Chapter 12
CREATING CONTEXTUALISED USABILITY GUIDES FOR WEB SITES DESIGN AND EVALUATION

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Abstract This work addresses the problem of creating usability guides for web sites design and evaluation. We present a web-distributed tool, called MetroWeb, to help web designers create and/or access to contextualised usability knowledge during the whole design process, in order to develop user-centred applications. The developer creates her own usability knowledge bases, which can be composed of other usability bases diffused by the tool, and uses this knowledge when designing and/or evaluating her web site. The usability knowledge forms a semantic network, in which various searching paths linked to user-centred design and evaluation are represented.

Keywords: User-centred design and evaluation, Tools for working with guidelines, Web usability guides.

1. INTRODUCTION AND MOTIVATIONS

Usability knowledge exists in many forms today, both and explicitly within people, guides, and tools: guidelines, patterns, design rules, conventions, and standards. Although this knowledge is supposed to be used continuously throughout the development life cycle, there is often a gap between the constitution of this knowledge and its true usage during design and evaluation. This gap is also often reflected in the existence of separate, independent processes and tools intended to support design and evaluation at the
same time. For instance, software exist that capitalise usability knowledge to be used by developers, but once evaluators use the knowledge capitalised by one of these tools in order to assess the usability of the developed user interface (UI), the tool stops and another tool starts, thus preventing members of the development team to link usability problems with related knowledge and to accumulate this knowledge as the organisation experience is growing. In addition, each tool typically remains focused on one aspect at a time: an online style guide only provides guidelines, but no testing of them, some UI evaluators can perform testing, but with little or no access to the usability knowledge.

There is almost no task-based tool to support the constitution of a style guide among stakeholders so as to share it with developers afterwards during the development life cycle. Moreover, the process of progressively introducing guidelines in a standard remains mostly manual, without any tool support.

To address the above shortcomings, a generic tool is presented that permits to create a contextualised usability guide, which represents a set of guidelines linked to significant usability knowledge, like an interface object on which the guideline can be applied, or an evaluation method that is able to assess the guideline. The usability knowledge can be expanded at any time, disseminated at any time and explicitly used during design and evaluation in a continuous way, shared by everyone implied in the web site development.

Although the tool presented can manage usability knowledge about any potential type of interface and a large spectrum of evaluation methods, we focus it on UIs for the web with heuristic or expert-based evaluation [1]. The tool is web-distributed to manage usability knowledge in a flexible and autonomous manner that can be run on multiple computing platforms.

Our main objectives are (1) to provide a tool responding to design questions with guidelines and resources exploitation, (2) to permit to automate searching paths related to user-centred design and evaluation process, (3) to support the usability guide creation task.

The paper is organised as follows: Section 2 reports on the most significant pieces of work related to the main goal. Section 3 presents the semantic network defining the fundamental usability concepts required to be manipulated in a usability knowledge base, in regard to searching paths linked to usability evaluation. Section 4 explains how to create a usability style guide with the tool. Section 5 presents how to use the guide in web site development. Section 6 reports on the design and development of the tool. Section 7 summarises the main points of the paper and presents some future work.