Sensemaking and Knowledge Building in System Development

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One major goal of research within the HCI (Human-Computer Interaction) community is to develop or refine theories and methods that can be used in practice, in the system development process. However usability methods are not always with ease adopted in the system development process or in organizations [1,2].

In my research, I have so far concentrated on system developers and their role in user centered system design since they will affect the usability of the resulting IT-system by making design decisions late in the system development process. In order to better consider the user and the usage of the system, the system developers need to adopt new methods.

Field methods are one type of methods in order to collect data about the user and the context of system usage. However the methods can seem to be time consuming and produce large amounts of data. On CHI'2002 four panelists offered their view of the practice and challenge of making field methods a part of the product development process. One conclusion was that in order to adopt field methods it is important to address the designers' needs [3].

Previous research on field studies in practice has much focused on adapting and streamlining the field studies to the limited time scale of systems development [4,5].

However time is not the only aspect that hinders system developers to adopt new methods, preceding attitudes and values might also play an important part of the adoption. Hence the developers must appreciate the methods and see them as useful and appropriate for their work [6]. If the system developers are negative the methods will not be used.

My concern is to understand how system developers make sense of HCI-methods and particularly field studies. How do the system developers perceive the methods and what do they think is the advantages and disadvantages with the methods? Do the system developers regard the methods as useful and helpful in their work and in what way?

The research question is:

How do system developers make sense of HCI-methods and particularly field studies?

In my research my over-arching method is action research, described in Rasmussen [7]. Action research aims at doing a change in practice at the same time as research is performed. The methods I have used are qualitative, collecting data about the people, the system and the context. Examples of methods used are semi-structured interviews, field studies and participatory observations.

Since my research is interpretative and qualitative, the criteria of evaluation used within the conventional research paradigm, is not applicable. Instead this research follows the quality criteria given by Klein and Myers [8]. They present seven principles that an interpretative researcher should consider during the whole research process. The principles cannot be applied in a mechanistic way, rather as a researcher I must reflect on how my research relates to these principles, to which extent and apply those principles that are appropriate.

I am a part of an action research project that our research group is doing in collaboration with three public authorities in Sweden. The research goal is to understand how an organization understands user centered system design, implements the methods, and make use of them. We are also interested in understanding what are the obstacles and beneficial factors of the implementation process. The project goal of the organization is to get better systems for their case handlers and by this better work and more healthy workers.

My results will give a deeper understanding of the problem of implementing user centered system design methods in organizations, and particularly how system developer perceive, understand an make sense of usability methods such as field studies. Furthermore, my work in the action research project will also affect the organizations in which the research is performed. Not only by us introducing user centered methods, but also by our presence, asking questions and giving advice which will affect how the people in the organization reflect on what they are doing which leads to a change in the organizational knowledge.

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