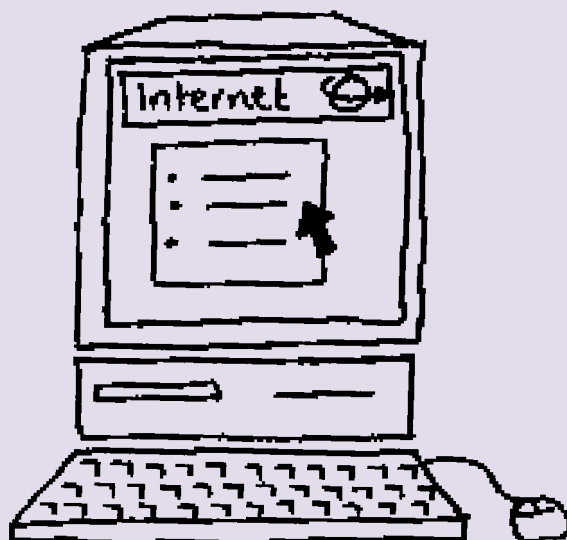




Scottish Accessible Information Forum

Making E-communication Accessible

Best practice for websites, email and electronic documents



A supplement to the SAIF Standards for Disability
Information and Advice Provision in Scotland



Making E-communication Accessible

A supplement to the SAIF Standards for Disability Information and Advice Provision in Scotland

Written by Jim Byrne and Eva Bolander

Published by the **Scottish Consumer Council**, Royal Exchange House, 100 Queen Street, Glasgow G1 3DN.

ISBN 0-9551942-5-3 / 978-0-9551942-5-2

© Scottish Accessible Information Forum, 2006.

First revised edition.

You may photocopy all or part of this publication, but please acknowledge the source.

First published 2002.

SAIF

Scottish Consumer Council

Royal Exchange House

100 Queen Street

Glasgow G1 3DN

Tel: 0141 226 5261

Fax: 0141 221 0731

Minicom: 0141 226 8459

Email: info@saifscotland.org.uk

Website: www.saifscotland.org.uk

This document is available on request:

- in braille,
- in large print,
- on audio tape/CD,
- in electronic format,
- on the World Wide Web.

1 Foreword

When SAIF published its Standards for Disability Information and Advice Provision in Scotland in 1999, the internet merited a few brief mentions as a possible method of delivering information and advice.

The technological revolution that is the World Wide Web was receiving huge amounts of publicity but at that time it was making very little impact on the everyday lives of disabled people throughout Scotland.

Three years later, when Making Websites Accessible was first written, it was unusual to come across an information and advice agency that was not planning, building or working hard to maintain a website in order to deliver some or all of its services. It was also very unusual to meet someone who had attempted to set up a website and found the process easy or straightforward. In addition, there were many initiatives throughout Scotland that were making access to the web more widespread. Today, in 2006, it is extremely unusual for agencies not to have a website. However, we still need to emphasise how important it is that websites and other forms of e-communication are accessible.

Admittedly, there is a wealth of information on the web and elsewhere about setting up a website and about accessibility. But where do you start and who do you believe? This guide is intended to do three things: firstly, to explain in simple, straightforward language what is involved in setting up a website; secondly, to provide guidance on how to make sure that accessibility is considered and addressed at every stage of the process; and thirdly, to introduce the concept of accessibility in all forms of e-communication, from emails and beyond.

Electronic communication has huge potential to make information readily available for disabled people in their preferred format, but often that potential is still not being fulfilled. We hope that this guide will help information providers build accessible, user-friendly websites that benefit everyone and extend that expertise to other forms of e-communication.



Ben Forsyth

Chairperson, Scottish Accessible Information Forum

Contents	Page
1 Foreword	3
2 Acknowledgements	7
3 Introduction	8
• World Wide Web Consortium	8
• PAS-78	9
4 What is e-communication?	10
• websites	10
• documents and forms	11
• email	12
• accessibility	14
5 How to get online	15
• computer	15
• modem	16
• internet service providers	16
• broadband	17
• wireless network	17
6 How to plan your website	19
• put someone in charge	19
• what should the website do?	20
• clarify your aims and objectives	21
• identify your target audience and its needs	21
• identify required features	22
• gather the content together	24
• organise your content	25
• promote ownership of the website	26
• adopt the right attitude	27

7	How to produce your website	28
	• choose a web designer	28
	• website tender documents	30
	• what is meant by accessible web design?	31
	• web accessibility issues for particular groups	32
8	How to maintain your accessible website	37
	• keeping your website up-to-date	38
	• allowing staff to publish and edit their information	39
	• determining staff support needs	40
	• content management systems	41
9	More features for websites	44
	• discussion forums	44
	• polls and voting	44
	• weblogs and news feeds	45
	• payment functions	45
	• feedback and subscription forms	46
	• password protected areas	47
10	How to create accessible email	48
	• formatting email	48
	• accessibility issues	49
	• newsletters and standards	50
11	How to create accessible electronic documents	51
	• making Word documents accessible	52
	• making PDF documents accessible	53
	• creating accessible PowerPoint presentations	54
12	Where to get more help	56
	• websites	56
	• books	59
	• online reports	60
	• feedback	60

Appendices

2 Acknowledgements

The Scottish Accessible Information Forum (SAIF) would like to thank Jim Byrne, of Jim Byrne and Associates, and Eva Bolander of Bestla Design for writing this guide. Jim is a recognised expert in the field of accessible website design and as creator of the Guild of Accessible Web Designers has a thorough awareness of practice and policy issues in this area. Eva is SAIF's website consultant and a member of the Guild.

We wish to acknowledge the support of the Scottish Consumer Council which hosts SAIF, and the Scottish Executive Health Department which funds our work.

SAIF's Standards and Communication Working Groups directed this project when our first guide was written in 2002 and provided valuable guidance throughout. The working groups then comprised:

Donald Anderson	Marie Burns
Grant Carson	Jean Dunlop
Lilian Lawson	Andrew McGhee
Lucie McKenzie	Shirley Young

For the 2006 edition, SAIF's E-communication Working Group has directed the project and we would like to thank them. They are:

Marie Burns
Sandra Wilson
Marilyn Slavin
Andy Groves



In addition, thanks to SAIF's Project Officers, Susan Burn and Steve Harvey for editing this guide. The illustrations used in this publication are from the Change Picture Bank (www.changepeople.co.uk).

3 Introduction

Electronic communication is becoming mainstream in most areas of life. Developments are happening at an incredibly fast pace with new services and technologies constantly emerging. Electronic services are also becoming more available, for example mobile phones and TV's can now access the internet.

Increasingly, organisations are expected to have their own website to deliver information and services online. This can make information and services more widely available - but only if presented in an accessible way.

All e-communication should meet current standards for accessibility. If accessibility standards are built into the design of a website or an electronic document, then it should be possible for users to tailor that technology to suit their needs.

There is, though, a danger in assuming that everyone can access information electronically. Electronic information should not completely replace other means of communication and service provision.

This basic guide will give you an overview of issues involved in producing electronic information. It offers guidance on creating accessible electronic documents and lists a range of useful resources that can help you deliver the best possible service online.

The main emphasis is on creating an accessible website, including related features like email and downloadable documents. Information about other technology is included to provide an overview of what is available.

World Wide Web Consortium

Guidelines for accessible websites are produced by the World Wide Web Consortium (W3C). Their **Web Content Accessibility Guidelines** (WCAG) provide an excellent resource for anyone building an accessible website and using related technology. This document does not replace those guidelines - indeed it recommends them as the 'official' resource for those engaged in the technical aspects of building websites.

In this guide we will not replicate what is written by W3C but we will inform and advise on how to maximise your chances of building a useful website by:

- explaining what an accessible website is,
- helping you to take control of the process of producing one,
- advising on what questions to ask when you commission a website,
- helping you to find a designer who can build an accessible website,
- helping you with issues around maintenance and sustaining accessibility.

PAS-78

Another document worth referring to is the PAS-78 (Publicly Available Specification) produced by The British Standards Institute. This provides a set of recommendations, with common sense advice to people in charge of commissioning websites.

Links

World Wide Web Consortium (W3C)
www.w3.org/WAI

PAS-78
www.bsi-global.com/ICT/PAS78/index.xalter

4 What is e-communication?

Within this document we refer to e-communication as including websites, emails and electronic documents. This section gives a brief overview of some of the jargon involved in e-communication.

Websites

Everyone knows about websites. They can provide a lot of useful information, goods and services and be the gateway to online communities. A website can include static pages, dynamic pages, message boards, discussion forums, news feeds, blogs, downloadable documents, forms and streaming media like sound and video, to name but a few of the most frequent features.

Static web pages

A static page is a basic HTML page that remains the same for all users until the developer changes the content by editing the code behind the page. You usually see .htm .html .xhtm or .xhtml as the ending in the webpage's address or URL (uniform resource locator).

Dynamic web pages

In dynamic web pages, the appearance of a page or part of a page changes without the whole page being reloaded. This could be, for example, a continuous update of the weather, a currency exchange rate or a form that gives immediate feedback on information you are trying to submit. Dynamic pages can also contain customised content depending on who the user is, what equipment they are using, the time, location or earlier set preferences. These pages are usually connected to a database and the ending of the URL can be .dhtm .dhtml .js .asp .php .jsp or .net

Pages with Flash animation, sound and interactivity are dynamic pages. Whole websites can be built as a Flash animation or included just as a part of an otherwise static page. It is often used for adverts and small games. Flash has been known to be inaccessible but efforts are being made to build in accessibility options in the program producing Flash pages.

Message boards and discussion forums

Message boards are used to discuss topics relevant to a certain group. A user posts a message, which everyone can see, someone else posts a reply and a discussion builds up. Message boards are also known as web forums or internet forums.

News feeds – RSS

News feeds are a way of collating and distributing news from different sources. They allow users to create their own personal news pages, containing only the topics they are interested in.

RSS is an abbreviation, most commonly for Really Simple Syndication or Rich Site Summary, used to indicate a news feed.

Blogs

A blog or a web-log is a website that someone is writing publicly, reflecting her/his own views and interests. Blogs often offer commentary or news on a particular subject, such as food, politics, or local news and some are set up as more personal diaries. The entries are most often in reverse chronological order, with the latest entry first.

Documents and forms

Documents and forms distributed via email or downloadable from the internet are most often in the format of:

- Word documents with filenames ending in .doc,
- PDF (portable document format) ending .pdf,
- RTF (rich text format) ending with .rtf.

Forms can be used to take bookings for training courses, sell items from your website and give feedback about the website content.

Sound and video

Some websites have sound and video. To hear the sound your computer needs to have a sound card installed. Most computers bought today will have one built-in when you buy it. You also need speakers or headphones to listen to the sound. Small speakers can be built into the computer system, others can be attached to it. Sound and video files can take time to download and start, especially if you are using a dial-up modem.

Plug-ins

You may also need additional software to your browser, called plug-ins, when you want to access sound, video, pdf and PowerPoint files. The browser plug-in will interpret files, other than webpages, so you can see and/or hear them. The plug-in required depends on what file format the media you want to access is produced in. Usually your computer will prompt you to download the required software. Some of the more common plug-ins are Windows Media Player, Quick Time, RealAudio, RealOne and Music Match.

Email

Email is a simple and cheap way to keep in touch with the people in your network. To use email you need to have an email account with a provider. Most internet service providers (ISP) give you one or more email accounts when you sign up to use their internet connection services. This email account can be hosted on a local server or be web-based. If hosted locally, you can only access your email at the computer connected up to the local server. Most work place email accounts are of this type. If the account is internet-based it means that you can access your emails from any computer with an internet connection. You just need to remember your password and login name.

Email lists

An email list or mailing list refers to a list of names and email addresses. It can be used when sending information by email to many people at the same time. A simple mailing list would be when individuals are grouped together in your own email program so that you can send the same email to them all at the same time.

More sophisticated mailing lists allow individuals to subscribe and unsubscribe themselves from the list and are generally web-based.

Mailing lists can be used for announcements, discussions and newsletters. Some mailing lists are open to anyone who wants to join them, while others require an approval from the list owner.

Discussion lists can be moderated, where every message must be approved before being sent to the rest of the subscribers. This gives a higher quality service and keeps out spam (junk email).

Newsletters

Electronic newsletters are the email equivalent of the paper-based version, i.e. an informative, regular mailing with news. The email-based one can be in plain text or HTML formatted. The plain text can only include text with no images. The HTML formatted can include the same content as a web page – and the same guidelines for accessibility apply to them as to a web page. More detail on accessible emails is in section 10.



Accessibility

Try to ensure that the electronic information you produce is accessible to the widest possible audience. The key is to make the presentation of your content flexible, so that users can change it to suit their own needs. For example, make it easy for people to alter text and background colours, change the size of the text and change the order in which content can be presented. Screen reading software can do this when content is well structured. When documents cannot be made accessible, consider providing an alternative way of accessing the same content. Dealing with access issues early in the publishing process will save a lot of time and money. It is always much harder to add-in accessibility at the end.

Making e-communication accessible is important so that it doesn't exclude people using assistive technology, for example screen readers, magnifying software, braille printers, keyboard only software, switches, etc. As with all information it should be produced in a well designed, attractive and user friendly format, using plain language.



5 How to get online

Before you even start thinking about a website, you need to make sure your organisation has the correct equipment to connect to the internet. Every organisation will be at a different stage of this process. What we have tried to do in this section is give you the basic information you need to get started.

To get connected to the internet you will need:

- a computer (e.g. a Mac or PC),
- a modem (broadband or dial-up modem, wireless, modem router, local area network access to the internet),
- an account with an Internet Service Provider (ISP),
- a browser (software to browse the web, pick up email and download files).

Computer

All new computers, whether PC or Mac, are internet-ready and most come with a modem and internet browser software already installed. To make the most of the multimedia aspects of the web you should buy a computer with a built-in sound card.

A sufficient low standard specification for an internet-connected PC would be 256 megabyte RAM memory (working memory) with a processor of 1.0 GHz clock speed. The larger RAM memory and faster processor you can get, the faster your computer will process information and run software. But the speed you access the internet at also depends on the type of internet connection and modem you are using.

New software demands more storage and working memory to run smoothly. Computer memory and processor performance are constantly increasing at the same time as they have become cheaper. If you can afford a computer with a high specification, the chances are it will take longer before you need to replace it.

Modem

If you are going to connect up via a dial-up modem and your telephone provider then get the fastest modem you can afford. Internal modems (i.e. you fit it inside the computer) are usually cheaper, but external modems are easier to install and can be easier to troubleshoot if they go wrong. A modem allows you to connect to an internet service provider (ISP) over your standard phone line. It dials up the provider in exactly the same way you dial a friend.



Internet Service Providers (ISP)

An ISP provides you with your connection to the internet. They can be split into two broad camps: those who provide just an internet connection and those who provide a connection and additional services such as news, discussion forums and child-friendly content.

Well known ISPs are BT, NTL, Tiscali and Excalibur which can provide both dial-up and broadband connections. Examples of ISPs providing additional services are MSN and AOL. Which one you choose depends on whether you put a value on these additional services. There are numerous ISPs available and the price varies a lot. You need to research what is available in your area according to your needs.

Whoever you choose as your ISP, they should provide you with an email facility and should also give reliable service and support. If you want them to host your website also check that they provide website statistics, a secure server, ftp (file transfer protocol) access and any software required to support your web-publishing software.

Broadband

You can get a faster connection (broadband) to the internet by using newer technologies such as ISDN (Integrated Services Digital Network), DSL (Digital Subscriber Line), or via a cable modem. Well-known providers of broadband services include British Telecom, cable providers like NTL and third party internet service providers who resell BT services. If you can afford a fast connection it is recommended. DSL and cable modems are 'always on' and provide un-metered, fast access to a richer multimedia experience. You don't need an extra phone line for the internet connection and you can of course use your phone at the same time as connected to the internet. You can find out about broadband and broadband providers at www.broadbandforscotland.co.uk

Wireless network

Since the publication of the first version of this guide, wireless networking has become an important way to connect to the web. Wireless connections, or hotspots as they are commonly called, are now available in many public areas such as airports, hotels and cafés. To set up a wireless network in your own organisation requires an 'access point', i.e. a device connected to the internet that can transmit data to other wirelessly enabled devices – and wireless enabled computers (e.g., by installing internal cards, USB devices). If you are considering buying a modem to connect to the internet, you should choose one that can provide wireless networking.

CD-Rom player

Your computer will also need a CD player as most internet installation software comes on a CD-Rom.

Software

You will need software to 'surf' the web and to use email. To surf the web you will need a web browser such as Internet Explorer, Firefox or Opera. With a program such as Outlook Express, Mail (on Macs) or Eudora you can send and receive email from your desktop machine. Many ISPs also provide a web-based email service, allowing you to receive and send email from anywhere with an internet connection, e.g. an internet café.

Links

ISP Review

www.ispreview.co.uk/broadband.shtml

AOL

www.aol.co.uk

MSN

www.msn.co.uk

Compuserve

www.compuserve.co.uk

NTL

www.ntlworld.com

BT

www.bt.com

Eudora

www.eudora.com

Outlook Express

www.microsoft.com/windows/oe

Internet Explorer

www.microsoft.com/windows/ie/downloads/default.asp

Firefox

www.mozilla.com/firefox

Opera

www.opera.com

6 How to plan your website

You have decided your organisation needs a website - so where do you go from here? The most important work is done in the planning stage. Spending time and effort on deciding what you want the website to do, what kind of features will deliver that and who is going to do it, is well worth the effort. It is always harder and more costly to rectify problems after the website has been published.

All of the most important decisions about website design are taken before a single page is published. This section is designed to help you make those vital early decisions. We will also give you information about various technical features which you might want to add to your website.



Put someone in charge

Getting a website designed, built and maintained is not a simple task. It requires good management skills in order to co-ordinate the project, and considerable understanding of what the organisation wants to achieve and what barriers exist to achieving its aims. Therefore, it makes sense to find a single person who can lead the entire process.

The ideal person is someone with enough 'clout' to have the full support of management - and enough knowledge of the details of how the organisation works to ensure the correct information goes on the site. He/she should be responsible for managing the entire process: organising meetings; clarifying the aims and design of the website; finding, employing and supervising a web designer; and liaising with all those involved in the project.

What should the website do?

A bad website, i.e. one that frustrates visitors because they can't find what they are looking for, or stretches their patience because it is too slow to download, will do your organisation more harm than good. It is better to have no website at all than a website that shows your organisation in a bad light.

Here are a few questions you will need to answer:

- Why do we need a website?
- What do we want the website to do?
- What are the features we like about websites?
- What are the features we don't like?

- Who will the website be aimed at?
- What are the needs of the particular audience/s?

- Who will design the website?
- What is meant by an accessible website?
- How do we ensure our website is accessible?

- How much time do we have to maintain it?
- Will staff be given extra time and training to work on the site?
- How will we encourage ownership of the site within our organisation?

- How will the success or failure of the website be measured?

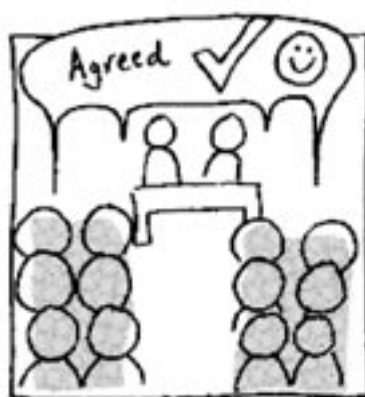
Bring together an appropriate group of people within your organisation to discuss the questions above. Write down the main points of the discussion as well as any conclusions reached during the meeting. You will want to start with the most important question, why do we want a website? Doing the exercise as a group should help build a feeling of ownership of the resulting website.

Clarify your aims and objectives

To clarify the aims of your website attempt to write a single paragraph that explains the following:

- who you are,
- what the site is for,
- what information/services should be found on the site.

Remember, if **you** don't know what your website is for, don't expect any of your visitors to know either.



Identify your target audience and its needs

Next you need to think about who you expect to use your website; who is the main audience for your information/services? Don't work on the assumption that it is for everybody - this is too broad and, if you adopt this approach, your site is likely to appeal to nobody. People surfing the web are usually looking for answers to specific questions - so think, why should they visit your site? Think about your site in terms of what needs it will meet for your intended audience. Look at a wide range of other websites and ask yourself what is good or bad about them.

Perhaps the single most important thing you can do is ask your potential audience what they want to see on your website and involve them in the planning and delivery process. For tips on how to involve disabled people in the process read SAIF's Standards for Disability Information and Advice Provision in Scotland (the section 'Involving Disabled People and their Representatives' is particularly relevant).

Once you have identified your target audience, but before you start to build your site, ask yourself these fundamental questions:

- Do the people I am aiming at have access to the web?
- Are they likely to use the web to access my information services?

Perhaps putting up a website is not the best strategy for meeting the needs of your intended audience. Maybe another year is needed before those you are aiming at are 'hooked up' and sufficiently comfortable using the web to access your information or services.

Identify required features

When you have identified the target audience and main purpose of the website, you need to decide what features you require on the website. To start with, write down everything that you think should be on your site, including features like discussion forums, feedback forms or guestbooks. Divide the information you end up with into categories. Give each category a short name - these names may later form the sections within your website. Think about how you might organise these categories on your site. Popular organisational schemes include: alphabetical, time-based, geographical, subject-based, audience-based or metaphor-driven.

Examples of these organisational schemes:

- alphabetical schemes: phone directory,
- time-based: television or radio guide,
- geographical: holiday guide,
- subject-based: university syllabus,
- audience-based: a conference website with sections for exhibitors, press and visitors,
- metaphor-driven: road signs.

Pick what you think is the best organisational scheme for your site and for your particular audience. Give some thought to this because you will need a system that will be able to accommodate the future growth of your site as well as its initial content.

You may wish to consider other technical features such as:

- audio,
- polls,
- message boards,
- news feeds,
- payment function,
- forms,
- password protected areas.

Level of accessibility and usability

Depending on your target group you need to decide on what level of accessibility your website requires, bearing in mind minimum levels required by law.

Consistency and integration with other marketing tools

If your organisation has a marketing plan, a 'house style' or templates for communication, you need to consider what will apply to the website. The marketing plan can give you help with who it is you want to reach with your website. Your house style and templates can give you logos and other information that should always be included in communication, as well as how items like phone numbers, addresses, and dates should be displayed. The house style can be very helpful when designing and writing content for the website.

Remember that house styles designed for printed material will have to be adapted for screen use. Text is read differently on screen and the legibility is generally only 70% compared to printed material, so headings and subheadings are important for the information. An accessible website design will also be flexible when it comes to text sizes, so the users can change the text size and font to their preference.

Domain name

The domain name is the name in the web address. For example, www.saifscotland.org.uk is SAIF's web address with saifscotland.org.uk being the domain name. It makes sense to use the organisation's name or abbreviation for a domain name but other names relevant to your activities and what you want the website to do can also be suitable. The domain name must be registered. This can be done through a registration company, your web designer or hosting company. The authority holding the register depends on the ending of the domain name i.e. .co.uk or .com

Design

Think about what general message you want to convey and how people will find the information on the website. Pay special attention to how the user will navigate around the website. It can often help to make a flow chart of the way people can navigate through the site. The navigation should be easy to understand and consistent throughout the site.

Gather the content together

Once you know what your site is for, who your target audience is, and the needs of that audience, you are then in a position to start gathering information to put on to your website. Always remember that the information you choose to put on to your website should directly meet the needs of your audience.

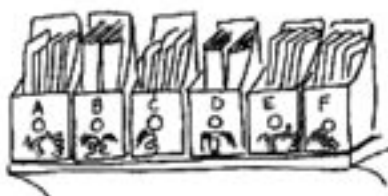
Some content should be on all websites:

- contact information,
- a map to get to your premises if required,
- details about when individual pages were last updated,
- accessibility statement,
- sitemap,
- copyright statement.

Organise your content

You should now have the content and a scheme, or a mixture of schemes, that form the basis of your website. To organise that content within the scheme, draw out the structure of your website on paper. Think about what is the most important information for your intended audience - and make sure that it will be easy to find.

Group similar information together (i.e. you want to have an 'About Us' section containing information about the aims of your organisation, a map, annual reports, address information etc.) Group all your services at one physical location on the page (discussion, search, classified ads, jobs etc.) and access to your content/information on another.



Think about whether you want to have links to everything on your front page or just a few links representing top-level topics - each leading to several related topics.

Plan for the future

A website is not finished when it is published, that is only the beginning and from then on it will develop and grow. It is a common mistake to relate to it as you would to printed information and think of it as finished and set in stone when published. The flexibility and low cost to change and add information are part of the benefits of having a website. It is therefore valuable to begin to think about the future at the planning stage and plan in advance for updating the content and maintaining standards.

Promote ownership of the website

Once your website is online that is just the start of your work - now you want to keep it fresh by updating it regularly with new material. Assuming most of this new material will be produced by staff within your organisation, you need to motivate and train staff to contribute to the site.

If your aim is to build a useful and regularly updated website ask yourself the following questions:

- Does the idea of having a website have the full support of everyone in the organisation?
- Are staff/management/directors already experienced users of the web?
- Is there a culture that sees the web as a valuable and core research/information tool?
- Do staff have access to the web from their desks?
- Will staff be given the responsibility to update their own sections of the website?
- Will staff have the technical means to update the website (i.e. a site management system)?
- What are the procedures in place to update the website?
- Is updating centralised and done by one person or decentralised to the various staff members themselves?
- What are the policies, if any, that relate to updating information on the website?
- Does everything have to be checked and passed by one person before it can go live? If so, does the designated person have the time to do this - and are there targets for 'turnaround'?
- Will the staff be given appropriate training?

If all of the above conditions are met you are in an ideal situation to operate a successful website. And you are probably unique, because such a scenario is unlikely to be the norm in most organisations.

You may first have to look at how you can make more effective use of the web within your organisation - and develop a culture where the web is seen as a legitimate and valuable communication and research tool, as vital as the telephone or the fax. The closer you can get to this ideal the better.

Having motivated, trained staff with instant access to the web on their desktops will help make them feel part of the process and be eager to contribute to the site, as will familiarity with the technology involved and a belief that the web can help them to reach their target audience.

Adopt the right attitude

Your website should be able to stand alone - don't think of the web as an advertisement for your offline activities - if possible provide the full service online. Don't tell people of the interesting and useful documents and articles you can send them by post, provide the full text of these documents on the site so that your visitors can read or print them themselves. Don't ask visitors at your site to phone for further information. By the time a potential customer is offline he/she will probably have forgotten all about your organisation and your products or services – remember that email is the natural way of communicating on the web.

Working through the above tasks is not quick nor easy but it is worth the initial effort. Apart from helping you to build a useful website, it should also help to establish commitment from those involved in the site at an early stage.

7 How to produce your website

You should have carried out the exercise suggested in section 6, **clarify your aims and objectives**, before you can take the decision to produce the website in-house or look for an external web-designer.

Your website will need to look attractive, be quick to load and easy to use and, of course, you will want to make sure that it is accessible to everyone. In a later section we will explore what is meant by an accessible website. First, here are some suggestions about how to hire a web designer and what initial questions you should ask them.

Choose a web designer

Research by the Disability Rights Commission in 2004 found that 91% of website developers do not claim to have any real understanding of web access issues. So finding an individual or organisation who can help you build an accessible website is not an easy task. The Guild of Accessible Web Designers website has a page listing all of their members, so this would be a good place to start: www.gawds.org/listmembers.php. There is also a search facility on the site to help you find a web designer in your area.

You need to do some research in order to find out which designers might be appropriate for your organisation's needs. You can do this in a number of ways: by asking other organisations who have used web designers for recommendations; by surfing the web yourself to find out which sites you particularly like and finding out who designed them; and by following up on companies that advertise the fact that they build accessible websites.

You can, of course, consider people already working in your organisation, e.g. designers, or someone with the ability to create a website and the capacity to learn to make it accessible. If you do choose this option, it is important to allocate them time and space for this specific task and not expect them to add this on to their existing job. Not giving sufficient resources to the person creating the website is often a major stumbling block for smaller organisations.

Once you have found a selection of possible designers and looked at some of the websites they have built to see if you like them, run them through the 'Cynthia Says' accessibility checker at www.cynthiasays.com/default.asp to verify their access claims.

Questions to ask

When you have a list of likely candidates, contact them for further information. Here are some questions you could ask:

- What will be the total cost of design? Having gone through the previous exercise you should have a good idea of how many pages and graphics will be on your site.
- Who have they previously designed websites for?

- How will you update pages or add pages to the website?
- Will you be able to update the site yourself?
If they do not provide a way for you to update your own site get a clear indication of how much it will cost to get them to add or edit information on the site. Specify in your tender document that any updates to the website must also be accessible.

- Do they carry out accessibility and usability tests of the website?
- Do they provide visitor statistics?
- Will the site have interactive features like guest books and discussion forums?

- Will the site be an accessible website?
- What level of conformance with the World Wide Web Consortium's Web Content Accessibility Guidelines (WCAG) will the site have?

If the web designers claim to design in accordance with WCAG there should be no hesitation in providing this information.

Website Tender Documents

Specify as a condition of your tender document that the resulting website must conform to the World Wide Web Consortium's (W3C) Web Access Guidelines available at www.w3.org

The W3C produces a set of guidelines called the Web Content Accessibility Guidelines (WCAG), which outline three levels of accessibility compliance for websites, with the first level being the least accessible. There is some debate on what level of conformance is appropriate. SAIF recommends that you aim for, at least, Level Two compliance.

An inaccessible website places your organisation at risk of not complying with the Disability Discrimination Act - and therefore at risk of a complaint from a disabled person.

It is suggested that the following information is added to your tender documents:

- Minimum Priority 2 compliance with Web Accessibility Initiative (WAI) Web Content Accessibility Guidelines 1.0 (WCAG).
This helps to ensure that the content of websites will be flexible enough to adapt to unpredictable user needs.
- The website must be created using valid (X)HTML.
This provides the best chance that sites will work on all hardware platforms and all web browsers.

User testing

Websites may pass accessibility tests but still place some disabled people at a 'substantial disadvantage' when compared to their non-disabled peers. If there is a budget available the tender document should also make provision for testing with disabled users to ensure the site is usable and accessible in practice.



What is meant by accessible web design?

The internet is, and will be increasingly, used by local and national government, banks, educational establishments, shops, information providers and indeed in every conceivable area of life to deliver information and services. Internet delivery of information and services is slowly replacing more traditional methods. As alternative methods disappear, so does choice - and it becomes critical to ensure that new delivery methods are accessible to everyone.

Almost 75% of all website traffic is image-based. Multimedia-rich sites are inaccessible to many disabled people; e.g. a visually impaired person who uses a speech synthesiser cannot make sense of information on the World Wide Web when it is purely graphics-based.

There are approximately 1.7 million individuals in the UK who are unable to read standard print with ease, 17 million adults with literacy problems and one million people with learning difficulties (Informability Manual Central Office of Information; Wendy Gregory, 1996, HMSO, ISBN 0117020389).

Therefore, the language you use is important. Adopt strategies throughout the process that will help you match your writing to the needs and knowledge of your readers. For help, advice and training on using jargon-free, straightforward language contact the Plain English Campaign at www.plainenglish.co.uk

Create a website design that is flexible

You will not be able to predict the needs of all the visitors to your website. So the best design is one that visitors to your site will be able to modify to suit their own needs. For example, check that colours, font and font size can be changed using your web browser preferences. If the text size can't be changed it means your site might not be accessible to someone who has a visual impairment.

Separate layout and content

The best way to create a website design that is flexible is to use cascading style sheets (CSS) for the style of text and layout of the pages. By doing that you separate the content, the actual information, from how you present that information and you can change one or the other independently. Your presentation/layout of the page might work very well for a lot of people but not for all. A user who needs a different contrast or colour scheme to access the information can change the style sheet and adjust it to his/her own requirements.

Web accessibility issues for particular groups

This section identifies some of the main considerations you must make in relation to the way groups of people with different needs can access your website.

A key point to remember, however, is that disabled people are not the sum total of their disability, they are individuals with varying abilities, backgrounds and levels of support. As individuals they will also have a wide range of interests and will use the World Wide Web for different things.



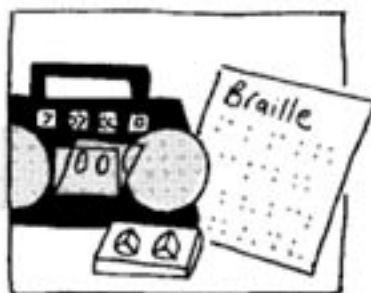
As this guide is specifically about disabled people we have concentrated on impairment-related guidance. However, if you are committed to accessibility, there are also a number of other factors you may want to take into account, depending on the focus of your website.

If you want to ensure that your website is accessible to other potentially excluded groups we suggest you go to www.socialexclusionunit.gov.uk/page.asp?id=108 to find out more about the work of PAT 15 (Policy Action Team) on information technology. This is a government initiative that, amongst other useful things, identifies the specific needs of different minority ethnic groups, women, young and older people as well as disabled people. It provides lots of ideas on accessibility as well as links to all kinds of interesting initiatives taking place in the UK and elsewhere.

People with visual impairment

The access needs of visually impaired people can be as variable as the number of people with visual impairment visiting your website. Flexibility therefore is the key to ensuring that your website is accessible to everyone. Those with some vision may need to be able to enlarge text (or make it very small), or change the contrast or colours on the web page. Others will access web pages using software which converts text into synthesised speech or makes them accessible via a braille display.

You must ensure that the design of your web pages does not make it difficult for a person with visual impairment to be able to customise the page for his/her own needs.



Designing a website to be accessible to a person with a visual impairment - or indeed for anyone - can be a complex subject. The following general principles apply to designing for users with a visual impairment, but are just as relevant to all groups:

- Provide text equivalents for all non-text objects on the page - speech synthesisers can't read graphics, and graphic text can't be enlarged in the same way as ordinary text. All graphics should have text labels, i.e. alt-tags, alternative attributes in HTML (Hyper Text Mark-up Language).
- Don't design the page in a way that stops the user from setting their own browser preferences, i.e. don't specify exact sizes for fonts or layouts - design everything in relative sizes.
- Use valid HTML and add structure to your pages by using the correct tags for headings, paragraphs, lists and so on. Many access software programs depend on the content of the pages being marked up correctly. Some of them can give an overview of the page by extracting all the headers and links and presenting them on a single page. If you have no headers on your page and all your links say 'click here' then the accessibility of your website will be very low.

There is very useful, more detailed information about designing for users with visual impairment at: www.rnib.org.uk/digital/hints.htm

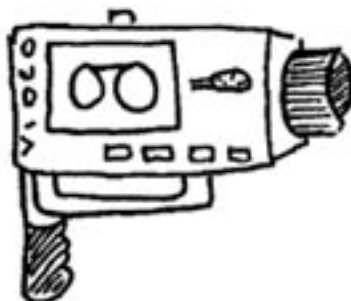
Deaf/hard of hearing people

Although it may not be immediately obvious how a predominantly visual medium like the web can be inaccessible to people who are deaf or hard of hearing there are some points worth noting.



Many deaf or hard of hearing people - particularly if they are sign-language users - do not have highly developed reading skills. Sign language is a different language from standard written English. Some people who use sign language therefore have a limited reading vocabulary. The use of simple, clear language will help to ensure that deaf or hard of hearing people can access the information on your web pages.

If you use audio or video provide text-based transcripts and closed captioning. Closed captioning on the web when not directly embedded within the video consists of a link to a 'script' of the video - the link to the script should be located close to the video clip.



Guidelines for implementing captioning for video can be found at www.samazdat.com/pac2.html in an article by Mike Paciello. For more detailed information about web accessibility for deaf people, see www.zak.co.il/deaf-info/old/home.html

Physically or mobility impaired people

For people who have difficulty using their hands or whose hand/eye co-ordination is restricted, the following guidelines can improve access:

- Provision of buttons rather than text for navigation to provide a larger 'target' for links. Having said that - if you design your web pages so that the text can be resized easily there should be no need to use graphics so that you can provide a larger target.
- Clear consistent layouts and navigation.
- Remember to consider the physical access to the computer itself. If a website is being designed for use in a public kiosk, the kiosk should be accessible to wheelchair users.

People with learning difficulties

There are of course marked differences in cognitive skills between individuals with learning difficulties. However there are some general rules worth applying.

Design simple uniform screen layouts with the option of only viewing one thing at a time. Use plain language and avoid pages overloaded with too many distractions or too many choices. For the same reason avoid long lists of links unless they are arranged in logical groups of no more than five or six links each.

The combination of auditory information, pictures and text helps to reinforce navigation and actions. This will also be useful for people who cannot read or are surfing the web with assistance. Auditory information should be clear, simple and repeatable.



Other suggestions include:

- provide a plain language description of the site,
- include a simple way to return to your home page,
- avoid animated graphics,
- simplify sequences - limit the choice and number of steps.

Link

www.otal.umd.edu/UUPractice/cognition

8 How to maintain your accessible website

Building an accessible website is easy in comparison with keeping the website lively, useful and accessible after it has been built. If the website is to remain useful it must be regularly updated. SAIF advocates the 'distributed approach' to web publishing. This means that staff should ideally be able to publish their own information (i.e. they don't give it to a third party to publish).

However, if you have a group of writers all with varying web-publishing skills - and using a variety of different publishing packages - the resulting website is unlikely to be good-looking, consistent or accessible. Why? Because the tools available at the moment don't help publishers learn the most important skills: usable, consistent and accessible design.

In the long term, writing pages for the web will be no more difficult than writing standard documents using a word processing package. However, until this happens you need to find systems that will work for you right now. Whichever you choose, staff will need training so that they have the skills to maintain an accessible and usable website.



Keeping your website up-to-date

In order to keep your website accessible those who are updating it need to know why keeping the website accessible is a good idea.

They also need to know how to add pages to the website and edit them without compromising its accessibility. They also need to know how to test the website to ensure that it continues to be accessible.

Staff training

The only way that staff can learn the importance of publishing accessible information on the web - and how to do it - is to provide good quality, appropriate training.



However, the training needs to be at the right level and of the right type. It is not reasonable to expect every member of staff to be:

- expert designers,
- expert information architects (i.e. the effective organisation of information),
- expert HTML authors,
- experts in building accessible websites.

Given that we are not quite at the point where writing a web document is as easy as writing a standard word-processing document, what should staff be learning? What type of training is required?

If you are committed to maintaining a regularly updated website you need to find a way to do two things. Firstly, you need to find a way for staff to publish and edit their own pages or sections on the website and secondly, to ensure that the resulting pages remain accessible. These two goals are difficult to reconcile - but with the correct approach it is possible to achieve both.

Allowing staff to publish and edit their information

If we look at the traditional web-publishing scenario, the following situation emerges. One person within an organisation becomes interested in the web and builds a website for the organisation with few resources and little input from anyone else. This person then becomes the organisation's 'web expert'.

When new information is to be added to the website it is channelled through this individual member of staff. As the demand to get information published on the web increases, he/she eventually becomes the bottleneck in the publishing process since it is highly unlikely that one person can keep up with the demands of the whole organisation (unless the organisation is very small).

The system then starts to break down; staff send their updates and have to wait weeks before seeing them on the web. Subsequently, they lose enthusiasm for web publishing and start thinking the process is not worth their effort. They then stop sending their documents for publication and the website stops reflecting the work of the organisation in an effective and up-to-date way.

The problem with the above method is that those who write the documents and are the experts in their own subject areas have little control over what actually goes on the web. As a result, their feeling of ownership of the website is eroded and its strengths are lost (i.e. timely information, instant feedback, interactivity and dialogue engendered by the immediacy of web publishing).

You could try to solve this problem by adding more 'website experts' by providing them with training or making this the person's full-time job rather than an adjunct to the person's main job. But this doesn't solve the problem of ownership or participation. On top of this, many organisations will insist upon another layer in the web-publishing sandwich, the editor.

Determining staff support needs

First of all, staff will need some type of web-publishing application. Many people are currently using WYSWYG (what you see is what you get) web page design packages like FrontPage or Dreamweaver. These packages have become popular because they promise to free people from the burden of having to learn HTML to build pages. However, using most WYSWYG web design packages can lead to difficulties because:

- they don't always produce standard, accessible HTML,
- their strengths don't lie in site management but in site design,
- they are not good at helping writers to organise their information logically or helping writers add their information to the correct part of the website,
- writers are not necessarily experts in the organisation of information.

These systems are often very good web design packages and if they are appropriate for your organisation's needs you may decide to use them. However, buying a web-publishing package will not tackle the fundamental issues of website management. They may make you a good designer but they won't teach you how to organise information on the web so it is easy to use or quick to download - and most importantly they don't necessarily make it easy to publish **accessible** websites. It is arguable that the time taken to learn most of these packages would be more usefully spent learning some basic HTML.



So what should staff be learning? Well, for the most part accessible web pages are pages written in standard HTML and HTML is not rocket science. All HTML does is give some labels to the bits of text that make up the page (i.e. here is a header, here is a paragraph, here is a list). Anyone who is going to publish information on the web should learn:

- some basic HTML,
- why it is a good idea to publish accessible web pages,
- how to write accessible web pages.

Learning some basic HTML will help all publishers - no matter what applications they are using - to build their websites.

Content management systems (CMS)

For updating your website you should consider using a content management system rather than a website design package. A content management system consists of software that enables a number of people to update, delete and add to, the content of the website.

The software can control what different people are allowed to do and which pages they can change. There can also be a review function which enables the changes to be checked for accuracy and accessibility amongst other things.

A content management system set up at the same time as the website can potentially decrease the overheads for organisations publishing their information on the web. It will make it easier to maintain an accessible site, promote ownership of the website and specific pages amongst the people contributing to them.

Choosing a content management system

There are many different types of content management software, though at the point this document was published not many of them claim to help in the creation of accessible websites. They mainly divide into two groups of CMS, web-based and client-based.

With web-based CMS you can access and change the pages through a browser. A client-based CMS is a program installed on your computer, where you access the pages through a connection to the web server. It works not unlike a word processing program where you make changes, can send changes for review by a third party and then upload to the web server. One example of this type of software is Contribute which works well with the website design package Dreamweaver.

An example of a web-based CMS suitable for small organisations is called QnECMS (Quick and Easy Content Management System – a system designed by one of the authors of this document). It has been designed to help organisations and individuals create accessible websites (www.qnecms.co.uk).

For larger organisations OpenACS is worth investigating (www.openacs.org) as is Joomla! (www.joomla.org). There are many free and open source content management systems. However most of them don't help users to create accessible websites, including the last two mentioned above.

The main features of a good content management system are as follows:

- It can control access to particular web pages - writers can only edit their own pages and add to their own sections (this has some drawbacks as well as advantages).
- It allows the creation of a consistent look and feel throughout the site, so assuming you have implemented good design and organisation at the outset, it is easier to maintain.
- It allows writers to concentrate on writing and designers to concentrate on designing.
- It allows the automation of the publishing process. If editors need to approve content before it goes live, this facility can be built into the system.

Once you create templates and your website is built using accessible HTML you are already a long way down the road to maintaining an accessible website.

With such a system in place ongoing training requirements will be less. For most documents writers will only need to learn some basic HTML. The learning curve is fairly gentle and, because it is easy to get started, you can learn as you go along.

Running a web-based CMS lets you carry out the entire publishing process using a web browser. You can also add photographs, graphics, word documents or PDF documents to your website. However, you will still have to pay someone to build your site in the first place so that it is accessible and you have a consistent framework to work with.

Link

en.wikipedia.org/wiki/Content_management_system

9 More features for websites

This section describes other interactive features you can add to your website:

- discussion forums,
- polls and voting,
- weblogs and news feeds,
- payment functions,
- feedback forms,
- subscription forms and newsletters,
- password protected areas.

Discussion forums

Discussion forum software allows communities of people with similar interests to have conversations with each other on a website, i.e. one person can publish a question on the site and another person can write a reply.

This is different from email and from chatrooms because the text of the conversations is always available on the website and people can join in whenever they want. For example, one person can ask a question, but the person with the answer can visit the site a few days later and answer that question.

Discussion forums are a place where people can learn from each other and good answers can be read by people who need the same information. They are also good because they can make people feel they are part of a community of others who share their interests.

Discussion forums need to be monitored and managed, i.e. an administrator will be needed to encourage discussion and keep the discussion free from unwanted content.

Polls and voting

A popular feature of many websites is polls, which allow visitors to the site to vote on different topics, e.g. on their favourite television programme or whether a website is good or not. Polls and voting software can also be used to get feedback from your users about the services you provide and to carry out informal surveys.

Weblogs and news feeds

The last few years have seen the growth of personal publishing and new ways of distributing and aggregating content on the web. Weblogs (also called blogs and web logs) are basically online diaries created by individuals and organisations to provide daily news, articles, photos and links to other websites. Entries are dated with the most recent entry at the top. The growth of weblogs and online news services has been helped by the development of software that has made web publishing easier than it was in the past.

An important aspect of weblogging is that other websites (and software) can subscribe to the online diaries, with the effect that the entries can appear on their own website or on sites that aggregate 'feeds', as they are called. If lots of organisations working in the same area publish weblogs, this means that content from all of those organisations can be collected into the one web page. This can make it easier to keep up with the events happening in a particular topic area.

Publishing a weblog provides a way to get content out to a wider audience, as many people can subscribe to the feed.

Payment functions

It is possible to take payment for services and goods directly from a website for:

- subscriptions,
- payment of services or goods,
- donations and gifts.

There are a number of ways that visitors to your site can provide payment:

- simple forms that can be printed out and sent with a cheque,
- use of Paypal – or similar specialist payment services,
- credit card payment – by linking up with an organisation who can carry out the transaction.

Software will be required to take and process the payments. You can then decide what method you want on your website, for example:

- shopping cart systems,
- Paypal payment buttons,
- simple forms linked to payment systems.

Feedback and subscription forms

Feedback forms are the online equivalent of paper forms, e.g. survey forms or application forms. The advantage of the online form over the paper form is that the content of the form is sent instantly to the website owner. The content can then be processed automatically in some way, e.g. the content of the form can be put into a database or an order can be sent out to the person who filled the form in.

Adding a feedback form to your website means visitors to your site can get in touch with you without having to start up their email program, write a letter, or contact you by phone. Feedback forms also have advantages for the website owner. Collecting information using a form means you don't have to put out your email address on your site, where it can be picked up by people wanting to send unwanted email (spam). A subscription form can be used to subscribe to a newsletter or receive regular updates from the organisation.

Data Protection Act

If you are collecting people's names, email addresses etc. through a form it is important to adhere to the Data Protection Act 1998 and handle the information in the right way. You should also inform people how you are going to use their information and how they can get information changed or removed from your system.

How forms work

When a form is filled in, the content of that form is sent to the computer that hosts the website. A computer program then processes the content of the form, e.g. it may send an email to the website owner, or put the content in a database or send a message to the person who filled in the form – or a combination of all of these things.

The form can be created using HTML but the computer program used to process the form content needs to be written using a scripting language such as Perl or PHP or Python. Although you can learn the skills to create and process forms yourself the organisation or individual you use to develop your website will be able to provide you with the forms you require.

Password protected areas

Having a password protected area on your website can be useful. For example, it could be used for distributing documents that you don't want to make public, such as minutes of meetings. You could also use it as a way to provide additional services and content to members of your organisation.

Links

Web Conferencing Guide

www.thinkofit.com/webconf

Polls and voting software

www.hotscripts.com/PHP/Scripts_and_Programs/Polls_and_Voting/more9.html

www.scriptsearch.com/PHP/Scripts_and_Programs/Polls_and_Voting

Wikipedia entry for blog and weblog

en.wikipedia.org/wiki/weblog

Payment functions

www.electronic-payments.co.uk

www.ncvo-vol.org.uk/fm/briefings/index.asp?id=2338

Forms

www.webcom.com/html/tutor/forms/intro.shtml

10 How to create accessible email

Email has become one of the most common ways to communicate. It is a good and economical method of disseminating information to people where they want to receive it. Emails are used for private communication, confirming transactions, newsletters, reminders for appointments, marketing and invitations, to name just a few examples.



There are a number of different email clients you can use when creating, receiving and storing emails. An email client can be installed on your computer or accessed over the internet (web mail).

Formatting email

Emails can usually be written in different formats which can be selected in the email program. The different types of formats are:

- Plain text,
- Rich text,
- HTML.

Plain text

In plain text formatting, your emails are written in the base font set in your preferences and you cannot create any other formatting, e.g. bullet points or bold. The receiver of the email can choose what font and font size they prefer their messages to be displayed in.

Rich text

In rich text you can create bullet points, different fonts, font sizes, font colours, horizontal lines etc. that can visually enhance an email.

HTML

In HTML formatting you can include anything you would use in a webpage such as images, forms and animation.

Accessibility issues

Different email clients display emails differently and there is currently no standardisation. Some can display certain features of rich text formatting and HTML, some can display all of them - others none. Some strip the email of all the formatting and replace it with their own version. The situation currently is similar to the first internet browsers in the early days of the internet. Some could display some of the HTML tags and others could not, and they were displayed quite differently depending on which browser was being used. This is something to keep in mind when creating emails and email-based newsletters.

The only way to ensure that the information is received in the same way by all recipients is to write 'plain text' emails. This is also the recommended format for people using screen readers and other assistive technology. The font, font size, colour and contrast are set as preferences in the email client. Users then get emails displayed the way they want.

There is some argument for the use of HTML-based emails and newsletters because they can convey a lot of additional information with images and colourful graphic designs. However, if an email is produced in HTML it should follow the same accessibility guidelines that are valid for webpages. Unfortunately there is little and disparate support for CSS (cascading style sheets) which should format the content, in today's email clients. You cannot be sure, therefore, that the HTML email reaches the recipient as it left you.

If you are producing a newsletter in HTML format, it would be an idea to offer a plain text version as well and let the user choose which one they would like to subscribe to, or send everyone a plain text newsletter with the HTML version as an attachment. The attached newsletter could then be opened by the user's normal browser with their accessibility settings in tact.

Newsletters and standards

There are no official standards for structuring a plain text newsletter to achieve good accessibility. However, there is an organisation called Headstar which promotes the **Text Email Newsletter (TEN) Standard**. This consists of guidelines designed to improve the readability of plain text email and newsletters by all readers, including people with visual impairments using special access technologies.

The Text Email Newsletter (TEN) Standard document gives examples of how you can structure your newsletter, provide a list of content and separate different sections to help the readability of the document in plain text. The document itself is structured as an example of good practice.

The Text Email Newsletter (TEN) Standard was developed by E-Access Bulletin, a free email newsletter on access to technology by vision-impaired people, published by Headstar with support from RNIB.

Link

Text Email Newsletter (TEN) Standard document
www.headstar.com/ten

11 How to create accessible electronic documents

Today documents are mainly produced electronically in a word processing software package. After being written they quite often make their way to people in one electronic form or another: they can be emailed as attachments, downloaded from websites, read on a handheld computer or mobile phone and, of course, also be printed out on paper and in braille. Quite often a document will also be transformed from one format into another during its lifetime. The accessibility of these documents depends on how well they are formatted and structured from the beginning. A well-formatted Word document can be easily transformed into an accessible PDF file to be downloaded from a website.

This chapter provides information on how to make the most common document formats more accessible.



Are Word documents accessible?

The general question about whether Word is a more accessible format than HTML or other document formats is covered in a good article on the AccessIT Website. The article is called 'How accessible are Microsoft Word documents?' The Web address is www.washington.edu/accessit/articles?266

Making Word documents accessible

The follow summary will help you to make your Word documents accessible to people with a range of different impairments. This list is also available as an appendix.

- Avoid using extremely small fonts and avoid setting large blocks of text in italics.
- Use styles to add structure to your documents, e.g. use the heading style to create headings rather than just making text look like a heading by making it bold.
- Provide alternative labels for all images. To do this, right-click on the image, then select Format Picture. A dialogue box will appear. Select the Web tab, and then add the appropriate alternative text.
- Create clear uncluttered pages, with plenty of white space. Use bulleted lists when appropriate as they can be easier to understand than dense paragraphs.
- Avoid animated text or flashing/blinking elements - as these can trigger seizures in some people.
- Ensure there is good contrast between elements on the page, e.g. text and background colours.
- Use the built-in table tools when creating columns of text. Don't use tabs to create tables.
- Use descriptive link text for links, when linking to web pages within your documents.
- Add space around paragraphs using style formatting options rather than using carriage returns. This is particularly important if you intend to convert your Word documents into PDF files.
- If you have embedded sound files, provide a text transcript of the sound file content.

Creating web pages from Word documents

If saving Word documents as HTML - save as filtered HTML. This will strip out some of the superfluous HTML that it would otherwise add in an attempt to make your web page look the same as your original document.

Adobe Acrobat and accessibility

The first version of Adobe Acrobat to create accessible PDFs was version 5. The following are some of the accessibility features of PDF documents created with version 5 and above:

- text can now be read by some screen readers,
- high contrast viewing is supported,
- structured markup can be added to PDF documents (just like HTML) - making it easier for those using screen readers or other assistive technologies to access content.

Making PDF files accessible

The Portable Document Format (PDF) allows authors to create documents that retain their original layout and design when viewed on screen or printed out.

Creating accessible PDFs involves a number of steps:

- Create accessible source documents. Use Word 2000 or later to create the source document according to guidelines mentioned earlier and then convert them to PDF using the latest version of Adobe Acrobat.
- Ensure that the PDF conversion settings in your source application are set correctly (see the links to documents at the end of this section for information about how to set conversion settings correctly).
- Run the built-in accessibility checker in Adobe Acrobat after you have created the PDF document.
- Fix any problems found, either by going back to the source document and re-converting after making changes, or by editing the XML (Extensible Markup Language) tags within the PDF document.

Creating accessible PDF documents is too complex a subject to cover in this short guide. Details relating to the above steps can be found by following the links at the end of this section.

If your Word documents are going to be converted into the PDF format, then using style to add structure to your document and ensuring all images have labels is very important. It is difficult to make changes to your document after it has been converted.

Adobe Acrobat is the most popular application used to create PDF files. It has built-in features to help authors create accessible PDFs. However, documents with complex layouts can still be difficult, or impossible, to make completely accessible, e.g. if the document has a complex layout such as overlapping images and text. For this reason you should always test your PDFs before making them available on your website. Seek feedback from someone who is an experienced screen reader user, to find out how accessible they are in practice.

As creating accessible PDFs is a time-consuming task, consider carefully whether PDF is the most appropriate format for each document you publish.

Creating accessible PowerPoint presentations

PowerPoint presentations are now quite common on the web. They can be made more accessible for users of assistive technologies if they only contain headings, text, bullet points and simple graphics. The main thing to remember is to include notes describing any other elements like graphics, diagrams and charts.

To do this you:

- create the slide in PowerPoint,
- use Auto Layout in Normal View,
- write a descriptive text in the notes panel for all graphics and additional elements conveying information in the slide.

Links

How to Create Accessible PDFs with Adobe Acrobat 6 by Jim Byrne
www.jimbyrne.co.uk/show.php?contentid=54

AccessIT article: Is PDF accessible?
www.washington.edu/accessit/articles?2

Acrobat solutions for accessibility
www.adobe.com/products/acrobat/solutionsacc.html

WebAIM, Accessible PowerPoint presentations
www.webaim.org/techniques/acrobat

www.washington.edu/accessit/articles?28

12 Where to get more help

There is a huge amount of resources available both on the World Wide Web and in books offering information and guidance about building websites. It would be impossible for SAIF to cover all the topics you may need to consider in this supplement. Equally, it is impossible to supply every link to every resource that might prove helpful to your organisation. What we have tried to do in this section is offer a reasonable selection of links that will act as a gateway to other, more specific resources that you may find useful. In most cases this has been done by listing the web address for each resource.

Websites

The Guild of Accessible Web Designers

A world-wide association of organisations and accessible web designers and developers.

www.gawds.org

Web Accessibility Initiative (WAI) at W3C

WAI, in co-ordination with organisations around the world, pursues accessibility to the web through five primary areas of work: technology, guidelines, tools, education and outreach, and research and development. Their website offers a vast range of resources that will be helpful whether you are a complete novice or a technical wizard, including accessibility checkers like WAVE and Bobby.

www.w3.org/WAI

Jim Byrne & Associates

Web consultancy and training organisation specialising in accessible websites. Jim is one of the authors of this document and was the author of the first edition.

www.jimbyrne.co.uk

Royal National Institute of the Blind (RNIB)

The RNIB has a range of very useful guidance notes as part of their See It Right Accessible Websites campaign. They contain lots of advice about building websites that do not exclude visually impaired people.

www.rnib.org.uk

The Disability Rights Commission (DRC)

Although it does not deal specifically with electronic communication, this site has a good links page containing contact details for lots of disability-focused organisations. Particularly helpful if you are looking at the information needs of specific groups.

www.drc-gb.org

Jargon busting

Understanding websites is a lot easier if you understand some of the most commonly used terms. We recommend you access a free online dictionary like those listed below. These give definitions in plain language for words, phrases and abbreviations that are related to computer and internet technology.

www.webopedia.com

www.whatis.com

www.wikipedia.org

The Web Standards Project

The Web Standards Project aims to improve access to legal and advice information on the internet. This is a joint programme between the London Advice Services Alliance and the Community Legal Service in England. However, it is relevant and useful for organisations in Scotland. The project aims to improve searching and access for visually impaired people, so that all users can more easily locate the information they need.

www.webstandards.org.uk

Philip and Alex's Guide to Web Publishing

An online book offering advice and free tutorials for anyone trying to build and/or run a website in an accessible and efficient way. A useful source of support for staff. Published some time ago but still useful.

www.philip.greenspun.com/panda

Sucky to Savvy

This is a web style guide written by Jeff Glover, a self-styled website expert. It contains a lot of useful dos and don'ts written in an amusing and accessible way. It also explains lots of technical internet language in layman's terms.

www.jeffglover.com

Scottish Enterprise E-Commerce Team

This website contains lots of fact sheets and other tools mainly aimed at the business sector but relevant to all organisations. Particularly useful topics covered include security, data protection and copyright.

www.scottish-enterprise.com/ebusiness

Books

Bulletproof Web Design: Improving Flexibility and Protecting Against Worst-Case Scenarios With XHTML and CSS

Dan Cederholm, 2006, ISBN 0321346939

60 Hot to Touch Accessible Web Design tips – the Tips No Web Developer Can Live Without!

Jim Byrne, 2006, ISBN 978-1-4116-6729-7

Don't Make Me Think! A Common Sense Approach to Web Usability

Steve Krug, 2000, ISBN 0789723107

Designing Web Usability: The Practice of Simplicity

Jakob Nielsen, 2000, ISBN 156205810X

Designing with Web Standards

Jeffery Zeldman, 2003, ISBN 0735712018

Information Architecture for the World Wide Web

Louis Rosenfeld & Peter Morville, 1997, ISBN 1565922824

Web Accessibility for People with Disabilities

Michael Paciello, 2000, ISBN 1929629087

Constructing Accessible Web Sites

Jim Thatcher et al, 2002, ISBN 1904151000

Web Accessibility: Web Standards and Regulatory Compliance

Jim Thatcher et al, 2006, ISBN 1590596382

Online reports

Research - eAccessibility of public sector services in the European Union

www.cabinetoffice.gov.uk/e-government/eaccessibility

November 2005

The Web. Access and Inclusion for Disabled People. A formal investigation conducted by the Disability Rights Commission

www.drc-gb.org/library/formal_investigation_report_w.aspx

2004, ISBN 0 11 703287 5

Feedback

As we have mentioned before, the World Wide Web is changing and developing at an incredible pace and we would welcome any feedback you have on these or other sites to inform future editions of this supplement.

We would also welcome any feedback you have on this publication. A feedback form is available on our website at www.saifscotland.org.uk or you can email info@saifscotland.org.uk

Making Websites Accessible

The Disability Discrimination Act states that you must ensure your online services are accessible to disabled people.

To meet the needs of disabled people:

- ☐ Comply with the Web Content Accessibility Guidelines (WCAG) version 1.0. Find out more at www.w3.org/WAI (Web Accessibility Initiative).
- ☐ When tendering for a website ensure that accessibility is built-in from the start. SAIF recommends WCAG AA compliance.
- ☐ Create a website design that is flexible so that users can change colours, font and font size to meet their individual requirements.
- ☐ Give links a meaningful name describing what they link to.
- ☐ Add labels to all non-text elements, like photographs and graphics.
- ☐ Do regular accessibility checks on your site, e.g. run it through the Cynthia Says accessibility checker at www.cynthiasays.com
- ☐ Involve disabled people in the planning and testing of your site.
- ☐ Get regular and organised feedback from disabled people about the accessibility of your site.
- ☐ Provide your staff with disability equality training. A key barrier for disabled people is negative attitudes towards them.

The Scottish Accessible Information Forum (SAIF)
Scottish Consumer Council, Royal Exchange House
100 Queen Street, Glasgow, G1 3DN
Tel: 0141 226 5261 Fax: 0141 221 0731 Text: 0141 226 8459
Email: info@saifscotland.org.uk Website: www.saifscotland.org.uk

Making Word Documents Accessible

The Disability Discrimination Act states that you must ensure your service information is accessible to disabled people.

To meet the needs of disabled people:

- ☐ Avoid using small fonts and setting large blocks of text in italics.
- ☐ Use styles to add structure to your documents, e.g. use the heading style to create headings rather than just making text look like a heading by using bold.
- ☐ Provide alternative labels for all images. To do this, right-click on the image, then select Format Picture. A dialogue box will appear. Select the Web tab and then add the appropriate alternative text.
- ☐ Create clear uncluttered pages, with plenty of white space. Use bulleted lists when appropriate as they can be easier to understand than large paragraphs.
- ☐ Avoid animated or flashing/blinking text.
- ☐ Ensure there is good contrast between elements on the page, e.g. text and background colours.
- ☐ Use the built-in table tools when creating columns of text. Don't use tabs to create tables.
- ☐ Use descriptive link text for links, when linking to web pages within your documents.
- ☐ Add space around paragraphs using style formatting options rather than using carriage returns. This is particularly important if you intend to convert your Word documents into PDF files.
- ☐ If you have embedded sound files, provide a text transcript of the sound file content.

The Scottish Accessible Information Forum (SAIF)
Scottish Consumer Council, Royal Exchange House
100 Queen Street, Glasgow, G1 3DN
Tel: 0141 226 5261 Fax: 0141 221 0731 Text: 0141 226 8459
Email: info@saifscotland.org.uk Website: www.saifscotland.org.uk

