Defining Quantitative Usability Requirements

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ABSTRACT
Quantitative usability goals are perceived difficult to define and quite seldom defined in practice. As a consequence, usability is considered only as a secondary objective in development projects and the likely result is a product with usability problems. The topic is neither discussed very thoroughly in the literature, and only few research papers exist. The focus of the workshop is to gather researchers and practitioners to share experiences and identify new proposals in defining quantitative usability requirements.

WORKSHOP THEME AND BACKGROUND
It is generally agreed as a good project management practice to define quantitative goals for product/system quality characteristics. Clear quality goals give a project a clear direction of work and acceptance criteria. In practice, usability goals are quite seldom among the quantitative goals in system or product development projects. Either usability goals have not been regarded relevant to define, or the definition of the goals has been experienced too difficult to do. One of the consequences of not defining usability goals is that other project objectives dominate, usability is considered only as a secondary objective of a project and the result is a product with usability problems.

Some literature recommends using quantitative goals for usability. For example, the standard ISO 13407 (ISO/IEC, 1999) identifies a process 'Specify the user and organizational requirements', including statements such as "provide measurable criteria against which the emerging design can be tested,,. On the other hand, many well-known usability books, such as the ones by Nielsen (Nielsen, 1993), Hackos & Redish (Hackos and Redish, 1998), and (Rosson and Carroll, 2002) only marginally address the issue, and some, such as the one by Beyer & Holtzblatt (Beyer and Holtzblatt, 1998) do not address the issue at all. We have seen very few research papers on the topic.

We believe that the definition of quantitative usability requirement is a useful thing. Our earlier experience (Jokela and Pirkola, 1999) indicates this; as do our later experiments with a number of development projects where we have tried to learn how define usability goals systematically. We have found this work very challenging, and would like to explore the issue and share experiences and views with other researchers and practitioners.

GOAL AND OUTCOME
The goal of the workshop is to gather researchers and practitioners to share experiences and identify new proposals in defining quantitative usability requirements. The proposals may relate to methods for defining usability requirements as well as future proposals for projects.

The main outcome of the workshop is the in what the participants learn from each other when sharing experiences and working together. We plan to produce a report, probably to be submitted to a forum such as SIGCHI bulletin. We also plan to summarize the results in a poster to be displayed at the NordiCHI conference.

PROGRAMME
The workshop starts with clarifying the objectives. Each participant thereafter gives a short presentation of her/his experiences and perspectives about the workshop theme. The detailed workshop objectives are defined, and the work is continued in smaller teams.

In the afternoon, the results of the teams are shared, and lessons learnt and conclusions drawn. In the end of the workshop, a poster is produced and future actions agreed.

PARTICIPANTS AND ADMITTANCE
The workshop is open to practitioners and researchers. Participants should have some insight on the topic, having either practical experience or carried out research on usability requirements.

Each participant is assumed to write a 1-2 page position statement or summary of her/his experience on the workshop theme. In addition, documents describing methods or templates for defining usability requirements would be valuable.

WORKSHOP ORGANISERS
Timo Jokela is an acting professor of user-centred design at the University of Oulu, Finland. Before joining academia, he was worked in pioneering role in user-centred design at Nokia Mobile Phones, being the first usability practitioner in the company. Lately he has managed a national research project KESSU where practical user-centred design processes and methods have been developed together with companies such as Buscom, Nokia, and Teamware Group. He is also the Finnish representative in the European UsabilityNet project.

Mikko Jämsä is a PhD student and senior assistant at the University of Oulu, Finland. His teaching responsibilities are usability testing and usability evaluation. Earlier he

has worked at a bank and the in police forces maintaining information systems and training users. He has lately worked with usability requirements together with different product development organizations as a part of KESSU project.

Tea Liukkonen-Olmiala works as User Interface Specialist at Nokia Mobile Phones, where she joined in 1997. Her job includes implementing user-centred design in early phase concepting work, training people, initiating new projects around this area and promoting the importance of UCD in the organisation.

REFERENCES

Beyer, H. and Holtzblatt, K. (1998) Contextual Design: Defining Customer-Centered Systems., Morgan Kaufmann Publishers, San Francisco.

Hackos, J. T. and Redish, J. C. (1998) User and Task Analysis for Interface Design, Wiley Computer Publishing.

ISO/IEC (1999) 13407 Human-Centred Design Processes for Interactive Systems, ISO/IEC 13407: 1999 (E).

Jokela, T. and Pirkola, J. (1999) Using Quantitative Usability Goals in the Design of a User Interface for Cellular Phones, In INTERACT '99 (Volume II), Vol. II (Eds, Brewster, S., Cawsey, A. and Cockton, G.) British Computer Society, Wiltshire, UK, Edinborough, UK, pp. 174-178.

Nielsen, J. (1993) Usability Engineering, Academic Press, Inc., San Diego.

Rosson, M. B. and Carroll, J. M. (2002) Usability Engineering. Scenario-Based Development of Human-Computer Interaction, Morgan Kaufmann Publishers.