

Guide to good practice in commissioning accessible websites

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Disability Rights Commission



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Foreword

This Publicly Available Specification (PAS) has been developed by the Disability Rights Commission (DRC) in collaboration with the British Standards Institution (BSI). No copying without permission of BSI except as permitted by copyright law.

Acknowledgement is given to the following organizations that were consulted in the development of this specification.

Abilitynet

British Broadcasting Corporation (BBC)

Cabinet Office (e-Government Unit)

Cxpartners (representing the Usability Professionals Association)

IBM

RNIB (Royal National Institute of the Blind)

Tesco.com

University College London

Usability Professionals Association (UPA)

Wider comments from other interested parties were invited by BSI. The expert contributions made by the organizations and individuals consulted in the development of this Publicly Available Specification are gratefully acknowledged.

Please note that during the production of this PAS Macromedia was bought by Adobe and all resources regarding Flash accessibility will eventually be available at access.adobe.com.

This Publicly Available Specification does not replace, contradict or supplement any of the World Wide Web Consortium (W3C) guidelines or specifications. This PAS is vendor neutral and product neutral. Generic terms are used in preference to brand names to ensure impartiality.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to v, a blank page, pages 1 to 56, an inside back cover and a back cover.

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This Publicly Available Specification is not to be regarded as a British Standard.

Introduction

Why make your website accessible to disabled people?

The introduction of the Disability Discrimination Act 1995 (DDA) [1] is only one reason why it is in the interest of website commissioners to develop accessible websites. Accessible websites also have the potential to widen a website's current audience and reach new ones:

- The Family Resources Survey [2] found that there are almost 10 million disabled people in the UK with a combined spending power in the region of 80 billion pounds per annum. Furthermore there are millions of other individuals that are affected by sensory, physical and/or cognitive impairments, including those resulting from the ageing process.
- Research undertaken by the DRC "The Web: Access and inclusion for disabled people" [3] has confirmed that people without disabilities are also able to use websites that are optimized for accessibility more effectively and more successfully.
- Content developed upholding World Wide Web Consortium (W3C) guidelines and specifications can be more easily transferred to other media, such as interactive TV, mobile phones and handheld computers.
- Accessible content, for example where a text equivalent is provided for graphical elements, is highly visible to search engines, often leading to higher rankings.

Ensuring accessibility can also be a source of good publicity, as social inclusion results in a fairer world with equality of opportunity. Further business benefits achieved by making websites accessible are given at <http://www.w3.org/WAI/bcase/benefits.html>.

The main focus of this document is the commissioning of public-facing (internet) websites but the principles can also be used by commissioners of intranet or extranet websites.

It is important to note that not all web developers will have practical accessibility design experience and/or accessibility expertise; see Clause 9 for advice on how to find suitable web developers.

The Disability Discrimination Act 1995 (DDA)

The DDA and the secondary legislation applied within Northern Ireland have placed a legal duty on service providers to make reasonable adjustments to the way they provide services to ensure that disabled people can use them. The DDA states that disabled people should not be treated less favourably than other people when accessing services. This duty extends to the provision of websites where a website falls within the definition of a service under the terms of the DDA. For the purposes of this document, website commissioners are assumed to have responsibility for this duty.

It is not possible to provide a definitive specification for a fully accessible website which will satisfy the requirements of the DDA, however the guidance set out in this Publicly Available Specification represents what the Disability Rights Commission (DRC) believes to be good practice.

The Disability Rights Commission (DRC)

The DRC is an independent body established in April 2000 by an Act of Parliament to stop discrimination and promote equality of opportunity for disabled people. The DRC's goal is "a society where all disabled people can participate fully as equal citizens".

In 2002, the DRC published a Code of Practice entitled "Rights of Access — Goods, Facilities, Services and Premises" [4] to accompany Part 3 of the DDA. The Code makes explicit reference to websites as "services" in accordance with the DDA's definition of the term. At the time of publication the DRC were updating the Part 3 Code of Practice.

The DRC Formal Investigation into website accessibility

In April 2004, the DRC published the report of their Formal Investigation into web accessibility in the UK. One significant finding was that 81 per cent of websites surveyed failed to uphold the most basic W3C accessibility guidelines and specifications, even though many website commissioners and developers claimed to be aware of the importance of making websites accessible.

The DRC has concluded that there is a need for best practice guidance on the process of commissioning accessible websites. This Publicly Available Specification has been commissioned to provide guidance to website commissioners on:

- the steps that should be taken to commission accessible websites
- the W3C guidelines and specifications to be adopted
- the role of the guidelines and specifications, software tools and user testing within the development life cycle.

Another important finding of the Formal Investigation involved accessibility testing. All the websites surveyed were tested using automated conformance testing tools (see **3.5**); however subsequent user testing with disabled participants uncovered further instances where websites did not uphold the W3C guidelines and specifications. Therefore it can be concluded that automated testing alone cannot provide a complete testing solution.

Ensuring accessibility

The web will only be truly accessible when all of the following work in harmony, using the relevant W3C guidelines and specifications:

- website developers ensure that their web content upholds W3C's Web Content Accessibility Guidelines (WCAG) (see **3.22**)
- website developers ensure that any non-W3C formats used on the website incorporate accessible design elements or follow accessible design guidelines applicable to that format
- authoring tool developers ensure that their products produce web content that upholds WCAG
- browser developers ensure that their products uphold W3C's User Agent Accessibility Guidelines (UAAG)
- operating system (OS) developers provide accessibility features within their operating system, and work with access technology developers to ensure their products work in harmony

- software developers, disability advocacy groups (such as AbilityNet, RNIB (Royal National Institute of the Blind)) and public sector organizations (such as BBC and the Government) provide advice to disabled people on how to optimize their computer setup
- educators and training organizations that provide training on web design include accessible web design in the curriculum of design courses.

The DRC recommends a combined approach to accessibility testing, including as essential requirements:

- the application of W3C guidelines and specifications (in particular WCAG)
- testing conformance to guidelines and specifications (in particular WCAG, see Clause 8)
- user testing with potential users, including disabled users (see Clause 8), during the design and development stages of the website development.

Summary for commissioning an accessible website

- a) Consider what the site should do and for whom:
 - write the accessibility policy/specification (see Clause 6).
- b) Consider who is going to create it, and how accessibility can be assured:
 - investigate the reputation of those designing and developing the site and the guidelines/processes they uphold (see Annex C).
- c) Consider how the web developers are going to create and maintain the website:
 - investigate whether the website will be created and maintained manually, using a CMS, or by using an automated web application (see 6.5.3)
 - ensure that a plan is in place to maintain levels of accessibility during the website lifecycle (see 8.5).
- d) Consider how accessibility will be tested (see Clause 8).

1 Scope

This Publicly Available Specification outlines good practice in commissioning websites that are accessible to and usable by disabled people.

It gives recommendations for:

- the management of the process of, and guidance on, upholding existing W3C guidelines and specifications;
- involving disabled people in the development process and using the current software-based compliance testing tools that can assist with this.

It is applicable to all public and private organizations that wish to observe good practice under the existing voluntary guidelines and the relevant legislation on this subject and is intended for use by those responsible for commissioning public-facing websites and web-based services.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies.

W3C guidelines and specifications available at <http://www.w3.org/>

3 Terms and definitions

3.1

access technology

hardware or software used to adapt or make computer systems and services accessible to a disabled person

NOTE 1 Examples include the provision of screenreaders and text-to-speech systems; screen-magnification software; tactile braille display, trackballs, touch pads/screens etc; alternatives to standard computer mice, keyboards, switches and voice-recognition software.

NOTE 2 Also referred to as assistive technology, adaptive technology.

3.2

accessibility

ability of people with disabilities to perceive, understand, navigate, and interact with websites

3.3

Authoring Tool Accessibility Guidelines (ATAG)

Authoring Tool Accessibility Guidelines published by the W3C WAI

3.4

authoring tool

software that generates web content

3.5

automated conformance testing tools

software tools used, without direct human intervention, to assess whether authoring of a website upholds guidelines and specifications

3.6

Cascading Style Sheets (CSS)

languages designed to specify what document elements should look like, eg colours, borders, spacing, font style

NOTE 1 Also referred to as style sheets.

NOTE 2 Typically used to define what pages should look like eg colours, borders, spacing, font style. Aural CSS enable web authors to define how their pages should be read aloud by screenreaders that support them.

NOTE 3 Also referred to as content production system (CPS).

3.7

cognitive impairment

decline in mental functioning, ranging from mild impairment, such as lack of concentration, to extreme impairment including increased problems with distraction, exhaustion by tasks that require mental energy, or problems with handling complex information

NOTE In more extreme impairment, people may have difficulties with the sleep/wake cycle, changes in mood, or disorganized thinking and speech.

3.8

content management system (CMS)

software that is used to create, modify, delete and archive content

NOTE Typically a CMS is also used as a way of publishing content to a website.

3.9

disability

<DDA> physical or mental impairment which has a substantial and long-term adverse effect on [a person's] ability to carry out normal day-to-day activities

NOTE The above definition is that included in the 1995 DDA and is the one that would be considered by a County or Sheriff's Court judge when ruling on a case of potential disability discrimination. See also **impairment (3.12)**.

3.10

Flash

rich media programming format that allows web developers to add animation, multimedia and interactive applications to websites

NOTE 1 Flash content (.swf files) is viewed through a **user agent plug-in** called the Flash Player.

NOTE 2 Flash file formats and authoring tools are proprietary.

3.11

heuristics

guidelines or rules that are used to guide the process of evaluation

3.12

impairment

physical, sensory or mental or cognitive impairment

NOTE 1 Physical impairments include motor impairments; sensory impairments affect the senses, such as sight and hearing; cognitive and mental impairments include learning disabilities and mental health problems.

NOTE 2 Some people might have a number of impairments.

NOTE 3 Impairments can differ in degree.

3.13

interoperability

the ability of software and hardware on different machines from different vendors to share data

3.14

learning disabilities

cognitive impairment affecting the way someone learns, communicates or does some everyday activities

NOTE A learning disability affects someone's intellectual and social development all their life.

3.15

mark-up

code used to structure, identify and format content on websites, eg HTML

3.16

plug-in

additional piece of software users need to download to enable them to view non-HTML content (such as PDF files, Flash or Java) in their browser

3.17

Portable Document Format (PDF)

file format for the distribution of content that retains the formatting and layout it was given at its creation and can be viewed on different computers and platforms via a specialized reader or via a browser plug-in (see 7.5)

NOTE 1 A useful feature of PDF files is that they look exactly the same for all senders and receivers of document regardless of hardware or software used.

NOTE 2 PDF files are viewed through a plug-in.

NOTE 3 PDF is a proprietary but published specification. Documentation about PDF and accessibility can be found at access.adobe.com.

3.18

usability

extent to which a [website] can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use

[adapted from ISO 9241-11:1988, definition **3.2**]

3.19

user agent

software (including web browsers and plug-ins) that retrieves and renders internet content or services, including text, graphics, sounds, video

NOTE 1 Examples include media players (including Adobe Flash Player for Flash content) and other software that renders web content (including Adobe Acrobat Reader for PDF content).

NOTE 2 Access technology might sometimes be considered a user agent.

3.20

User Agent Accessibility Guidelines (UAAG)

User Agent Accessibility Guidelines published by the W3C WAI

NOTE The version of UAAG in use at the time of publication is 1.0.

3.21

W3C

see also World Wide Web Consortium (**3.29**)

3.22

W3C/WAI guidelines

accessibility guidelines (ATAG, WCAG and UAAG) published by the W3C WAI

3.23

W3C specifications

documents published by the W3C that define and describe all aspects of how to code different types of web mark-up

3.24

Web Accessibility Initiative (W3C WAI)

body of the W3C that, in coordination with organizations around the world, pursues accessibility of the web through five primary areas of work:

- technology
- guidelines
- tools
- education and outreach
- research and development.

3.25

Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines published by the W3C WAI

NOTE The version of WCAG in use at the time of publication is 1.0.

3.26

webpage template

pre-defined generic page format that is used to create web pages

3.27

website commissioner

individual or organization responsible for commissioning the creation of a website or web content

3.28

website developer

individual or organization responsible for designing and building a website or web content

3.29

World Wide Web Consortium (W3C)

international consortium of organizations that develops interoperable technologies (specifications, guidelines, software and tools) to lead the web to its full potential

4 General principles

4.1 Development of an accessibility policy

Website commissioners should develop and document an accessibility policy in accordance with Clause 6.

4.2 Upholding W3C guidelines and specifications

4.2.1 General

The website should uphold WAI guidelines and referenced W3C specifications to ensure interoperability and accessibility to disabled people.

4.2.2 Content formats

4.2.2.1 Web commissioners should give careful consideration to the proposed formats used to design and deliver web content eg PDF (see 7.5.2), JavaScript/ECMAScript (see 7.4) or Flash (see 7.5.3).

4.2.2.2 Content formats that are not covered by WCAG eg PDF and Flash should only be used if it is determined that these are the most appropriate formats for content delivery in each case (for example if they enhance understanding and functionality for a group of users at whom the material is primarily aimed) and used in accordance with available authoring tool guidance.

4.2.2.3 When non-compliant content is provided, or content that is only available in certain modalities, accessible and equivalent alternatives should be provided.

4.2.2.4 Common Office file types such as word processing and spreadsheet documents should be authored in accordance with the accessible authoring techniques available for these formats.

4.2.3 Authoring tools

4.2.3.1 Website commissioners should ensure that authoring tools that uphold ATAG (see 6.4.3) are used for the creation of web content wherever possible.

4.2.3.2 In the choice and procurement of tools the commissioners should require suppliers to list any deviations from ATAG.

NOTE At the time of publication, no single authoring tool that supports all ATAG Priority 1 checkpoints is known.

4.3 Conformance checking

4.3.1 Website commissioners should not rely solely on automated conformance testing tools to assess conformance with the relevant W3C guidelines and specifications (see Clause 8).

4.3.2 Automated tools may be used as part of the validation process, but additional manual checks and user testing with disabled people are essential to be confident that the website is accessible to disabled people.

4.3.3 Where content on the website is being supplied by a third party the website commissioner should ensure that this content has also been included in all conformance testing.

4.4 Involving disabled people in the requirements gathering and conceptual design process

Website commissioners should ensure that requirements are gathered from disabled people at the earliest stage and that the methods chosen accurately capture these users' particular requirements. You should seek expert help to facilitate this.

NOTE The best method for gathering these requirements will depend on a number of factors, including how easy it is to recruit and elicit useful data from people with different disability profiles (see Clause 8).

4.5 Regular testing by disabled people

Website commissioners should conduct user testing with disabled participants to ensure that their websites are accessible and usable by disabled people (see Clause 8).

4.6 Additional accessibility provisions

Additional accessibility provisions are not essential and should never replace upholding W3C guidelines and specifications.

NOTE 1 It is more appropriate for website commissioners and developers to view these as a supplementary enhancement that users might choose to employ if a website upholds W3C guidelines and specifications.

NOTE 2 Additional accessibility provisions can be useful where the anticipated users of the website are prohibited from using the accessibility feature in their browser's operating systems due to local administration policies.