Chapter 11
Web Accessibility:
Current Trends

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ABSTRACT

Web accessibility conjures the vision of designers, technologists, and researchers valiantly making the World–Wide–Web (Web) open to disabled users. While this maybe true in part, the reality is a little different. Indeed, Web accessibility is actually about correcting our past mistakes by making the current Web fulfill the original Web vision of access for all. It just so happens that in the process of trying to re-engineer these corrections, that have for the most part ignored, we may solve a number of 'larger–scale' usability issues faced by every Web user. Indeed, by understanding disabled–user's interaction we enhance our understanding of all users operating in constrained modalities where the user is disabled by both environment and technology. It is for this reason that Web accessibility is a natural preface to wider Web usability and universal accessibility, it is also why 'main–stream' technologist take it so seriously and understand its cross-over benefits.

INTRODUCTION

We may imagine that there are many reasons for the Web to be accessible ranging from moral necessity, through ethical requirement, to legal obligation. However, the two most compelling are solid main–stream considerations; the business–case and the 'über–use–case'.

The business–case for Web accessibility is strong on three fronts. Firstly, one in five people over the age of 65 are disabled. Population demographics indicate that our populations are ageing across the board. As the population ages the financial requirement to work longer is increased, but the ability to work longer is reduced because

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disability becomes a bar to employment (European Union Policy Survey, 2005). Secondly, an ageing and disabled, but Web literate, population indicates a large market for online shopping and services especially when mobility is a problem for the shopper (Disability Rights Commission, 2004). A final benefit for business, keeping in mind that disability does not equal unskilled, is a highly motivated and skill rich workforce (Westwell et al. 2006). With the growth of the knowledge economy through many developed countries, and a move from manual work to more thought and communication based activities, there is the very real possibility of disabled Web users being able to find productive, fulfilling, and social empowering employment; if only technology, and specifically the Web, where available to them (European Union Policy Survey, 2005). Web accessibility means commercial success.

Web accessibility is really just an 'über–use–case' because in the end we will all be disabled by the technology or the environment (Novick et al. 2002; Ivory et al., 2002); we become 'situationally impaired'. Work on Web accessibility is helping us address many other domains including those centered around user mobility and digital inclusion. For instance, work on physical disability and the Web is helping solve problems of the usability of mobile technology (Trewin, 2006; Harper, 2007). By applying the same technology, used to counter a physically disabled users tremors and jerky movements, to the mobile Web, the operational problems of mobile interaction in moving environments are being solved (Trewin, 2006). Similarly, mobile Web access suffers from the interoperability and usability problems that make the Web as difficult to interact with for main–stream users as it is for visually impaired users. Again, solutions proposed 3–4 years ago in the Web accessibility community are now being applied to main–stream mobile devices. A more concrete example is the Firefox browser extension for 'mouseless browsing' which adds "small boxes with unique ids behind every link and/or form element. You just have to type in the id to trigger the corresponding action i.e. following a link, pressing a button or selecting a text-field" [1]; this work, has roots in accessibility 'access-keys' (Robinson, 2003) and 'auto access-keys' (Yesilada, 2008).

A fact often forgotten is that we are all unique. The disabled user serves as a reminder that Web accessibility is a truly individual experience and that by understanding the flexible and personalization required by disabled users we can understand that at some-point this same flexibility and personalization will be required by all (Panayiotou, 2004).

To understand the needs of disabled users is to understand the needs of everyone (Raskin, 1997; Raskin, 2000). With this in mind we will split this chapter into three main parts. First we will examine the intersection between accessibility, disability, and technology in an effort to understand the differing needs of users, and the technology provided to fulfill those needs (see § 'Web Accessibility Primer'). Next, we will investigate Web accessibility from a more practical orientation. We will set out the current trends in the tools, techniques and technologies in use to help build, check, and transform Web pages into accessible forms; and from this investigation understand the extent and use of each of these activities (see § 'Current Trends in Practical Web Accessibility'). Finally, we present an overview of possible future directions in Web accessibility (see § 'Future Trends'). We suggest that to understand accessibility the developer must take account a number of truths: (1) there is never just one solution; (2) solutions are not simple; (3) a single solution will never work, instead, combinations of solutions are required; and finally, (4) you do not know the user or their requirements at the granularity required to make assumptions. We remember that work in the Web accessibility field is not only for disabled people; organizations and people without disabilities can also benefit.

We conclude with the understanding that to build applications and content that allows for