

Chapter 1

Introduction

JENNY CRAVEN

The rationale for *Web Accessibility: practical advice for the library and information professional* is to provide a practical introduction to web accessibility for library and information professionals, students and lecturers. The subject is an important one because of the increasing provision of resources in an electronic format, in particular via the world wide web, together with raised awareness of the importance of widening access for all. Increasingly, recognition is given to the fact that it is a moral duty as well as a legal requirement to take reasonable steps to ensure that no one is excluded from access to goods and services, including access to web-based information and resources, and that it also makes good business sense to widen the customer base. Although there is an abundance of advice and guidelines available on the subject of web accessibility and usability, this book aims to provide practical advice from a range of experts and practitioners in this area, covering the issues relevant to the library and information sector.

The term 'accessibility' can mean different things to different people. In the library environment it can relate to the library functions and 'ensuring that all services are usable by all users' (Brophy, 2007). Libraries should be physically accessible and sensitive to the needs of users, and there are a number of recommendations for this, including:

- attention to site planning and car parking
- improving entrance doors

- internal planning, such as doors, handrails, staircases and lifts
- attention to colour schemes, lighting and signage
- provision of telephones, adapted toilets, and adapted windows
- attention to floor surfaces and floor coverings
- design of reception areas
- attention to safety procedures.

The technological aspects of the library should also be accessible. This could include accessibility between:

- different technologies: operating system (such as MS Windows), application (such as Excel, Word, or a web browser) and assistive technology (AT) where necessary (such as screen magnification or a screenreader)
- different technologies and humans: achieved using a combination of the above and via a user interface
- humans, technology and the context of the interaction: achieved via a combination of the above, and within the context of the interaction (such as e-resources/materials, virtual learning environments, repositories, borrower transactions etc.). (Adapted from Holbye, 2007)

The library should be ‘virtually’ accessible, and so the library website should be designed according to accessibility guidelines and should provide information about opening times, services offered and contact details. It should also provide access to the catalogue, online journals, abstracts and contents pages, as well as to borrower details, renewal and reservation services. The provision of full-text journal articles and the development of e-book provision can mean increased opportunities to access library services remotely. This will be further enhanced by the continuing implementation of copyright legislation that allows alternative formats designed for people with visual or other impairments to be produced from digital files without payment of a fee.

Web accessibility generally refers to the application of technical solutions to the design of a website in order to render it more accessible to users. Draffan (Chapter 2) describes the different types of tools that can be used to help widen access to the web. These tools include functions already built into the operating system, such as the ability to change the display settings

to high-contrast colours for text and background, with enlarged fonts, or to adapt keyboard, mouse and sound settings. Other tools include those that are often referred to as ‘enabling’ or ‘assistive’ technologies provided by third parties. These are separate software applications (often, but not exclusively, provided by commercial companies) that can be loaded onto the computer to support the hardware or add other functionality such as Braille translation for an embosser, screen magnification, or screenreading with high-quality speech synthesis. The issue of individual customization of the desktop and user profiles is also discussed in Chapter 2, looking in particular at the problem of customization within networked environments.

Accessibility between technologies (operating system, application and assistive technology) will help to widen access to the web for many people when used in combination with accessible web design. How accessible web design affects different people is explored by Ball (Chapter 3), beginning with a discussion of the concept of ‘Design for All’, which encourages the designer to consider the full range of needs (including technological, informational and accessibility) and characteristics the audience will exhibit and to cater for them accordingly. With this in mind, Ball explains the importance of considering the ‘purpose’ of the website and how it will be accessed (e.g. via a computer, a mobile device, a user with low internet connection speed, or a combination of these). The different needs and characteristics of the likely audience of the website are explored, suggesting different mobility, visual, audio, cognitive and technological needs, and how access can be improved through accessible web design techniques such as layout, navigation and the provision of images and multimedia.

Chapters 2 and 3 having established how to widen access to the web through the use of assistive technologies and display adjustments, and through accessible design techniques that help to address different user needs, Sloan (Chapter 4) considers the importance of accessible web design. This includes social, financial, technical and legal factors, all of which provide a strong case for the adoption of accessible web design techniques and the development of accessibility statements and policies. Despite the strong arguments in favour, a number of barriers to accessibility have also been identified. These include the perceived cost of accessible design, fears about the loss of creative design, a lack of legislative clarity, and a lack of organizational support. The barriers are discussed, together with possible solutions to help eliminate them.

Barriers described in Chapter 4 may also be attributed to a lack of understanding of issues relating to accessible web design, and an overview of the advice and guidance available to help counteract this is provided by Howell (Chapter 5). Beginning with a brief history of accessible web design, this chapter includes an explanation of how the correct application of properly validated coding such as Hypertext Mark-up Language (HTML) or Extensible Hypertext Mark-up Language (XHTML), which define the structure of the content, together with the use of Cascading Style Sheets (CSS), which define the way the content is displayed, can aid the accessibility of the website or web-based resource. Howell outlines some established sources of advice and guidance on accessibility, such as the different guidelines provided by the World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI), together with suggestions for keeping up to date with web accessibility issues and recommendations.

The initial chapters having established how to widen access to the web and why this is important, Sloan (Chapter 6) then considers the different methods available to evaluate and assess the accessibility of websites, which is also an important part of accessible web design, whether as part of a new design project or as an assessment of an existing resource to identify potential barriers. A variety of effective techniques for evaluating a website's accessibility are identified, including automated, manual and user techniques; the pros and cons of each are discussed, with a recommendation for using a hybrid method in order to adopt a more holistic approach to accessibility assessment. Sloan recommends this approach because it offers the best balance in terms of resources required and the range and quality of results. Identifying accessibility problems is only part of the picture, however, and Sloan goes on to suggest how they can be reported in ways that are helpful to those responsible for removing or reducing the barriers identified. He covers methods of conducting an accessibility audit and reporting the results effectively so as to identify what actions are required, why they are required and the level of importance attributed to each action.

Whereas many of the chapters in this book can be of general relevance to anyone interested in accessible web design, Brophy (Chapter 7) brings together a number of issues directly related to library and information services. Specific problems faced by library and information professionals are identified, including limited budgets, conflicting demands, and difficulties in employing staff dedicated solely to accessibility. To help address these

and other problems, Brophy recommends adopting a sevenfold strategy which comprises time taken to listen to the user community, becoming familiar with key sources of advice and guidance, developing an accessibility policy, conducting accessibility audits, developing a strategy to action improvements, providing appropriate assistive technologies, and continuously monitoring and reviewing what is being achieved. Other accessibility issues discussed in this chapter are digitization of web-based materials, provision and procurement of third-party content, and the growing use of Web 2.0 technologies in libraries.

The issues and recommendations covered in Chapter 7 can also be linked to Chapter 8, where Eskins and Craven discuss the education and training of library and information professionals in accessible web design and the provision of ‘Design for All’ in the curriculum. Recommendations that have been made to the software industry, that all web designers must be trained in Design for All (DfA) accessibility requirements and techniques, have been addressed to some extent, and examples are given of the types of web accessibility training and online courses available, with discussion of their relevance to library and information professionals. As well as looking at the provision of relevant training, there is discussion of the need to ensure students of all web design and web authoring related courses receive training in web accessibility as a core part of the module or curriculum, rather than it being provided as an add-on for those already in the job market. Examples of good practice of where this is already taking place in the LIS curricula are given.

Examples of good practice form the basis of Chapter 9, where Craven demonstrates, through evidence of improving access to resources, and the implementation of recommendations provided by the IFLA checklist on access to libraries for persons with disabilities, how web accessibility is being addressed by library and information professionals. Despite the examples of good practice, Craven reveals that there is still a gap in the awareness of issues relating to web accessibility, as demonstrated in surveys and studies, but that there is evidence that this gap is being addressed through a number of initiatives and action plans. Examples are also provided in this chapter of studies undertaken to improve and encourage access for all, including the importance of involving users in the process.

Looking to the future, Kelly (Chapter 10) takes a critical look at some of the developments in web accessibility guidelines and assessment, and

provides some suggestions as to how these could be improved, in particular through a more holistic approach to web accessibility. Starting with an overview of the holistic approach developed to address the accessibility of e-learning materials, he broadens this out to consider other areas such as communication, entertainment and the storage and retrieval of information. He also considers the accessibility of newly emerging technologies which are being increasingly adopted by library and information professionals, including those referred to as Web 2.0, such as social networking and sharing technologies. Finally, Kelly explores some of the principles for web accessibility that are currently included in the latest guidelines being produced by the World Wide Web Consortium Web Accessibility Initiative (W3C/WAI).

The importance of taking a practical approach to web accessibility is the theme of this book. Key issues are discussed and a number of examples are given to help address them. The aim is to provide practical advice to inform, and to encourage engagement with, anyone who is involved in the provision of accessible and sustainable web services. A vision for the future is that accessibility becomes a fundamental part of the mainstream processes of teaching, and of commissioning, procuring, designing, developing and editing websites, web-based resources and services so that access is widened to as many people as possible according to their preferred method of access, application, location or device.

References

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- Holbye, S. (2007) Experiences from Training Universal Design. Presentation at the Technology for Participation (T4P) conference, Kristiansand Norway, 25-27 June 2007, www.t4p.no/t4p.no/conference.