

Samskabte designmaterialer

- en tilgang til brugerinddragelse i mindre og mellemstore webudviklingsprojekter

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Forord

Vi vil gerne sige en stor tak til de webbureauer, der har deltaget i vores interviews og velvilligt har givet os lov til at være med i deres projekter:

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Jan, Rikke og Jesper, Wildside A/S

Adam, Novicell ApS

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Trine og Anne, Den Jyske Opera

Nikolai, Tivoli Friheden A/S

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Tak for jeres deltagelse, samarbejde, kommentarer og interesse i forbindelsen med udarbejdelsen af dette speciale!

Summary - Co-Creation of Design Materials

- An Approach to User Involvement in Small and Mid-Sized Web Development Projects

We have in this thesis investigated how user involvement inspired by the Scandinavian Approach (e.g. Greenbaum & Kyng 1991) can be carried out in small and mid-sized web development projects. We have focused on developing techniques that can be deployed by professionals in the web agencies and that can enter into existing practice. Our investigation resulted in a set of guidelines for co-creation of design materials and two concrete techniques: Knowledge and Metaphor-Card Workshop and The Persona Game.

With 10 years of shared experience as web developers, we see a need to lessen the gap that exists between the practices in commercial web agencies and the design ideal of Participatory Design (PD). The motivation for this is that we, through our work with PD projects under university auspices, have experienced innovative and creative solutions resulting from the close cooperation between designers and users. It is, however, not possible to integrate PD practices directly into the current practice in web agencies, since they are fundamentally different. There is therefore a need to adapt PD principles to techniques applicable to small and mid-sized web development projects.

Method and Theory

Our approach has been to depart from the practice in actual real world web development projects. In cooperation with three web agencies we participated in four of their actual projects. The four projects were divided between the two techniques, so each technique went through two iterations. In accordance with the PD tradition the development of the techniques were – in the first iteration – tuned to the specific circumstances in the situation (Kensing 1999). The second iteration was focused on refining the technique. The development of the two techniques constituted our main empirical investigation. Before initiating the projects, we conducted five *semi-structured interviews* (Flick 2002) with practitioners from two of our three cooperating web agencies. Our practice oriented approach is also reflected in our theoretical perspective that forms our understanding of the practice in the web development agencies.

We understand web development practice to be a *design practice*. In our understanding, design refers to the creation and shaping of the structural, functional, ethical and

aesthetical properties of an artifact, at the request of a proposer, within the scope of resources available to the project (Löwgren & Stolterman 2004). This understanding means that we consider all practitioners who influence the making of websites in a web agency to be designers and not only graphical and/or web designers. Developers, writers and consultants, in our sense, are also designers.

In accordance with Donald A. Schön's theory of the reflective practitioner (1987, 1991), we consider the designers as engaging in a reflective conversation with the situation, when doing their trade. To get a better grasp of what *situation* implies, we, inspired by Löwgren & Stolterman (2004), established the notion of *design situation*, which contains all the circumstances (context, requirements, cultural norms, external factors etc.) that affect the design, *in addition to* the fact that the design situation evolves along with the project. A focal point in Schön's description of the reflective conversation is the materials in the design situation.

In our understanding of design materials we have also incorporated the notion of *design artifacts* (Bertelsen 1998). The design artifacts perspective is theoretically based on *Activity Theory* (see Kuutti 1995 for an introduction). The notion of design artifacts and Activity Theory forms – together with Schön – our theoretical understanding of human practice and therefore our understanding of the practices in small and mid-sized web development projects. This leads us to see the creation of design materials as our basic strategy for incorporating the result of the actual user involvement sessions into the web development practice.

Based on our PD ideal of user involvement, the above theoretical understanding of the practice and the development of the two techniques, we have formulated a set of guidelines for the co-creation of design materials. Before accounting for these, we will describe the basic conditions that we must observe before integrating PD into small and mid-sized web development.

Conditions for user involvement in web development

Based on our experience as well the five semi-structured interviews, we have identified four basic conditions that influence user involvement in small and mid-sized web development projects:

- There are a limited number of person-hours available

We consider a small or mid-sized web development project to be in the region of 100-200 hours. Since the user involvement activities can only make up a certain part of the available time, a technique should be possible to carry out within 15-20 person-hours.

- The practitioners have little or no formal education in user involvement

Neither through experience, nor through our investigation during the making of this thesis, have we come across any practitioner who has experience in the Scandinavian approach to user involvement.

- Interaction and interface elements are relatively predetermined

The means of interaction with – and the interface elements of – a website are predetermined by HTML standards (www.w3.org), browser interfaces, and various best practices (Garret 2003, Nielsen 2004).

- Web development is contract development

Small and mid-sized web development projects are characterized by being based on formal agreements through a binding offer or an actual contract. This means that at the time when the agreement is closed, the agency must be sure it can fulfill the contract within the estimated amount of person-hours, to ensure a profit margin on the project. Hence the project cannot be subject to substantial changes after the deal is closed.

What is Co-Creation of Design Materials?

Co-creation of design materials as a concept consists of a set of guidelines for the involvement of users in small and mid-sized web development projects: A technique...

- must take a workshop as a basis
- can benefit from being structured as a game
- must focus on narratives
- must focus on practice
- must result in design materials

By having workshops as a basis, it allows the confinement of user involvement to a certain time and place. A workshop can be conducted in 2-3 hours and creates a space where users can cooperate directly with the designers and the client. A workshop should be at the beginning of the project, so the full generative potential is not neutralized by the formal contract.

To accommodate for the limit in time and formal user involvement training on behalf of the practitioners, a workshop can benefit from being structured as a game. By incorporating explicit rules as turn taking, the progression of the workshop is ensured.

Taking part in a game is also something that all participants will be experienced in. Our use of the game metaphor is based on the tradition of using design games in the Scandinavian approach (e.g. Ehn & Sjögren 1991, Johansson & Linde 2005, Brandt 2006).

Narratives are the means by which the designers can gain insight into the context and practice of the users, and as such is a substitute for ethnographic field studies which cannot be carried out within the conditions of small and mid-sized web development projects. While narratives cannot give as much detailed information as a field study would, the telling of a narrative does imply reflection on the experience recounted (McCarthy & Wright 2004).

The above mentioned condition that interaction and interface elements are relatively predetermined, leads us to focus on practice rather than on detailed interaction design of the website. Furthermore, users are much more likely to be able to relate to practice, that is what possibilities the future website may open up, than to how a website is to be designed to create those possibilities. The actual design is up to the designers to deal with, based on the knowledge gained on the workshop.

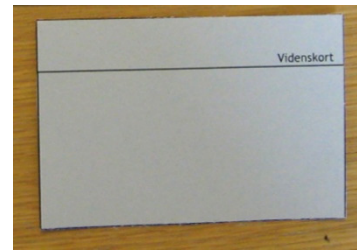
Finally, the workshop must be self documenting, and thus result in tangible design materials. These design materials must be references to the users' practices and narratives, and moreover act as reminders for reflections about the use of the website (Ehn & Sjögren 1991). By documenting the user involvement session as tangible design material, the result can enter into the practice of the web agency and play a part of the designers' on-the-spot experiments (Schön 1991).

Besides being inspired by the PD tradition and our theoretically based understanding of practice, these guidelines are the result of our development of two techniques in actual web development projects. At the same time the two following techniques are our proposals for the co-creation of design materials.

Knowledge and Metaphor-Card Workshop

A knowledge and metaphor-card workshop is a workshop that aims at idea development, among users, designers and representatives from the client, within the topic of the workshop. It is inspired by the concept of Inspiration Card Workshop (Halskov & Dalsgård 2006), and results in a number of co-created design materials in the form of concept posters depicting the concepts developed on the workshop.

As indicated by the name, the workshop is centered on two types of cards, namely knowledge and metaphor-cards. Knowledge-cards are produced at the workshop, by asking the participants three or four questions which they have to answer by filling in knowledge cards with a headline and if necessary an elaboration. Knowledge-cards are the means by which the participants of the workshop can gain a shared insight into each other's practice and experiences in relation to the topic of the workshop, and thus forms the basis of the idea development session which will take place later in the workshop. Conforming to our guidelines for co-creation of design materials, the questions asked allow the users to present narratives in the following presentation of their knowledge cards. An empty knowledge-card is shown to the right.



Following the production of knowledge-cards, the users – in turn for each question – should present and motivate their knowledge-cards to the rest of the participants, allowing them to select around ten cards, from the total pool of knowledge-cards, which will be the primary shared knowledge-cards.

Next up are the metaphor-cards, which are intended to spark off idea development, by introducing generative metaphors (Schön 1979) in to the workshop. The term *generative metaphor* describes the phenomenon that perspectives or qualities of use can be “carried over” from one domain of experience to another, i.e. considering a website to be a scrap book may yield new perspectives as to how to structure the website and what its most important use qualities are.



Metaphors are chosen individually for each workshop by the designers, who should already have an idea on how a given metaphor might become generative in relation to the workshop topic. There should be around six to eight metaphor-cards for a workshop. Before the idea development session begins, the facilitator must introduce the metaphors and give examples of their use whilst still leaving room for the participants to add their own interpretations.

In the idea development session participants have to match metaphor-cards with knowledge-cards, and tell how the chosen metaphor adds a new perspective to the chosen knowledge-card. This will led to a discussion among all the participants on the topic, during which new cards of either type can be added, as well as other notes written on post-

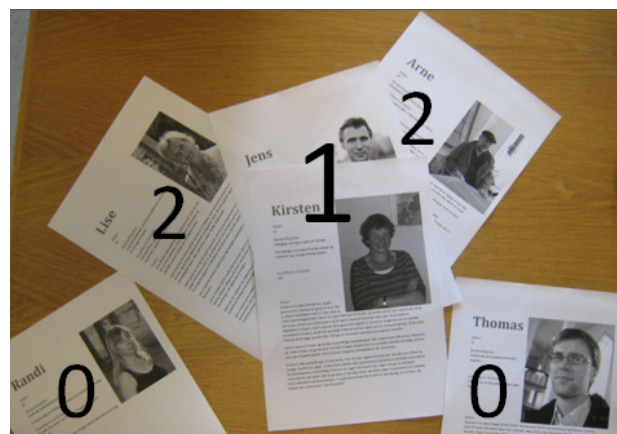
concrete (but fictive) user base emerges. In this way the documentation of the users' practices and experiences is an integrated part of the game.

In order to create a game-like setting we have created some props for use in The Persona Game:



From the top left is the playing board, designed to resemble a field track. Next is the persona templates and on top of those, the persona game pieces. Each of the persona game pieces is placed on the playing board, and can move one step forward when an answer is linked to the corresponding persona template. From bottom left are the category board and the wheel of fortune. The wheel is passed on from player to player, and is used to determine which of the four categories the player should pick the question from. The game is finished when all the game pieces have reached the goal area on the playing board.

After the workshop the persona posters with the post-its are typed up. The typed up personas form the basis of a discussion (between client and web agency) about what the goals of the different personas are. This is in accordance with the basic idea of personas: “Develop a precise description of our user and what he wishes to accomplish.” (Cooper 2004, p. 123). It’s also in alignment with our Activity Theory perspective, that the mental representation of an action is its goal (Bertelsen & Bødker 2003, p. 300-301).



The discussion continues by selecting a primary persona that the design work can focus on. A set of supporting personas are also selected to form a coherent description of the potential users. The result of the discussion can be documented as in the picture. And like this the co-created design materials can enter into the practice of the web development process.

Conclusion

Co-creation of design materials is an approach to user involvement inspired by the Scandinavian approach in small and mid-sized web development projects. By having the users create design materials in cooperation with designers and representatives of the client through a workshop, users can have a generative voice in the design process. This is based on that design materials mediate the design process, and they are a material in the design situation which designers can use in their reflective conversation with the situation.

Based on this understanding of practice and the conditions, we identified four conditions for user involvement in small and mid-sized web development projects, and we advanced five guidelines for co-creation of design materials. Furthermore we concretized these guidelines into two techniques, namely the knowledge and metaphor-card workshop and the persona game. These two techniques have been developed, tested and refined over the course of two workshops each, and along with the concept of co-creation of design materials represents our proposal on how to involve users in small and mid-sized web development projects.

Our involvement in actual client's projects gave us a realistic test bed in which to develop the techniques. The use of actual real world projects as a starting point results in two reservations. Firstly our results and techniques are strongly tied to the circumstances in the two initial projects, and the following refinement is limited to one test case per technique. Secondly we have engaged in the web development process parallel to the actual client project, and as a consequence we have not followed a project from initiation to delivery. Future work would therefore include following a project during its full lifespan.

We hope that this thesis will inspire the practitioners in web agencies to experiment with the co-creation of design materials in their development process.