During the course of product development projects, many usability issues are identified and fixed. However, some remain undetected due to 'unawareness' of the people involved in the decision-making process, and this can harm the project greatly. In this workshop you learn how to prevent this; we present a theory, based on observations from practice, which increases your understanding of unawareness in design. You will explore the 'unawareness' influencing factor and how to handle it. 'Aware'-designers lead to better decisions, and thereby to more usable products.

Improving usability decision-making

How to prevent unawareness in your design practice

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Biography
Christelle Harkema is a PhD student at Eindhoven University of Technology (the Netherlands). She obtained her BSc and MSc degree in Industrial Design Engineering at Technical University of Delft. During her master's, she specialised in ergonomics and research. Afterwards she worked for a number of years at Indes, a Dutch design agency as a usability consultant. In October 2007 she started her PhD within a joint project 'Design for Usability', with a special focus on designer decision-making.

Introduction PhD research

When I started this project I wondered why there are so many usability issues with current innovative products. During product development designers encounter many unknown aspects and use a range of usability techniques to retrieve the usability information lacking, for example about use, user context, etc. But despite these techniques, usability issues still occur.

Usability decision-making

Usability issues result from decisions in the development process. I started my research on decision-making in design practice to understand how these issues occur by investigating the influencing factors on usability decision-making. Three factors influence usability decision-making in design practice; the situation, uncertainty and unawareness.

Situation

The situation in which decisions are made greatly influences decision making: the team members involved, the time available, the organisational goals and many other aspects that contribute to the situation. These are just a few examples which complicate the task of the decision-maker.

Uncertainty

Uncertainty is an important influencing factor on usability decision-making. It is difficult to make a decision if there is no information. Many usability techniques are available to retrieve the required information and support the decision maker.

Unawareness

Another influencing factor is unawareness; not knowing that you don't know. This is the 'hidden' influencing factor, but one that does result in real usability issues. This factor is the focus of my PhD research project.

Addressing unawareness

Improving usability related decision-making, and thereby product usability, can be achieved by addressing unawareness in the decision-making process.

STEP 1
Realising and acknowledging that unawareness influences usability related decision-making.

STEP 2
Recognising and addressing the aspects that contribute to the unawareness factor.

Unawareness about information

Unawareness about information can for example occur due to 'incorrect' testing. When usability tests are executed, the team assumes all the required information is available. However, incorrect tests may not provide the usability information and thereby mislead the team.

Unawareness about consequences

A contributing aspect to unawareness about the consequences of a decision is an unbalanced dialogue. Prioritisation of a certain discipline or management interference can disturb the dialogue between disciplines as other disciplines may no longer feel responsible.

Unawareness about decisions

Unawareness about making a decision can occur during idea generation; all kind of solutions are created, showing the variety of alternatives. These ideas or concepts are often not seen as decisions, however the process of making the final choice for a concept includes all the implicit decisions taken.

Influencing factors on usability decision-making in design practice

development team — development → product ←→ interaction ←→ user

development team → intended use

product → actual use

intended use ←→ mismatch ←→ actual use

mismatch → USABILITY ISSUES

situation

decision making

influencing

uncertainty

influencing

unawareness