

U-WISH

Web usability: methods, guidelines and support interfaces

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Summary

The Network User Interface (NUI) provides new possibilities to enhance the accessibility of Web-based services for information or commerce. However, current NUIs prove to bring about new use problems such as disorientation, laborious navigation and loss of overview. On one hand existing human-computer interaction knowledge is insufficiently addressed in the current design practice, on the other hand this knowledge does insufficiently provide clear answers to design questions. Cognitive engineering theory and methods are needed that encompass such knowledge and thus help to realise usability. The theory should be the basis of design guidelines that are organised according to the different abstraction levels of the software development stages. The method should consist of specification and assessment techniques that address these guidelines at each development stage. The U-WISH project aims at such a method and the present report provides the first interim results.

A cognitive engineering framework is presented and parts that need further investigation are identified, in particular guidelines, support concepts and assessment techniques. Based on the framework and a review of existing NUI support functions, three concepts for navigation support were developed and implemented: categorising landmarks, history map and navigation assistant. Software tools were developed for the assessment of usability, and for the testing of spatial ability and memory. Currently, the support concepts are being evaluated with these tools to establish how much they improve usability and to derive design guidelines for navigation support.