Document revision

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Revision details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.4</td>
<td>02 May 06</td>
<td>G Schwarz</td>
<td>First draft released for comment</td>
</tr>
<tr>
<td>0.5</td>
<td>03 May 06</td>
<td>G Schwarz</td>
<td>Second draft released for comment</td>
</tr>
<tr>
<td>0.6</td>
<td>07 May 06</td>
<td>G Schwarz</td>
<td>Revised section 1</td>
</tr>
<tr>
<td>0.7</td>
<td>19 May 06</td>
<td>G Schwarz</td>
<td>Moved section ‘Content guidelines’ to DET web writing guide</td>
</tr>
<tr>
<td>0.8</td>
<td>22 May 06</td>
<td>G Schwarz</td>
<td>Changed document title to ‘Web design guidelines’</td>
</tr>
<tr>
<td>0.9</td>
<td>26 Jun 06</td>
<td>G Schwarz</td>
<td>Added/revised sections: Designing for browsers, Web forms, Using JavaScript.</td>
</tr>
<tr>
<td>0.10</td>
<td>12 May 08</td>
<td>K Leen</td>
<td>Revised for use by Conservatoriums and Music Centres funded</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>under the Regional Conservatorium Program managed by Strategic Initiatives Directorate</td>
</tr>
</tbody>
</table>

Document approvals

<table>
<thead>
<tr>
<th>Name</th>
<th>Directorate / Position</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faruk Avdi</td>
<td>Corporate Communication / Online Communication Manager</td>
<td>02 9561 8446</td>
</tr>
</tbody>
</table>

© State of New South Wales, Department of Education and Training 2005.

Published by
Corporate Communications
35 Bridge St
Sydney NSW 2000

Copyright of this material is reserved to the Crown in the right of the State of New South Wales. Reproduction or transmittal in whole, or in part, other than in accordance with provisions of the Copyright Act, is prohibited without the written authority of Corporate Communication.
Contents

1 Web design guidelines .................................................................5
  1.1 Introduction ........................................................................5
  1.2 User experience .................................................................5
    1.2.1 What is user centred design ........................................5
    1.2.2 What is usability .......................................................5
    1.2.3 What is accessibility ..................................................6
    1.2.4 What is information architecture ..............................6

2 Design for the user .......................................................................7
  2.1 High level approach ...........................................................7
    2.1.1 Define user profiles ....................................................7
    2.1.2 Identify user needs .....................................................7
    2.1.3 Identify user tasks .....................................................7
    2.1.4 Develop an information architecture .........................7
    2.1.5 Evaluate with users ................................................7
  2.2 General usability principles ................................................8

3 Design for the organisation .....................................................9
  3.1 Planning your project .........................................................9
    3.1.1 Define site objectives ...............................................9
    3.1.2 Define user requirements .........................................9
    3.1.3 Develop project documentation ..............................9
    3.1.4 Content maintenance .............................................9
    3.1.5 Quality assurance ................................................9

4 Structuring information ..........................................................11
  4.1 Information architecture ..................................................11

5 Navigation ................................................................................12
  5.1 Overview ..............................................................12
  5.2 Navigation guidelines ......................................................12
    5.2.1 Using buttons ........................................................12
    5.2.2 Breadcrumbs .........................................................13
    5.2.3 Links on long pages .............................................13

6 Visual design ............................................................................15
  6.1 Corporate identity ..........................................................15
  6.2 Visual hierarchy ............................................................15
  6.3 Text .............................................................................15
  6.4 Icons .............................................................................16
  6.5 Images ...........................................................................16
  6.6 Text as images .............................................................17

7 Technical guidelines ............................................................18
  7.1 Web standards approach ...............................................18
  7.2 Designing for browsers ...................................................18
    7.2.1 Page performance .................................................18
7.2.2 Standard page dimensions...............................................................19
7.2.3 Popup windows ..............................................................................19
7.2.4 Avoid horizontal scrolling.............................................................20
7.2.5 Avoid use of frames........................................................................20

7.3 Web forms ..........................................................................................21
7.3.1 Form guidelines.............................................................................21
7.3.2 Form layout ..................................................................................21
7.3.3 Form input elements......................................................................22
7.3.4 Form related tags...........................................................................23
7.3.5 Mandatory fields ..........................................................................23
7.3.6 Form data validation......................................................................24
7.3.7 Privacy for form data .....................................................................25

7.4 Tables ..................................................................................................26

7.5 Acronyms and abbreviations .............................................................26

7.6 Use of JavaScript ................................................................................26
7.6.1 Recommended uses .......................................................................26
7.6.2 Popup windows using JavaScript..................................................27
7.6.3 Accessibility considerations...........................................................28

7.7 Using XHTML ....................................................................................28

7.8 Metadata ............................................................................................29

8 Accessibility guidelines...........................................................................31
8.1 Accessible design checklist...............................................................31
8.2 Categorised guidelines .....................................................................31
8.2.1 Content related.............................................................................31
8.2.2 Mark-up related ...........................................................................31
8.2.3 Tables ..........................................................................................32
8.2.4 Forms and interactive elements ..................................................32
8.2.5 Template / stylesheet...................................................................32
8.2.6 Additional......................................................................................33

9 Glossary ..................................................................................................34

10 References ............................................................................................36
1 Web design guidelines

1.1 Introduction
The Web design guidelines have been produced to:

- improve the quality of Conservatorium's online communications
- ensure a usable and accessible online experience for all site users
- promote consistent usage of web elements, terminology and writing style.

Consistent design is vital for the credibility and user experience of the Conservatorium's websites and web-based applications.

This document is aimed at web designers and web developers, covering best practice guidelines for web design. An associated document, the Web writing guide, is for web authors and online writers. It covers writing for the web, an editorial style guide and online policy development information.

The guidelines are draft and will be subject to improvement and updates. Please note that the guidelines are non-mandatory.

1.2 User experience
User experience is a term used to describe the overall experience and satisfaction a user has when using a product or system. When applied to a website, the term refers to the quality of experience a person has when interacting with a specific design, which includes the content, functionality, and aesthetics (among others).

Key benefits of a successful user experience are:

- users are able to find what they need
- users are able to use what they find
- users value the site (or application), and will want to use it in the future

In order for an organisation's websites to exhibit a successful user experience, the following approaches should be employed:

- user centred design
- usability
- accessibility
- information architecture

1.2.1 What is user centred design
User centred design is a general term use to describe an iterative process which involves end-users and stakeholders in the design and evaluation of products or services. The benefits are reduced costs and products/services that meets user needs. It is derived from The International Standard, ISO 13047, 'Human Centred Design Process for Interactive Systems':

"Human-centered design is characterised by: the active involvement of users and a clear understanding of user and task requirements; an appropriate allocation of function between users and technology; the iteration of design solutions; multi-disciplinary design."

1.2.2 What is usability
In simple terms, usability is about being able to use a website or service easily, quickly and with confidence so that users are able to easily achieve their goal.

A usable website should:

- be logically intuitive
• be understandable
• have a consistent design and be predictable

Based on the international standard ISO 9241-11: usability can be defined as:

“...The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use”

The key terms to note in this definition are:
• effectiveness – are the users able to the job done and achieve their goals?
• efficiency - how much time and effort was required to use the service?
• satisfaction - was the user satisfied and will they want to use it again?

1.2.3 What is accessibility

The W3C Web Accessibility Initiative (WAI) defines web accessibility as follows:

'Web accessibility means that the Web (including intranets) is designed so that people with disabilities and impairments can perceive, understand, navigate, and interact with it effectively'.

People with disabilities use the Web through:
• use of keyboard or switch (instead of mouse)
• use of screen magnifier, screen reader or speech recognition software
• use of or other assistive technologies

Reasons for developing accessible websites include:
• Disabilities affect a signification proportion of the Australian population. According to The Australian Bureau of Statistics (2003), 20% of Australians have a disability.
• The likelihood of having a disability increases with age, and the overall population is aging.
• Information and services provided by the web play an important role in the day to day life of people with disabilities.

In practice, developing an accessible website involves:
• Structuring content (where possible), using mark-up that indicates the type of information.
• Creating an interaction design that is device-neutral; for example supports keyboard alternatives to mouse-based interaction.

1.2.4 What is information architecture

People have a natural tendency to organise information from their own point of view. They do this by grouping concepts together through some common attribute, and linking them based on the relationships between the concepts.

Information architecture refers to:
• the structural design of a site’s information space to facilitate intuitive access to information (source: Jesse James Garrett ‘Elements of the user experience’. http://www.jjg.net/elements).
2 Design for the user

2.1 High level approach

2.1.1 Define user profiles
A user profile describes key characteristics of a user and aspects of a users' work environment. Identifying user profiles can inform what the website user experience should include. User profiles can include:

- demographics (age, gender, etc).
- physical characteristics (eg age-related, visual or motor impairments)
- web experience (new to the web, intermediate, advanced)
- technological capacities (eg browser type, internet connection)

2.1.2 Identify user needs
Develop an understanding of their needs, and the factors that affect how they use the website:

- underlying users' motivations
- purpose for visiting the site
- information or resources they are interested in
- frequency of visiting of the website

2.1.3 Identify user tasks
A task is a set of interactions performed by a user -- one or more tasks are performed by a user to achieve a goal. Identification of user tasks provides input into interaction design.

2.1.4 Develop an information architecture
Information architectures work best when users understand them. This can be achieved by evaluating candidate information architecture with participants from target user profiles.

2.1.5 Evaluate with users
Usability evaluations support a user centred design approach, and are usually conducted iteratively from early stages of design and throughout development.

The benefits of iteratively evaluating aspects of a website with users are:

- uncover problems that users are likely to encounter when using the site.
- to obtain user feedback which can inform design improvements

While there are variations in when and how you conduct an evaluation, each evaluation shares the same characteristics:

- goal is to improve the usability of a website or service
- the participants represent real users
- the participants do realistic tasks
- what participants do and say is recorded and or observed
- data is collected which is analysed, issues identified, and recommendations made to address the issues

Other times to evaluate include:

- Before significant changes to the information design or navigation structure.
2.2 General usability principles

Jakob Nielsen and Rolf Molich developed the following usability heuristics in the early 1990s (Molich and Nielsen 1990; Nielsen and Molich 1990). While they are not complete, they highlight some of the key issues to consider when building software, including websites.

1. Visibility of system status
   The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

2. Match between system and the real world
   The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

3. User control and freedom
   Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

4. Consistency and standards
   Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

5. Error prevention
   Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

6. Recognition rather than recall
   Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

7. Flexibility and efficiency of use
   Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

8. Aesthetic and minimalist design
   Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

9. Help users recognize, diagnose, and recover from errors
   Messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

10. Help and documentation
    Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.
3 Design for the organisation

3.1 Planning your project

3.1.1 Define site objectives
- define site objectives prior to the design of the site
- define quality goals for the site (measurable in terms of defined metrics)

3.1.2 Define user requirements
- identify target user profiles
- user needs
- define user tasks

3.1.3 Develop project documentation
Employing a project-based approach for a website will result in a need for appropriate documentation. In order to support those that have to maintain and manage the website, documentation should be developed for:
- technical specification
- functional specification
- design specification
- information architecture
- processes for publishing, including approval processes

3.1.4 Content maintenance
A regular maintenance or review schedule should be developed, for all content prior to publication. Business rules and schedules for content maintenance need to be established for:
- editorial guidelines
- content ownership
- checking of contact details
- content expiry
- archiving and version control
- visitor reporting summary

3.1.5 Quality assurance
A quality assurance process should be developed and implemented. For content aspects:
- check correct placement of pages within site architecture
- check that all links are working
- check metadata (including page title)
- check spelling and correct errors
For technical and functional:
- ensure site is viewable in supported browser versions and platforms (PC and Mac)
• check that minimum accessibility requirements have been met
• check page size
• check your HTML validity – eg http://validator.w3.org/
• check your CSS validity – eg http://jigsaw.w3.org/css-validator/
• check your accessibility compliance eg www.w3.org/WAI/ER/tools
4 Structuring information

4.1 Information architecture

Information architecture can refer to the process of organising and labeling information so that people can find it. Information can be organised in various ways. For example:

- **alphabetical**: indexes, glossaries, menus
- **chronological**: what’s new, event calendars, news archives
- **topical**: social science, mathematics
- **audience specific**: for students, for staff, for visitors
- **task oriented**: provide feedback, check schedules, find a phone number

A website should be structured:

- so that users are able to find and engage with the content quickly and easily
- according to the tasks users will perform to access the information or services

Labels are a form of representation and when appropriate for the context, trigger the right association in the user's mind. In websites labels typically represent a content chunk, for example:

- ‘Contact us’ represents name, phone number, fax number, address, email address

Labels also reveal the information architecture of a website, for example:

- navigation links, page titles, sub-heading, breadcrumbs.

Information can also be structured using a hierarchical or linear approach. Some guidelines for design of hierarchies are:

- aim for a balance between breadth and depth
- if a hierarchy is too broad, users may have too many options to choose from
- if it is too deep, they may have to click too many times to reach the content
- avoid designing an information architecture that reflects the structure of the organisation. Users who are unfamiliar with the organisational structure may find it hard to locate resources.

Further information:

5 Navigation

5.1 Overview

Goals of navigation

- support information retrieval through browsing behaviours
- present the information hierarchy through the site structure
- provide context by indicating the user’s location within the site structure

Types of navigation:

- global navigation
- local (or sub-site) navigation
- breadcrumbs
- contextual navigation
- supplementary systems (site maps, site indexes)

Global navigation:

- intended to appear on every page within a site (sometimes different on home page)
- allows direct access to key areas and/or functions
- most link to home page
- many contain search function or link to search

Local navigation

- complements global navigation on larger sites
- often used for sub-site navigation within a very large site
- sometimes used for navigation within and around major content areas within a site
- need to be designed appropriately so users notice it

5.2 Navigation guidelines

5.2.1 Using buttons

*Guideline*

- Button usage should be consistent within a site.

*Description*

There are three general uses of buttons on the web:

1. Perform an action and update the page
2. Perform an action and navigate the user to another page
3. Navigate the user to another page (no action)

Websites should use buttons labels consistently for the same purpose. The following are provided as examples (indicative only):

- **Submit**: submit information collected from the user, usually as part of business process or online transaction
- **Cancel**: cancel a submission and return to the starting point
- **Previous**: return to the previous step in a workflow
- **Next**: used to proceed to the next step in a workflow.
• **Save**: save information modified by the user.

**Accessibility of buttons:**

- In general, it is not necessary to assign an explicit `tabindex` for interactive page elements, as the default flow is from left to right and down the screen.
- If required, design the page to support logical tab key navigation.

### 5.2.2 Breadcrumbs

**Guideline**

- Where appropriate, use breadcrumbs to assist users locating the current page within the hierarchy of a website.

**Description**

**General:**

- Breadcrumbs are a sequence of links and related text that show the user's location within the hierarchy of a website.
- Breadcrumbs should be placed in a consistent location on the page.
- The root or first text string in the breadcrumb should be the top level of the hierarchy structure.
- The last item reflects the current page heading and should not be a hyperlink.

Breadcrumbs should be used with caution in the following situations (because the location is already evident to the user):

- In step based workflow - in this situation it is better to add the step name the page heading. For example "Flight booking: Credit card details".
- On pages where the tabs or navigation structure already indicate the location of the current page in the hierarchy.
- On Home pages. Note: pages below the home page, 'Home' should be the root of the breadcrumb.
- On message or feedback pages.

Example of a breadcrumb for a content site:

```
Home > Level 1 page > Level 2 page > Current page
```

### 5.2.3 Links on long pages

**Guideline**

When the length of the page potentially involves substantial vertical scrolling (ie with detailed content):

- periodically place 'top of page' style navigation links within the page, or
- add ‘List of contents’ to the top of very long pages

**Description**

**List of contents:**

- links take users to the corresponding content further down the page.
- the destination of these links are commonly known as 'anchor' or 'within-page' links.
- anchor links can serve two purposes: they provide an outline of the page so users can quickly determine if it contains the desired information; and they allow users to quickly navigate to specific parts of the page.
- When using 'top of page' links:
  - selecting 'top of page' repositions the browser view to the start of the page
  - ‘top of page’ should be right aligned against the right hand edge of the page
- link should be placed every two or three standard scrolling pages
- do not place link at end of every minor page section (sometimes this cannot be avoided due to automatic insertion).
- If using an icon to represent ‘top of page’ instead of a hyperlink, then use an image link.
6 Visual design

6.1 Corporate identity

Guideline
- Use branding and corporate identity in accordance with required guidelines

Description
To be provided

Rationale
Branding standards play an important part in ensuring user confidence in the site or service they are accessing. Without effective branding and identity, users cannot be assured of the validity of the site or service they are using.

6.2 Visual hierarchy

Guideline
- Use visual design to create a visual hierarchy in which important elements are emphasised consistently.

Description
- Use appropriate colours to support a visual hierarchy. This assists users in locating relevant information on the web page.
- The overall visual balance and organisation of the page is crucial to drawing the reader to the relevant content.
- Page titles, page headings and table headings should stand out relative to body text and table cell text.
- Key page elements (eg headings) should use web safe colours or colours which are able to degrade to web safe colours on 8 bit displays.
- Light, neutral or pastel shades of colours typically found in nature make the good choices for background or minor elements. Avoid strong, highly saturated colours except in regions of major emphasis.

Further information
http://www.vischeck.com/vischeck - Vischeck 2002,

6.3 Text

Guideline
- Ensure the foreground text colour has a strong visual contrast the background colour, and that text is readable by target user groups.

Description
- Use a sans-serif font designed for the web (eg, or Verdana or Trebuchet).
- The recommended background colour is #FFF
- Ensure background colours do not diminish the legibility and readability of the text.
- Avoid using background images and textured or patterned backgrounds as they make it difficult for people with sight problems to read the foreground text.
Accessibility considerations:

- Consideration should be given to text colour issues associated with various forms of colour blindness (REFERENCE?).
- Use relative units in markup. Refer to WCAG 1.0 checkpoint 3.4.
- Refer to the WCAG 1.0 checkpoint 2.1 ‘Do not convey information through use of colour alone’.

6.4 Icons

Guideline

- Icons should be optimised for display on the web

Description

- All icons need to have meaningful ALT text. Refer to Web Content Accessibility Guideline (WCAG 1.0) checkpoint 1.1. For example: a ‘popup window’ icon should state: ‘opens in new browser window’.
- It is recommended that the following icon dimensions be a minimum of 16 x 16 pixels and maximum 32 x 32 pixels.
- Icons adjacent to text should have the same relative size.
- Icons should not be scaled (ie using HTML markup).
- Avoid using the HEIGHT and WIDTH attributes to adjust an image’s physical dimension. Rather, use a graphics program (eg. Photoshop) to resize the image.

6.5 Images

Guideline

- Images should be optimised for display on the web

Description

GIF (Graphics Interchange Format):

- GIF is a lossless bitmap format, which means that no image quality is lost when the image is compressed.
- GIF supports a maximum of 256 colours.
- GIF format should be used for compressing images with flat colour and crisp detail such as: logos; icons; illustrations; images with solid colours.

JPEG (Joint Photographic Experts Group)

- JPEG is a compressed bitmap format, which means that some image data is lost when the image is compressed, reducing the quality of the image.
- JPEG supports millions of colours (24-bit).
- JPEG format should be used for: images with gradients, photographs and other continuous tone images on the web.

Image sizing:

- The size of static images should be minimised (to reduce download time).
- All image source tags (even icon graphics) should include HEIGHT and WIDTH attributes (to reduce page rendering time).
- Avoid using the HEIGHT and WIDTH attributes to adjust an image’s physical dimension.
- Do not use images with widths greater than 744 pixels, as this may cause horizontal scrolling. The use of 744 pixels allows for a margin of 28 pixels either side of the image (in 800x600 resolution).

Image placement:
• Large images should be avoided at the top of the content area of a page, where they push text content below the bottom of the screen at 800x600 resolution.

Alternative text:
• Images should include meaningful content conveying an image description in the alt tag (alt attribute).
• Decorative or spacer images should include an empty alt (ie alt="").

6.6 Text as images

Guideline
Text displayed as images is not recommended.

Description
If graphical text is used:
• make your font sizes as large as possible
• use simple block fonts when possible
• use good colour contrast between the text colour and background colour
• provide a text value for the "alt" attribute.

Rationale
Some users with low vision use programs that enlarge the elements on their screen so that they can more easily see them. When the text in an image is enlarged, it often becomes pixelated and difficult to read.

.
7 Technical guidelines

7.1 Web standards approach

A web standards approach commonly refers to authoring web content to the specifications recommended by the World Wide Web Consortium (W3C).

The W3C specifications provide a standard reference point for web content authors and browser developers. If both developers and authors refer to the same specifications, then a webpage should look and function consistently, across different browsers.

For the webpage developer, a web standards approach includes:

<table>
<thead>
<tr>
<th>Advising browser specification</th>
<th>Advising the browser of the specification used to author content - add a doctype to each webpage that declares the specification used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validating code</td>
<td>Ensure that the mark-ups used is consistent with the declared specification.</td>
</tr>
<tr>
<td>Separating content from presentation</td>
<td>Use appropriate specifications; a structural language for content markup (eg XHTML) and a presentation language (eg CSS) for layout and styling.</td>
</tr>
<tr>
<td>Using semantic markup</td>
<td>The mark-up element is chosen that most appropriately describes the content or type of information. For example, document headings have HTML equivalents. &lt;h1&gt;Heading level one&lt;/h1&gt; &lt;h2&gt;Heading level two&lt;/h2&gt; &lt;h3&gt;Heading level three&lt;/h3&gt;</td>
</tr>
</tbody>
</table>

Validation tools:

http://validator.w3.org/
http://www.htmlhelp.com/tools/validator/

Developing with web standards -

https://addons.mozilla.org/firefox/60/ - Firefox web developer toolbar
http://www.456bereastreet.com/lab/developing_with_web_standards/

Web standards organisations

http://webstandardsgroup.org - Web standards group
http://webstandards.org - Web standards project
http://www.w3.org - World Wide Web consortium -

7.2 Designing for browsers

7.2.1 Page performance

Guideline

- Avoid overall page sizes of greater than 130K including all presentation technologies.

Description

- Page performance is a combination of speed of page download and browser page rendering.
- Presentation technologies can include: HTML, XML, images, clients-side scripts, stylesheets.
- Page performance is improved by:
  - minimising the number of graphics on the page (avoid using graphics for text headings).
• ensure graphics are saved in the format appropriate to the attributes of their content (ie PNG or GIF, or JPEG).
• use XHTML and CSS positioning techniques rather than tables to layout the page.
• use linked stylesheets rather than embedding styles within the page.

Rationale
• Page performance is an important element of overall user experience. Some users have limited access speeds – a download 50K page takes around 9-10 seconds to on a 56Kb modem.

7.2.2 Standard page dimensions

Guideline
• Pages should be designed to support a minimum standard browser resolution, and expand in proportion to accommodate higher browser resolutions.

Description
• Base the page design on a minimum resolution of 800x600 pixels.
• Use a fluid (non fixed) page layout to cater for both users limited to 800x600, and those able to utilise additional screen real estate at 1024x768 or higher resolutions.
• When determining the page layout, calculation of page width should reserve horizontal space for vertical scroll bars, window borders, and page borders, which vary depending on operating system and browser.

Rationale
• A proportion of DET users still use a browser resolution of 800x600.
• A significant portion of DET users use a browser resolution of 1024x768 or greater.

7.2.3 Popup windows

Guideline
• Minimise the use of popup browser windows by only using when necessary
• When used, indicate (to a user) when a new window is going to be opened.

Description
• Users should be informed that a new window will be opened by:
  • including text such as ‘opens in a new window’ as the title attribute for hypertext links
  • providing alt attribute text for image links
• The popup window should have smaller dimensions than that of the parent window. This allows the user to see that a new window has opened, preventing disorientation.
• The spawned browser window should be sized to maximum of 80% of the parent window width and height, and offset from the parent window.
• Avoid disabling window controls (resize, address bar, menu bar etc)

Rationale
• Consistency is an important principle on the web. The standard result of clicking a link is that the destination page replaces the origination page in the same browser window, not opening a new window.
• Popup windows can take the focus away from the main browser window. This can be frustrating for users, especially those who may not be overly familiar with the Internet. Novice users have trouble returning to the original site as they do not realise a new window has opened and they cannot click on the browser ‘Back’ button.
• Some browsers (eg: Mozilla, Netscape 7 and IE6 - under Windows XP SP2) and Internet filtering software allow the user to block or stop popup windows from opening. For this reason, information on popup windows should not form a vital part of the application or information.

• Popup windows often create accessibility issues when used inappropriately (see later section).

Further information
http://diveintoaccessibility.org/day_16_not_opening_new_windows.html - Dive into Accessibility: Not opening new windows

7.2.4 Avoid horizontal scrolling

Guideline
• Browser pages displayed at the minimum supported standard (eg 800x600) should not have horizontal scroll bar visible.

Description
• Horizontal scrolling occurs when certain contents within the page extends beyond the width of the page. A bar appears at the bottom of a browser window, when the content cannot fit on the screen.

• To minimise horizontal scrolling:
  • use percentages rather than absolute units (eg pixels) in the page layout
  • design page content so that it fits well within the target browser dimension.

• Conditions which can cause horizontal scrolling:
  • too many tabs in the navigation bar
  • too many global buttons
  • tables that contain too many columns to fit within the width of page
  • images sized inappropriately

• Horizontal scrolling may occur if the browser is resized to less than 800x600 resolution.

Rationale
• People who have upper limb disabilities or visual disabilities may have difficulty in operating the scroll bar.

• Users often find it annoying to scroll from left to right.

Further information

7.2.5 Avoid use of frames

Guideline
• Use of HTML frames is not recommended for technical and accessibility issues.

Description
Frames are not recommended:
• Frames can pose a variety of problems for people with disabilities using assistive technology devices.
• Technical issues relating to synchronisation of frames within a web page.
• Many browsers cannot print framed pages appropriately.

7.3 Web forms

7.3.1 Form guidelines

General
• Make sure your form incorporates a logical flow.
• Ensure that form instructions are written concisely.
• Don’t use jargon and or complex terminology.
• Always consider the effort required by the user to answer your questions.
• Use validation services to test the accessibility of the form.

Form headings
• Form sub-headings should use (preferably) HTML headings H3 or H4.
• Otherwise, form sub-headings can use bold text and be left justified (use appropriate style if available).

Group related fields
Consider grouping related form fields together and if appropriate, label the groups. The recommended approaches for grouping related fields are (in order of preference):
• use an appropriate left justified heading level, eg heading 3 (<h3>) or heading 4 (<h4>)
• fieldset element to group logically related form elements such as radio buttons and checkboxes.

Labels
• Labels (in general) should not use bold or emphasised text.
• Field labels which are statements, do not need to end with a colon.
• Labels which are questions should end with a question mark. For example: Were you born overseas?

Input field examples
Supplement form labels with examples where it is necessary to avoid confusion or ambiguity. Examples should appear before the input field as part of the field label for both across the page and down the page form layout. When used, they should be brief rather than detailed.

Example:
What is your data of birth (dd/mm/yyyy)?

Compound input fields
To assist users entering data correctly, it is sometimes effective to compound input fields together. This can be useful for information with multiple parts such as phone numbers, account numbers, date fields etc. Precede the compound text fields with a label that describes the function of the text fields as a group, not individually. For example:

Home number (with area code) :  02  

7.3.2 Form layout
There are two general approaches to the layout of form elements.
Label on preceding line (recommended)
- The label is positioned on the line above the corresponding form element(s).
- Recommended for most forms where limited space is not an issue.
- Most effective for forms that are composed of questions or the form is a questionnaire.
- The label that designates grouped items such as radio buttons and checkboxes, should also appear on the line above the group.

Label on same line
- The label is positioned to the left of the corresponding form field(s).
- Recommended for small forms where space is a factor and the objective for the page design is to minimise vertical scrolling.
- Labels positioned to the left of the input element should be right aligned against the input field margin.
- The label that designates grouped items such as radio buttons and checkboxes is also placed to the left of the group elements.

7.3.3 Form input elements
This section describes the use of form input elements.

Checkboxes
Checkboxes are used when multiple input selections may be required.
- Checkboxes are usually laid out vertically (or in multiple columns). For two checkboxes consider placing them in a single row (eg for Yes No).
- The labels for each checkbox should always placed to the right of the checkbox.
- There should be a meaningful label associated with the group.

Radio buttons and groups
Radio buttons are used to select one item from a set of items.
- They can be used where a single mandatory response is required.
- Radio buttons are usually laid out vertically.
- If there are two or three radio buttons (with short labels), consider placing them in a single row.
- There should be a meaningful label associated with the radio button group. The labels for each radio button are always placed to the right.
- If it is determined that the user is required to make an active choice, then the radio button group should not have a default selection. In this situation the label for the radio button group should be marked as a required field.
- When there are a large number of items (ie greater than 7), consider a multi-row select list or drop-down select list.

Select list (drop down)
Select lists (drop down) are used for selecting one item from a set of items.
- Select lists must have a label either to the left or above the input field.
- An alternative to consider for a large numbers of items is the select list (multi-row).
- If it is determined that the user needs to make an active choice, then provide a non-selectable prompt. The recommended text is 'Please select'. This guideline also applies if the field is mandatory.
• If there is no logical default value and the information is not required, set the default to a blank value or value indicating no selection. For example 'Not selected'.

• The ordering of items should take into account results of analysis, generally alphabetical or numerical.

• If a select list is used for a very large set of items, it is recommended that frequently used items be located at a distinct subgroup at the beginning of the list. If this approach is taken, a non-selectable title for each subgroup should be included.

Select list (multi-row)
Select lists (with multiple rows visible) can be used for selecting single or multiple values from a set of values.
• An alternative to a select list (multi-row) is a column or grid of checkboxes.

Text field
Text input fields are used for single data field entry.
• Text input fields must have a label either to the left or above the input field.

• Try to match visible lengths of fields to repository data length, where appropriate. Text fields can indicate data length if necessary.

• Text fields should always be preceded by the associated label. This keeps the label and field in close proximity for those using screen magnifiers. Exceptions occur when there is limited space to provide a literal label. In this case, the TITLE attribute for the input field can be used instead of an explicit label.

7.3.4 Form related tags

Tag FIELDSET
This enables the creation of a logical group of fields following a FIELDSET opening tag. For example:
<fieldset>logically grouped form fields</fieldset>

Tag LEGEND
This enables the labelling of a logical group of fields contained within a FIELDSET tag. For example:
<legend>Customer support</legend>

 Tag LABEL
Wrapping the form element and associated label text within the LABEL tag, associates the element and label as well as providing a larger input area (selecting the label will activate the element, except in Internet Explorer). For example:
<label for="product1">
<input type="radio" name="rbutton" value="product1" id="product1" />
Product1
</label>

7.3.5 Mandatory fields
A web form should provide a consistent method for indicating what the minimum completion requirements are for the form. This avoids any potential ambiguity for the user about what fields need to be completed on a form.

There basic approaches are to:
A. indicate mandatory fields (preferred method)

B. indicate optional fields

**Approach A**

The form begins with a statement explaining what the minimum completion requirements are. The statement may vary slightly depending on the nature of the information requested. Typical statements are:

- Mandatory fields are marked with *
- Answer all questions marked with a *

If there are no mandatory fields on the web, the standard statement still should be displayed to avoid any ambiguity. The statement should be located immediately before the first form heading or form element (if there is no heading on the page).

The mandatory field indicator * needs to be accessible by a screen reader. For this reason, a GIF image depicting a red asterisk should be used, instead of an asterisk as HTML. The image should be placed to the left of the field label.

The GIF image should contain the alt-text similar to the following:

```
<img src="asterisk.gif" alt="This information is required">
```

OR

```
<img src="asterisk.gif" alt="This information is required">
```

The rationale for the placement, is that the screen reader will announce that ‘This information is required’ before the field label is announced. If a HTML asterisk is used, the screen reader will announce the asterisk as ‘asterisk or ‘star’.

---

**Your contact details**

*Name:*

*Email address:*

*Phone number:*

---

**Approach B**

The form begins with a statement explaining the minimum completion requirements are. Typical statement is:

All fields are mandatory unless otherwise indicated

### 7.3.6 Form data validation

It is essential to avoid invalid data by using an appropriate form validation technique. This is achieved by using either server-side validation or browser based validation (ie JavaScript).

**Server-side validation**

Server-side validation is used to ensure input data is validated. When errors are found, the approach can also be leveraged to effectively present the errors to the user. A suggested method is:

- Start with the original page with previously entered form content.
- Add the fields that are affected by errors as bullet points in a list at the top of the page.
- Link each item in the list to a target anchor adjacent to or preceding the affected field.
• Display the error message in red text to the right of the field’s label (preferably), or on the preceding line.

Error messages should be clear, concise, and avoid technical jargon. They should:
• notify the user that there is a problem
• explain what the problem is
• provide an action to fix it (if not obvious).

The following mock-up provides an illustration of the approach:

![Warning symbol] Sorry, but we’ve found problems with:
• Your name; and
• Your e-mail.

Enquiry form

* Preferred contact
  - Email
  - Phone
  - Fax
  - Post

* Name Your name can't contain numbers. Please check and fix this.

E-mail Your preferred contact method is e-mail. Please change it or type in a valid e-mail address.

Contact number

Please provide area code e.g. (02) 1234 1234

Telephone

Fax

Mobile

Browser-based validation

Browser-based (i.e., client-side) validation refers to the validation of form input data using JavaScript. This approach should be used with discretion. The following are appropriate situations:
• need to provide an immediate response to the user
• need to reduce the load on a web or application server

When used, the popup window should only display one error message at a time. The rationale for discretion is that when the popup window is closed, the user has to remember the error and suggested remedy. This can be a problem for people with short-term memory issues.

7.3.7 Privacy for form data

The Privacy and Personal Information Protection Act 1998 established safeguards to protect all personal information held by government agencies from 1 July 2000. Personal information is any information that relates to an identifiable person.

The Department is obliged to meet the requirements of the legislation in relation to collection, storage, use and disclosure of personal information.

The Privacy Code of Practice is available online at

Further information

http://www.formsthatwork.com/
http://www.accessify.com/tutorials/better-accessible-forms.asp
http://diveintoaccessibility.org/day_28_labeling_form_elements.html
http://www.webaim.org/techniques/forms/
7.4 Tables

Guideline

- Use guidelines when displaying information using tables or a tabular layout.

Description

Tables:

- Column headings and row labels should be in the same text size as that of the table data, but can use emphasised text.
- HTML Headings (eg H2, H3) should not be used to define the table column headings and row labels.
- Column headings should have the same alignment as column data.

Rationale

- The key rationale behind the data contained within a table is to allow a natural grouping of ideas/information that can be conveyed in a clear and concise manner.

Further information


Style manual for authors, editors and printers - sixth edition; ISBN 0 7016 3648 3 (paperback); ISBN 0 7016 3647 5 (hardback)

7.5 Acronyms and abbreviations

HTML provides semantic tags that identify acronyms and abbreviations. These provide a visual cue of a dashed line beneath the acronym or abbreviation, affording users to place their cursor over it. Once the cursor is over the acronym or abbreviation, any contents of the title attribute will appear as a tooltip. For example:

```html
<acronym title="Electronic Casual Pay Claims">ECPC</acronym>
```

When the user places their cursor over ECPC, it will pop up a tooltip that displays ‘Electronic Casual Pay Claims’.

7.6 Use of JavaScript

7.6.1 Recommended uses

Scripting languages such as JavaScript can add interactivity and conditional behaviour to web pages. For example:

- create dynamic menus
- change the contents of pages based on certain conditions
- perform form field validation

Approaches to using JavaScript in websites (including web applications):

<table>
<thead>
<tr>
<th>Situation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor form validation</td>
<td>Date checking, fields coded, check boxes checked and date validation. Note: These edits still need to be performed at the server end, for users who have scripting turned off or non JavaScript compatible web browsers</td>
</tr>
</tbody>
</table>
In general, browser-based validation should be minimised. If used it should be limited to checking of mandatory fields. Business rule or logic checks should be performed on the server. Any client-side validation should be replicated on the server to allow functionality where JavaScript is disabled.

Sites should follow the recommended coding of popup windows to ensure accessibility of content. Refer to section ‘Popup and spawning windows’ elsewhere in document for more information.

Resizing of windows should be enabled to allow screen magnifiers to function.

JavaScript can be used to provide dynamic show/hide behaviour for form elements or other page content.

The use of JavaScript to visually enable and disable (eg greying out) interactive page elements should be used with due consideration.

Further information:
http://www.webdevelopersjournal.com/articles/cross_browser/javascript.html
http://www.oreillynet.com/javascript/

### 7.6.2 Popup windows using JavaScript

**Guideline**
- Where popup windows are used, ensure that: popup windows are coded in an accessible way; and ensure that users who do not have JavaScript are still able to access the content.

**Description**
A popup window can be opened by using HTML or JavaScript. The following applies if a popup window is opened.
- Popup windows should not be the same size as the parent window. This has the potential to confuse the user, as they can be left wondering what happened to the main browser window.
- Popup windows should be reused wherever possible by naming the target attribute. For example; all help windows may have the same name (target="helpWindow").
- The user should always be able to resize a popup window.

**Example**
If JavaScript is enabled the link_popup() function is triggered, return false prevents any further actions being triggered by the link. In the absence of JavaScript the href/target combination will be triggered.

```html
<a href="http://example.com" target="_blank" onclick="link_popup(this); return false">pop me up</a>
```

**Rationale**
- Pure JavaScript popup windows breach Web Content Accessibility Guidelines - checkpoint 10.1. "Until user agents allow users to turn off spawned windows, do not cause popups or other windows to appear and do not change the current window without informing the user".
- In addition users who do not have JavaScript available will also miss out on content provided in JavaScript based popup windows alone.

**Further information**
http://www.alistapart.com/articles/popuplinks/ - Accessible Popup Links
7.6.3 Accessibility considerations

Guideline

- Ensure that important (i.e., essential) page functionality is accessible if JavaScript is not available (e.g., turned off) in the user agent or browser.

The following WCAG 1.0 checkpoints are relevant to JavaScript:

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.3</td>
<td>Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported.</td>
</tr>
<tr>
<td>8.1</td>
<td>Ensure that scripts and applets that provide the only source of important functionality are directly accessible or compatible with assistive technologies.</td>
</tr>
<tr>
<td>11.4</td>
<td>If a page cannot be made accessible, construct an equivalent accessible page (use if appropriate).</td>
</tr>
</tbody>
</table>

Further information:

- [http://tom.me.uk/scripting/](http://tom.me.uk/scripting/) - practical examples of combining JavaScript and accessibility
- [http://www.w3.org/TR/WCAG10-HTML-TECHS/#directly-accessible-scripts](http://www.w3.org/TR/WCAG10-HTML-TECHS/#directly-accessible-scripts) - external link - W3C Techniques: Direct accessibility of scripts:
- [http://www.jimthatcher.com/webcoursea.htm](http://www.jimthatcher.com/webcoursea.htm) - Jim Thatcher course: scripts and applets

7.7 Using XHTML

The eXtensible Hypertext Markup Language (XHTML) is the re-formulation of HTML as an XML application. XHTML reinforces the HTML 4.01 current principles, especially the detachment of document structure from presentation and issues concerning accessibility, and aggregates several of the basic XML concepts such as:

- Requiring adherence to a variety of syntax and semantic rules like the "well-formed" idea.
- Reinforcing the reliability and fidelity through validation of documents.

The World Wide Web Consortium (W3C) defines XHTML as ‘a family of current and future documents types and modules that reproduce, subset, and extend HTML, reformulated in XML’. These documents types are devised to work in conjunction with XML-based user agents.

XHTML can be used either with cascading style sheets (CSS) to attain presentation goals or with Extensible Stylesheet Language (XSL) to allow transformations.

There are three flavours of XHTML 1.0:

<table>
<thead>
<tr>
<th>Variant</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>XHTML 1.0 Strict</td>
<td>Provides a clean structural mark-up, free of any markup associated with layout. It requires Style Sheet language to achieve presentation goals</td>
</tr>
<tr>
<td>XHTML 1.0 Transitional</td>
<td>The transitional DTD supports most of the standard HTML 4 tags and attributes, so it can be used to add some layout adjustments through HTML presentation features.</td>
</tr>
<tr>
<td>XHTML 1.0 Frameset</td>
<td>Enables the use of HTML frames to break up the browser window into two or more frames</td>
</tr>
</tbody>
</table>

XHTML must conform to basic XML syntax and it requires some important technical practices including:

- All document types must be declared via the correct DOCTYPE declaration
• The structure of a conforming document must contain: the DOCTYPE declaration, an html
element with the XHTML namespace declared, a head element including the title element, and a
body element.
• All elements and attribute names must be written in lower case, and that all attribute values must
be quoted.
• All non-empty elements must be terminated with a closing tag.
• All empty elements must be terminated with a trailing slash.

XHTML 1.0 is a redesign of the "HTML 4" as an XML application, and therefore an XHTML document
must be well-formed and must adhere to basic XML syntax. Also, XHTML 1.0 inherited the three
DTDs (Document Type Definition) model of HTML 4: Strict, Transitional, and Frameset. The DTD to
which it conforms is declared at the beginning of the document. Each DTD may be recognized by a
unique label called a Formal Public Identifier, or FPI. For example:

```xml
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"Http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

Further information

- [Http://www.w3.org/MarkUp/](http://www.w3.org/MarkUp/)
- [Http://xml.coverpages.org/xhtml.html](http://xml.coverpages.org/xhtml.html)
- [Http://webreference.com/xml/reference/xhtml.html](http://webreference.com/xml/reference/xhtml.html)

### 7.8 Metadata

Metadata is information about web pages and their content. It is used to:

• provide information about the content to search engines, which then index the pages to assist
  people searching for information on that topic
• enable a range of content life-cycle management processes, i.e. by specifying the expiry dates
  content can be easily maintained or archived.

It is not visible in the web browser when the page loads but can still be seen if the user chooses to
view the page in Source mode.

The Australian Government Locator Service (AGLS) is an Australian metadata standard already
mandated for use within Commonwealth Government agencies and NSW has also agreed to adopt
the standard. Therefore, all Departmental websites are committed to implementing this standard. For

Note: Meta tags should not be used to perform automatic page redirections, as access technologies
cannot interpret the content before the redirection takes place.

According to government standards, the following metadata should be included:

<table>
<thead>
<tr>
<th>AGLS Element</th>
<th>Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandatory for all records</strong></td>
<td></td>
</tr>
<tr>
<td>Creator</td>
<td>Mandatory for all resources</td>
</tr>
<tr>
<td>Title</td>
<td>Mandatory for all resources</td>
</tr>
<tr>
<td>Date</td>
<td>Mandatory for all resources</td>
</tr>
<tr>
<td><strong>Mandatory under specific circumstances (Conditional)</strong></td>
<td></td>
</tr>
<tr>
<td>Publisher</td>
<td>Mandatory except for services</td>
</tr>
<tr>
<td>Availability</td>
<td>Mandatory for offline resources ie no Identifier element</td>
</tr>
<tr>
<td>Identifier</td>
<td>Mandatory for online resources</td>
</tr>
<tr>
<td>Subject</td>
<td>Mandatory if no Function element</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Function</td>
<td>Mandatory if no Subject element</td>
</tr>
<tr>
<td></td>
<td>Mandatory for <strong>services</strong></td>
</tr>
<tr>
<td><strong>Optional</strong></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Optional</td>
</tr>
<tr>
<td>Audience</td>
<td>Optional</td>
</tr>
<tr>
<td>Contributor</td>
<td>Optional</td>
</tr>
<tr>
<td>Coverage</td>
<td>Optional</td>
</tr>
<tr>
<td>Description</td>
<td>Optional</td>
</tr>
<tr>
<td>Format</td>
<td>Optional</td>
</tr>
<tr>
<td>Language</td>
<td>Optional</td>
</tr>
<tr>
<td>Mandate</td>
<td>Optional</td>
</tr>
<tr>
<td>Relation</td>
<td>Optional</td>
</tr>
<tr>
<td>Rights</td>
<td>Optional</td>
</tr>
<tr>
<td>Source</td>
<td>Optional</td>
</tr>
</tbody>
</table>
8 Accessibility guidelines

8.1 Accessible design checklist

The following provides an informal checklist (non-exhaustive):

1. Turn off graphics. Make sure you can understand and navigate the site with only the supplied alt text.
2. Turn off style sheets. Make sure your pages are still readable without style sheet formatting.
3. Set the text zoom to its maximum value. Make sure your text resizes, and that your page layout can accommodate large text.
4. Resize your browser window. Make sure the layout holds up to different window widths.
5. Navigate your site from the keyboard. Make sure you can access all navigation and form elements without using a mouse. Make sure you cycle through links in a logical order. Verify that the text of your links makes sense when read out of context.

8.2 Categorised guidelines

This section summarises commonly used WCAG 1.0 checkpoints. They have been categorised to provide a quick reference for content authoring and development activities.

Refer to W3C ‘Checklist of checkpoints for Web Content Accessibility Guidelines 1.0’ for further information: http://www.w3.org/TR/WAI-WEBCONTENT/full-checklist.html.

8.2.1 Content related

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Provide an equivalent text description for all non-text elements on a page (eg images).</td>
</tr>
<tr>
<td>1.3</td>
<td>Provide an audio description of the visual information in multimedia presentations.</td>
</tr>
<tr>
<td>3.7</td>
<td>Ensure quotations are marked up with quotation elements.</td>
</tr>
<tr>
<td>4.2</td>
<td>Specify the expansion of each abbreviation or acronym in a document where it first occurs.</td>
</tr>
<tr>
<td>2.1</td>
<td>Ensure information is not conveyed by colour alone.</td>
</tr>
<tr>
<td>2.2</td>
<td>Ensure that foreground and background colour combinations provide sufficient contrast.</td>
</tr>
<tr>
<td>12.3</td>
<td>Divide large blocks of information into smaller and more logical groups where appropriate.</td>
</tr>
<tr>
<td>11.4</td>
<td>If a page cannot be made accessible, construct an equivalent accessible page.</td>
</tr>
<tr>
<td>13.1</td>
<td>Clearly identify the target of each link. This is only required for help popup links where the TITLE attribute text states ‘opens in new window’ or similar.</td>
</tr>
<tr>
<td>14.1</td>
<td>Use the clearest and simplest language appropriate for a site’s content.</td>
</tr>
</tbody>
</table>

8.2.2 Mark-up related
3.5 Use header elements to convey structure.

13.4 Use navigational elements in a consistent manner.

3.6 Mark up lists and list items properly.

13.2 Provide information about pages and sites in metadata.

4.1 Clearly identify changes in the natural language of a document's text and any text equivalents (eg captions).

4.3 Identify the primary natural language of a document.

7.5 Do not use markup to redirect pages automatically

### 8.2.3 Tables

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>For data tables, identify row and column headers.</td>
</tr>
<tr>
<td>5.2</td>
<td>For complex data tables, use mark-up to associate data cells and header cells.</td>
</tr>
<tr>
<td>5.3</td>
<td>Ensure that information laid out using tables make sense when linearised, or provide an alternative equivalent.</td>
</tr>
<tr>
<td>5.4</td>
<td>If a table is used for layout, do not use any structural markup for the purpose of visual formatting.</td>
</tr>
<tr>
<td>5.5</td>
<td>Provide summaries for tables.</td>
</tr>
<tr>
<td>5.6</td>
<td>Provide abbreviations for header labels.</td>
</tr>
</tbody>
</table>

### 8.2.4 Forms and interactive elements

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4</td>
<td>For scripts and applets, ensure that event handlers are input device independent.</td>
</tr>
<tr>
<td>9.2</td>
<td>Ensure that any element that has its own interface can be operated in a device-independent manner.</td>
</tr>
<tr>
<td>9.3</td>
<td>Use logical event handlers in scripts.</td>
</tr>
<tr>
<td>9.4</td>
<td>Create a logical tab order through links, form controls and objects.</td>
</tr>
<tr>
<td>10.2</td>
<td>Properly position the labels of form controls.</td>
</tr>
<tr>
<td>12.4</td>
<td>Associate labels explicitly with their controls.</td>
</tr>
</tbody>
</table>

### 8.2.5 Template / stylesheet

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>When an appropriate markup language exists, use markup rather than images to convey information.</td>
</tr>
<tr>
<td>3.2</td>
<td>Ensure a DOCTYPE declaration is included at the beginning of the document.</td>
</tr>
<tr>
<td>3.3</td>
<td>Use style sheets to control layout and presentation.</td>
</tr>
<tr>
<td>3.4</td>
<td>Use relative rather than absolute units in markup language and style sheet property values.</td>
</tr>
<tr>
<td>5.4</td>
<td>If a table is used for layout, do not use any structural markup for the purpose of</td>
</tr>
</tbody>
</table>
14.3 Create a style of presentation that is consistent across pages.
6.1 Organise documents so they may be read without style sheets.

8.2.6 Additional

<table>
<thead>
<tr>
<th>Checkpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>Do not cause the screen to flicker.</td>
</tr>
<tr>
<td>7.2</td>
<td>Do not cause content to blink.</td>
</tr>
<tr>
<td>7.3</td>
<td>Do not create movement in content.</td>
</tr>
</tbody>
</table>
## 9 Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above the fold</td>
<td>‘Above the fold’ refers to the portion of a webpage visible in the browser window when the page first loads. An equivalent web specific term is ‘before-the-scroll’.</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Accessibility means that the Web (including intranets) is designed so that people with disabilities and impairments can perceive, understand, navigate, and interact with it effectively.</td>
</tr>
<tr>
<td>Acrobat</td>
<td>Acrobat is part of a set of applications developed by Adobe to create and view PDF files. Acrobat is used to create the PDF files, and the freeware Acrobat Reader is used to read the PDF files.</td>
</tr>
<tr>
<td>ALT-text</td>
<td>ALT-text (or more correctly ALT-attribute) is part of the image source tag in HTML. It is used so if visitors choose not to view graphic images on your web pages, the alternative text will be shown.</td>
</tr>
<tr>
<td>Browser</td>
<td>The software used to view, manage, and access web pages by interpreting hypertext and hyperlinks.</td>
</tr>
<tr>
<td>Cookie</td>
<td>A cookie is a message given to a web browser by a web server. The purpose of cookies is to identify website users/visitors and possibly prepare customised web pages for the visitor.</td>
</tr>
<tr>
<td>CSS</td>
<td>CSS is an abbreviation for Cascading Style Sheet, a feature of HTML developed by the W3C. CSS allows the presentation of web page elements (eg text, headings, images) to be defined separately from the content.</td>
</tr>
<tr>
<td>Forms</td>
<td>Forms or more correctly ‘web forms’, are HTML tags that define and label text-entry boxes, check boxes, radio buttons, and/or drop-down menus to create on-screen forms for collecting information from the user.</td>
</tr>
<tr>
<td>FTP</td>
<td>Acronym for File Transfer Protocol. FTP allows you to copy or send files one computer to another via the Internet.</td>
</tr>
<tr>
<td>GIF</td>
<td>Acronym for Graphics Interchange Format. GIF images display up to 256 colours.</td>
</tr>
<tr>
<td>Gradient</td>
<td>A gradient is a gradual transition of colours. Many metallic images are gradients. Web images that use gradient fills as a special effect should be saved in a JPEG rather than a GIF format.</td>
</tr>
<tr>
<td>HTML</td>
<td>Abbreviation for HyperText Markup Language; a cross-platform text-formatting system for creating web pages.</td>
</tr>
<tr>
<td>Hyperlink</td>
<td>A hyperlink (also called a link), is a connection between one page of a hypertext document to another. This destination can either be a web page on the same site, or a web page located on another site.</td>
</tr>
<tr>
<td>Hypertext</td>
<td>Hypertext is any text that can be chosen by a reader and which causes another document to be retrieved and displayed.</td>
</tr>
<tr>
<td>Image map</td>
<td>An image map is a single graphic image containing multiple, clickable hyperlinks.</td>
</tr>
<tr>
<td>Information architecture</td>
<td>Structural design of the information space to facilitate intuitive access to content.</td>
</tr>
<tr>
<td>ISO</td>
<td>International Standards Organisation.</td>
</tr>
<tr>
<td>JavaScript</td>
<td>JavaScript is a scripting language for use on web pages.</td>
</tr>
<tr>
<td>Kilobyte</td>
<td>A kilobyte is a storage unit capable of storing 1,024 bytes of information.</td>
</tr>
<tr>
<td>Lossless compression</td>
<td>Lossless compression refers to a data compression technique where the file quality is preserved and no data is lost. Lossless compression is commonly used.</td>
</tr>
<tr>
<td><strong>Lossy compression</strong></td>
<td>A term used to refer to a technique of shrinking file sizes by giving away some precision of detail. JPEG is an example of a file that is compressed this way.</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>PDF</strong></td>
<td>Abbreviation for Portable Document Format. Files can be downloaded via the web and viewed page by page, provided the user is computer has installed the necessary plug-in which can be downloaded from Adobe's own website.</td>
</tr>
<tr>
<td><strong>Plug-In</strong></td>
<td>A software extension that provides added capabilities to the browser, for purposes such as viewing, hearing, or saving specially formatted files.</td>
</tr>
<tr>
<td><strong>PNG</strong></td>
<td>Stands for Portable Network Graphics format. PNG is used for lossless compression and displaying images on the web.</td>
</tr>
<tr>
<td><strong>QuickTime</strong></td>
<td>Quick Time is the Apple technology that allows video, digitized sound and music, 3D, and virtual reality to be viewed on your website. It's available for Macintosh and Windows-based computers.</td>
</tr>
<tr>
<td><strong>RGB</strong></td>
<td>Abbreviation for the colours Red-Green-Blue. For example, the RGB abbreviation for the colour red shown below is 255-0-0.</td>
</tr>
<tr>
<td><strong>Sans serif</strong></td>
<td>A style of typeface that means ‘without feet’. Common sans serif typefaces include Arial and Verdana.</td>
</tr>
<tr>
<td><strong>Saturation</strong></td>
<td>The colour intensity of an image. An image high in saturation will appear to be very bright. An image low in saturation will appear to be duller and more neutral.</td>
</tr>
<tr>
<td><strong>Serif</strong></td>
<td>A style of typeface that has &quot;little feet.&quot; Common serif typefaces include Times Roman and Garamond.</td>
</tr>
<tr>
<td><strong>SMIL</strong></td>
<td>Synchronized Multimedia Integration Language (SMIL) was developed to synchronise the display of audio, video, text and graphics in web-based presentations.</td>
</tr>
<tr>
<td><strong>Typeface</strong></td>
<td>A typeface contains a series of fonts. For example, the typeface Arial contains the fonts Arial, Arial Bold, Arial Italic and Arial Bold Italic.</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td>URL is the abbreviation for Uniform Resource Locator and is an address referring to a document on the Internet.</td>
</tr>
<tr>
<td><strong>Usability</strong></td>
<td>The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use</td>
</tr>
<tr>
<td><strong>User experience</strong></td>
<td>User experience is a term used to describe the overall experience and satisfaction a user has when using a product or system.</td>
</tr>
<tr>
<td><strong>W3C</strong></td>
<td>World Wide Web Consortium (W3C) is an organisation which develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential.</td>
</tr>
<tr>
<td><strong>XHTML</strong></td>
<td>Abbreviation for Extensible Hypertext Mark-up Language and is a hybrid of XML and HTML. Web pages designed in XHTML should look the same across all platforms.</td>
</tr>
<tr>
<td><strong>XML</strong></td>
<td>Abbreviation for Extensible Mark-up Language.</td>
</tr>
</tbody>
</table>
10 References

Please note: the references in this section are not complete.

Louis Rosenfeld and Peter Morville, Information Architecture for the World Wide Web, 2nd edition
W3C ‘Checklist of Checkpoints for Web Content Accessibility Guidelines 1.0’ http://www.w3.org/TR/WAI-WEBCONTENT/full-checklist.html
David Miller, Zebra Tables: http://www.alistapart.com/articles/zebratables/
Web Guidelines for public facing NSW Government Agency’s websites (version 0.3)
### Detailed changes

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision details</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>Updated with feedback from:</td>
</tr>
</tbody>
</table>