more features, and geographic expansion of the service, also the diversity of use practices increased. The younger demographic of the users brought increasing differences between developers and users. Developers’ active participation in use communities decreased, and volunteer users’ participation in development and moderation waned. The role of the fansites changed as certain discussions about Habbo could be carried out in the developer-provided forums.

I conceptualised the above changes in the development as changes in social distance between developers and users. As developed in [11], shifts in developer–user social distance refers to changes in uncertainty and familiarity of the other group’s practices, resulting from a combination of changes in 1) diversity of use practices, 2) differences between developers and users, 3) direct developer participation in use practices and vice versa (direct user participation in development practices), and 4) indirect contact between developers and users through both social and technical mediators.

Developer subjectivity, for instance, a developer’s own use of a particular product or service and resulting first-hand experience, is poorly considered in guidelines and other advice on user involvement. Much writing on user involvement starts with the assumption that a developer is not a representative user and can therefore not trust his or her own gut feelings with respect to design choices. The other extreme opinion is also common, that is, developers are competent members of a community of practice and their personal experience is perfectly representative. [11, 13] In contrast, I argue that developers can lean on their ideas about use and experience of use, but that it depends on how familiar the developers are with the users and the use practices—what I call here the developer–user social distance.

This case is an example of self-centred design being adequate, but within certain limits. To convey the limits, the sensitising concept of developer–user social distance is proposed. As long as the distance is small, one can posit that self-centred design and informal user engagement can work, but as soon as the developer–user social distance grows, more effort is needed in terms of user involvement to bridge the emerging gaps. It also works the other way around. In many product and service design cases, the initial developer–user social distance is broad; however, as users engage in development and personal contacts develop, the developer–user social distance decreases, which then opens up possibilities for the use of more informal, potentially lighter and more first-hand, methods.

**Other Aspects of Importance**

Developer–user social distance is intended as a guiding concept, or a shorthand abstraction, for designers to communicate many complex relations between design and use. However, also a number of other contextual factors shaped the deployment of usability and user experience methods, too many to be covered in detail here. The following gives a brief overview to provide empirical support of their significance with respect to method deployment (cf. [16]):

**Organizational specialisation:** When organisational specialisation increases, which tends to happen when organisations grow, more effort is needed on communicating knowledge about users and their use practices within the organisation, as not all managers and developers can have deep knowledge about users and use practices. This makes reports from user studies, use cases, scenarios, and other user representations more relevant.

**Degree of business/mission criticalness:** Login, registration, payment processes, and other factors enabling a low threshold of use are critical parts of most services, which need to work optimally. Sulake focused its first formal usability evaluation on these processes. On the other hand, less important features can stand more bugs or longer fixing times. Sulake left low-priority features hanging for a while.

**Project scope & openness of design space:** User feedback and use practices have most influence on the features that are under active development. Early on, emergent use practices and user feedback were significant, for instance, in the development of furniture ownership rights and their sharing, navigation between rooms, furniture trading mechanisms, moderation, and online discussion about Habbo. In 2006–2007 the service concept was broadened with social networking features and user feedback could influence those developments.

**Feature-specific use variance:** Assessing relevant variance in use practices is significant for fitting a technical feature to social practices. For instance, login, registration, and particular payment options are features with use practices that are tightly scripted with little degree of freedom. On the other hand, decorating a room and moving about in Habbo are very open-ended use practices. For open-ended use practices, technical flexibility is key and user research methods that can tackle open-endedness (observation, interviews, data mining server logs with machine learning algorithms). For tightly scripted use practices, clear interaction sequences are key, as are user research methods.
with a high degree of control and a priori definitions, like A/B testing and quasi experiments, for instance.

**User-Generated Content and User-Owned Services.** Social media settings accentuate the organising of user communities and peer production after market launch. Active user volunteers can fill in where a service developer company has no resources. Key questions to the organization of user possibilities in influencing service evolution include who hosts, maintains and controls the rights to activities and outcomes of user-run, developer-run, or interconnected third-party blog/forum resources and services.

**Digital trails.** In social media contexts, developers have easy access to online user action, so whenever a question of uncertainty comes to mind, a developer can just log on and check what users are doing and writing about just that topic. Service operators can use web analytics to analyse their server and service logs regarding all sorts of statistics of online user action and activities: site visits, transactions, and use patterns. These digital trails offer advanced opportunities for dialogue between developers and users, and means to tap in and collaborate with user owned interconnected resources and services.

**CONCLUSION**

We have reported on user involvement methods deployment from a longitudinal case. The aim was to give a rich picture of development practices, including the emergent method repertoire of the developers. This position paper focuses on a neglected slowly changing contextual aspect: developer–user social distance. While the context of use has been in focus since the beginnings of user-centred design, the design context has been found between the lines and in the margins until recent debates [5, 13, 14, 16]. The concept of developer–user social distance brings these two, design context and use context, together. It has the potential to overcome what has been described as a ‘heroic view’ of design, where developers are understood in too simplistic notions of either omnipotent heroes or malevolent devils. Furthermore, the unclear role of informal engagement and personal experience in changing design and use contexts can be resolved by considering shifts in developer–user social distance.

**REFERENCES**