

Web Mobility Guidelines for Visually Impaired Surfers

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The 'Towel' project seeks to find solutions to problems encountered by visually impaired users when travelling in the World-Wide-Web (Web) by leveraging solutions found in real-world mobility. Visually impaired users find mobility on the Web particularly difficult because of the reliance of hypermedia on visual layout. Hypertext design and usability guidelines have traditionally concentrated upon navigation to facilitate this mobility; consequently other aspects of travel are neglected. This paper seeks to address these issues by extending current guidelines and design methods to include the real-world mobility concepts of orientation, memory, environment, preview and the purpose of the task at hand.

Keywords: Mobility, hypertext, visually impaired, guidelines, user agents

1. INTRODUCTION

Movement through and around complex hypermedia environments, of which the web is the most obvious example, has long been considered an important and major issue in the hypermedia design and usability field (Chen, 1997; Furuta, 1997). Indeed the commonly used slang phrase 'surfing the web' implies rapid and free movement, pointing to its importance among designers and users alike. It has also been long established (Brambring, 1984; Chieko, 1998) that this potentially complex and difficult movement is further complicated, and becomes neither rapid nor free, if the user happens to be visually impaired. This general term is used to encompass the World Health Organisation (WHO) definition of both profoundly blind and partially sighted individuals (Harper, 2000). This is because the richness of visual cues presented to a sighted user are not appropriate or accessible to a visually impaired user (Harper, 1999). Visually impaired users have a number of difficulties when interacting with this predominantly visual information. For example, a sighted user will be able to assimilate the page structure and visual cues on that page within a few seconds. This information is also continually present (on the page) for refreshing the memory of the user quickly when necessary. To fully realise the problems involved we suggest that our sighted readers start their browser and limit the window size to the top left fifth of the screen (Figure 1). Now browse a series of simple and complex web sites, and note the problems you have. We believe you'll find that the main problems encompass:

1. Can't get a feel for what's on the page;
2. Don't know how long the page is or where I am on it;

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