THE UNIVERSITY OF NEW SOUTH WALES

UNSW Websites: Accessibility Guidelines

UNSW IT SERVICES

This document is attached to, and should be read in conjunction with:

The UNSW Website Policy

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It was reviewed by the ITC and Policy Advisory Committees, and endorsed by the Academic Board at its meeting of 5 October, 2004.

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Introduction

The UNSW Web Accessibility Checklist is based on the W3C Web Content Accessibility Guidelines 1.0 (ref) and is intended to give UNSW web developers a set of focused guidelines to follow when creating websites.

The content of the W3C website is vast and often confusing. This document attempts to summarize and simplify the content to facilitate an 'at-a-glance" viewing. It has been ordered by Priority Level mode, with each Priority colour coded, with the relevant Guidelines and its accompanying checkpoint number.

There are different ways to view the W3C Guidelines. It can be viewed in terms of the Guidelines in numerical order, viewed via the Priority Levels, the Core Techniques, or the In General, Use of Images, Tables, Frames, Applets-Scripts and Multimedia headings.

To facilitate the search for known guidelines directly, a numerical view of the W3C Guidelines 1.0 has been included.

Some Guidelines can appear in more than one Priority, and each Guideline can have up to 9 individual Checkpoints but the Checkpoints themselves will only appear in one Priority. For example: Guideline 2 Checkpoint ***2.1*** is a ***Priority 1*** guideline and Guideline 2 Checkpoint ***2.2*** is a ***Priority 3***.

Not all Priority 1, 2 or 3 Guidelines have been recommended. This is due to the fact that they are 5 years old and developments in technology have, in some cases, superseded the Guidelines. The selection of the Guidelines that are recommended in this document is intended to reflect the current state of web technologies and is a formalisation of guidelines that were selected for accessibility compliance of the Corporate Website.

Since web content is in constant flux, it has been recognised that not all of the Priority 2 and 3 Guidelines can be met.

Therefore, compliance levels have been set as:

Standard- Compulsory.
Guideline- Not compulsory but if possible, include.
N/A- Not Applicable.

Checking for Compliance

Compliance, approved or otherwise, from automated test engines should not be taken as having met the W3C guidelines. A number of methods should be used to check your site for compliance.
Automated tools such as Bobby (www.cast.org),
Wave (http://www.wave.webaim.org),
Aprompt (http://aprompt.snow.utoronto.ca/),

Lift (http://www.usablenet.com/),
can provide an indication of compliance and possible problems but should not be relied upon. The majority of problems identified require user checks which rely on judgement and knowledge. Other checking methods that should be considered are:
- check with different browsers e.g. Opera, Mozilla, Lynx
- use the accessibility options on the PC\MAC i.e. high contrast, no images
- check if possible using a screen reader
- ask users with disabilities to check accessibility

The checklist also identifies the primary roles in Web Development and which priorities are relevant to which role:
Visual Designer
Encoding – Web Programmer- HTML Editor
Content Writer

Web Accessibility

While the primary focus of web accessibility is access by users who have disabilities, in the larger scope of universal design it should include benefits for all users. In designing a user interface that is effective, efficient and satisfies the users' needs, a uniform approach should be adopted to address issues such as:

Page Structure	-Can visitors make sense of the site on first visit?
Navigation	-Can they navigate through the site with minimal effort? - Are the navigation mechanisms easily located? - Are they consistent throughout the site? - Are they intuitive? – The user shouldn't have to guess where to find things.
Presentation	-Is the design and layout consistent and predictable throughout? - Are the font sets easily readable? - Is there sufficient colour contrast?
Content	-Is the content suitable for the intended audience? Is it easily understood and organised effectively? -Can they find what they need and complete their tasks with minimal effort. -Will users want to return to the site in future?

Guideline Priorities

The Web Content Accessibility Guidelines v1.0 classifies guidelines under the following 3 Priority Areas:

Each checkpoint has a priority level assigned by the Working Group based on the checkpoint's impact on accessibility.

Priority 1

A Web content developer ***must*** satisfy this checkpoint. Otherwise, one or more groups will find it impossible to access information in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents.

Priority 2

A Web content developer ***should*** satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document. Satisfying this checkpoint will remove significant barriers to accessing Web documents.

Priority 3

A Web content developer ***may*** address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access information in the document. Satisfying this checkpoint will improve access to Web documents.

(Priority 1) ***In General***	***Compliance level***	***Disability Group affected:*** Vision Impaired Hearing Impaired Cognitive\ Learning Disability Physical Disability	***Primary Role*** Visual Designer Encoder -Programmer -HTML Editor Content Writer	***Comments***
Guideline 1 ***Provide equivalent alternatives to auditory and visual content.*** Checkpoint 1.1 Provide a text equivalent for every non-text element (e.g., via "alt", "longdesc", or in element content). ***This includes***: images, graphical representations of text (including symbols), image map regions, animations (e.g., animated GIFs), applets and programmatic objects, ascii art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds (played with or without user interaction), stand-alone audio files, audio tracks of video, and video.	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	Ideally only apply alt-tags to images which represent meaningful interaction with the website. E.g. Assistive technologies will read all alt-tags and interaction with the website can actually be impaired if non meaningful content is also tagged such as borders etc. Null Alt tags indicating that images have been used as spacers will be ignored by screen readers Such judicious use of alt-tags will provide a superior experience for users utilizing assistive technologies but will cause automated page checkers such as Bobby to complain that a page is not accessible. For vision impaired users, allows screen reader technology such as JAWs, Windows Eyes, and ZoomText to read alt tags associated with non text element. For the hearing impaired, text equivalent for elements such as sound files allow users in this group to maximize their web experience. http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent

Guideline 2 ***Don't rely on colour alone.*** Checkpoint 2.1 Ensure that all information conveyed with colour is also available without colour, for example from context or markup.	Standard	Vision	Visual Designer	For vision impaired users who may be colour blind. For example, an online quiz that shows a correct answer in the colour green is not as accessible as having words describing the correct answer. E.g. Who was the first Prime Minister of Australia? A: Authur William Fadden B: Harold Holt C: Edmund Barton - is not as accessible as ***The correct answer is Edmund Barton*** http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Guideline 4 ***Clarify natural language usage*** Checkpoint 4.1 Clearly identify changes in the natural language of a document's text and any text equivalents (e.g., captions).	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	If web pages contain multiple languages such as English and French, clear indications of the change in language allow speech synthesizers to automatically switch to the new language. The natural language of content may be indicated with the "lang" attribute in HTML and the "xml:lang" attribute in XML http://www.w3.org/TR/WCAG10-HTML-TECHS/#changes-in-lang
Guideline 6 ***Ensure that pages featuring new technologies transform gracefully.*** Checkpoint 6.1 Organize documents so they may be read without style sheets. For example, when an HTML document is rendered without associated style sheets, it must still be possible to read the document.	Standard	Vision Cognitive	Encoder -Programmer -HTML Editor	Allows screen reader technology and users with learning impairment to be able to access and comprehend data if associated style sheets are not available. In conjunction with ***Priority 1*** Guideline 14- ***Ensure that documents are clear and simple-*** Checkpoint 14.1. Or provide alternative CSS which present table data and page data in a linearised text only fashion. http://www.w3.org/TR/WCAG10-CSS-TECHS/#Generated
Checkpoint 6.2 Ensure that equivalents for dynamic content are updated when the dynamic content changes.	Standard	Vision	Encoder -Programmer -HTML Editor	A static equivalent should be referred as often as possible to keep it in sync with the dynamic offering. http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent

Guideline 7 ***Ensure that moving, blinking, scrolling, or auto-updating objects or pages may be paused or stopped.*** Checkpoint 7.1 Until user agents allow users to control flickering, avoid causing the screen to flicker.	Standard	Vision Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Screen readers may not be able to read elements such as flickering and scrolling text. Users with learning difficulties may also find it hard to comprehend the desired effect these elements are trying to convey. See also ***Priority 2*** Guideline 7-Checkpoint7.3 Flickering or flashing screens, while annoying, to some it can be a ***genuine*** health hazard for epilepsy sufferers and the like. Also, for example, clocks on a webpage cause an auto-refresh which triggers screen readers to re-read a page.
Guideline 14 ***Ensure that documents are clear and simple.*** Checkpoint 14.1 Use the clearest and simplest language appropriate for a site's content.	Standard	Vision Cognitive	Content Writer	Screen readers may not be able to correctly pronounce complex words, abbreviations or acronyms. Consider the language capabilities of the intended audience. While it is desirable to use the simplest words to convey meaning, it is not always possible to use “simple” language to describe everything on a website. For example, specific websites dealing in high technology, law and science may find it difficult and impractical to simplify every term, notation naming convention. Attention should be paid to the intended target audience. However, content such as instructions, requirements and descriptions should always be carefully structured, logical and clear. (e.g. would the instructions make sense if given over the telephone?) http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension
Use of images and image maps (Priority 1)				
Guideline 1 ***Provide equivalent alternatives to auditory and visual content.*** Checkpoint 1.2 Provide redundant text links for each active region of a server-side image map.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	An ***Image map*** is an image that has "active regions". When the user selects one of the regions, some action takes place -- a link may be followed, information may be sent to a server, etc. To make an image map accessible, content developers must ensure that each action associated with a visual region may be activated without a pointing device. Text is considered accessible to almost all users since it may be handled by

				screen readers, non-visual browsers, and braille readers. As you design a document containing non-textual information (images, applets, sounds, multimedia presentations, etc.), supplement that information with textual equivalents wherever possible. For complex content (charts, graphs, etc.), the text equivalent may be longer and include descriptive information. Text equivalents must be provided for logos, photos, submit buttons, applets, bullets in lists, ASCII art, and all of the links within an image map as well as invisible images used to control the layout of a page. Also provide redundant text links for any auditory elements. http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Guideline 9 Design for device-independence. Checkpoint 9.1 Provide client-side image maps instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Refer also to ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.1, Checkpoint 1.2, and Checkpoint 1.5.
Use of tables ***(Priority 1)***				
Guideline 5 Create tables that transform gracefully. Checkpoint 5.1 For data tables, identify row and column headers.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Screen readers read from left to right (linearised) on a computer screen. Therefore complex data tables would not make sense if read by a screen reader. Row and table headers need to be linked to cells to provide contextual information and care needs to be used in the design of data tables so the information makes sense when read linearly. Avoid Row Span. Screen Readers perform better with Column Span.

				See also comment for ***Priority 2*** Guideline 5-Checkpoint 5.3 See the following link for the W3C example on table design: www.w3.org/TR/WCAG10-HTML-TECHS/#identifying-table-rows-columns
Checkpoint 5.2 For data tables that have two or more logical levels of row or column headers, use markup to associate data cells and header cells.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	See above comment for ***Priority 1*** Guideline 5-Checkpoint 5.1.
Use of frames ***(Priority 1)***				
Guideline 12 Provide context and orientation information to help users understand complex pages or elements. Checkpoint 12.1 Title each frame to facilitate frame identification and navigation.	Standard	Vision	Encoder -Programmer -HTML Editor Visual Designer	Use of Frames is discouraged. Accessible technologies can only work in the current frame and therefore have to move from frame to frame to interact. E.g. data in a frame within a frame. No feedback that a change has occurred in a destination frame if the current frame remains unchanged.
Use of applets and scripts ***(Priority 1)***				
Guideline 6 Ensure that pages featuring new technologies transform gracefully. Checkpoint 6.3 Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported. If this is not possible, provide equivalent	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	If Java applications, for example, are used to convey content, then an alternate means of describing the material should be made available. If such applications are used purely for graphic and decorative effect, and are not providing informative content, the content need not be represented in an alternative form. E.g. javascript for nested menus – one of the most common uses – should

information on an alternative accessible page.				include a hyperlink from the top level menu to a page with all the nested links listed for those who cannot access nested menus. http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent
Use of multimedia ***(Priority 1)***				
Guideline 1 Provide equivalent alternatives to auditory and visual content. Checkpoint 1.3 Until user agents can automatically read aloud the text equivalent of a visual track, provide an auditory description of the important information of the visual track of a multimedia presentation.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	E.g. a CC track in a video could be provided or a transcript of auditory content.
Checkpoint 1.4 For any time-based multimedia presentation (e.g., a movie or animation), synchronize equivalent alternatives (e.g., captions or auditory descriptions of the visual track) with the presentation.	Standard	Vision Hearing	Encoder -Programmer -HTML Editor Content Writer	With Macromedia Flash MX, web developers can create content that works with assistive technologies. It supports Microsoft Active Accessibility (MSAA), content magnification, mouse-free navigation, sound synchronization, and custom colour palettes. Synchronization of slides with video and audio content can also be achieved via Quick Time or Windows Media Player technologies.
If all else fails ***(Priority 1)***				
Guideline 11 Use W3C technologies and guidelines. Checkpoint 11.4 If, after best efforts, you cannot create an accessible page, provide a link to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality),	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Content Writer	For example, create a plain text alternative with an accessible link off the main web page. Note: For text only websites, personal firewalls may block HTTP referrers.

and is updated as often as the inaccessible (original) page.			Visual Designer	

(Priority 2) ***In General***				
Guideline 2 ***Don't rely on colour alone.*** Checkpoint 2.2 Ensure that foreground and background colour combinations provide sufficient contrast when viewed by someone having colour deficits or when viewed on a black and white screen. [Priority 2 for images, Priority 3 for text].	Standard	Vision	Visual Designer	See comment for ***Priority 1*** Guideline 2-Checkpoint 2.1
Guideline 3 ***Use markup and style sheets and do so properly.*** Checkpoint 3.1 When an appropriate markup language exists, use markup rather than images to convey information.	Guideline	Vision Hearing	Content Writer Encoder -Programmer -HTML Editor	Structure vs. presentation When designing documents, content developers should try and identify the desired structure for their documents before thinking about how the documents will be graphically presented to the user. Distinguishing the structure of a document from how the content is presented offers a number of advantages, including improved accessibility, manageability, and portability. For instance, many developers consider that a horizontal line communicates a structural division. This may be true for sighted users, but to unsighted users or users without graphical browsers, a horizontal line may have next to no meaning. Use of style sheets to separate style from content is recommended e.g. so that user defined styles can be applied. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure http://www.w3.org/TR/WCAG10-CSS-TECHS/#Generated
Checkpoint 3.2 Create documents that validate to published formal grammars.	Standard	Vision	Encoder -Programmer -HTML Editor	DTD should be placed in front of documents. DTD: Document Type Description.
Checkpoint 3.3 Use style sheets to control layout and	Standard	Vision Hearing	Visual Designer	Style Sheets should be used in preference to frames. Content developers should use style sheets to style text rather than representing

presentation.		Cognitive		text in images. Using text instead of images means that the information will be available to a greater number of users (with speech synthesizers, braille displays, graphical displays, etc.). Using style sheets will also allow users to override author styles and change colours or fonts sizes more easily. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.4 Use relative rather than absolute units in markup language attribute values and style sheet property values.	Guideline	Vision	Visual Designer Encoder -Programmer -HTML Editor	For example: text moves\resizes accordingly depending on browser\screen resolution. Locked search form fields.
Checkpoint 3.5 Use header elements to convey document structure and use them according to specification.	Guideline	Vision Hearing	Encoder -Programmer -HTML Editor	See comment for ***Priority 2*** Guideline 3- ***Use markup and style sheets and do so properly -*** Checkpoint 3.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.6 Mark up lists and list items properly.	Standard	Vision Cognitive Hearing	Encoder -Programmer -HTML Editor	See comment for ***Priority 2*** Guideline 3- ***Use markup and style sheets and do so properly*** Checkpoint 3.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.7 Mark up quotations. Do not use quotation markup for formatting effects such as indentation.	Standard	Vision Hearing	Encoder -Programmer -Html editor	
Guideline 6 ***Ensure that pages featuring new technologies transform gracefully.*** Checkpoint 6.5	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	Although it is possible to make most content accessible, it may happen that all or part of a page remains inaccessible. Additional techniques for creating accessible alternatives include: 1. Allow users to navigate to a separate page that is accessible, contains

Ensure that dynamic content is accessible or provide an alternative presentation or page.			Content Writer	the same information as the inaccessible page, and is maintained with the same frequency as the inaccessible page. 2. Instead of static alternative pages, set up server-side scripts that generate accessible versions of a page on demand. 3. Provide a phone number, fax number, e-mail, or postal address where information is available and accessible. This is for sensitive data that cannot be accesed via the web e.g case studies of active legal disputes. See also ***Priority 1*** Guideline 11- ***Use W3C technologies and guidelines-*** Checkpoint 11.4
Guideline 7 Ensure that moving, blinking, scrolling, or auto-updating objects or pages may be paused or stopped. Checkpoint 7.2 Until user agents allow users to control blinking, avoid causing content to blink (i.e., change presentation at a regular rate, such as turning on and off).	Standard	Vision Hearing Cognitive	Visual Designer	Screen readers cannot read elements such as flickering and scrolling text. Users with learning difficulties may also find it hard to comprehend the desired effect these elements are trying convey.
Checkpoint 7.4 Until user agents provide the ability to stop the refresh, do not create periodically auto-refreshing pages.	Standard	Vision Cognitive	Visual Designer Encoder -Programmer -HTML Editor	Content developers sometimes create pages that refresh or change without the user requesting the refresh. This automatic refresh can be very disorienting to some users. Screen readers would re-set and start reading again from the top of the page.
Checkpoint 7.5 Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects.	Guideline	Vision Cognitive	Content Writer	See above comment for ***Priority 2*** Guideline 7- Checkpoint 7.4 It may be appropriate at times, to do so if providing necessary information e.g. advising of copyright, legal issues etc before a user enters a site. Inform the user of the destination of the re-direct.

Guideline 10 Use interim solutions. Checkpoint 10.1 Until user agents allow users to turn off spawned windows, do not cause pop-ups or other windows to appear and do not change the current window without informing the user.	Standard	Vision Cognitive	Content Writer	This may confuse screen readers and users with learning difficulties. Also re-sets screen readers. See above comment for ***Priority 2*** Guideline 7 Checkpoint 7.4 User Agents can stop pop-ups. It maybe appropriate to spawn, for example, a video in a separate window provided that the link that does so informs the user e.g. “play video in new window”
Guideline 11 Use W3C technologies and guidelines. Checkpoint 11.1 Use W3C technologies when they are available and appropriate for a task and use the latest versions when supported.	Guideline			The latest W3C technologies are available from the W3C Technical Reports and Publications page.
Checkpoint 11.2 Avoid deprecated features of W3C technologies.	Guideline		Encoder -Programmer -HTML Editor	Refers to changes of html standards over v1-v2. Text- font is deprecated – font tag superseded by CSS Browsers may not support deprecated code. For example, ***Bold*** became ***strong***.
Guideline 12 Provide context and orientation information to help users understand complex pages or elements. Checkpoint 12.3 Divide large blocks of information into more manageable groups where natural and appropriate.	Guideline	Vision Cognitive	Content Writer	A universal design issue. Allows users with visual and\or learning difficulties to be able to comprehend the data easily and efficiently with the help of screen readers or other assistive technology. See comment for ***Priority 1*** Guideline 14- ***Ensure that documents are clear and simple***- Checkpoint 14.1
Guideline 13 Provide clear navigation mechanisms Checkpoint 13.1 Clearly identify the target of each link.	Guideline	Vision Cognitive	Visual Designer Encoder -Programmer	Good link text should not be overly general; for instance "click here", says nothing about what is to be found if the link is followed. Instead of "click here", link text should indicate the nature of the link target, as in "Course Notes Accounting 1001" or "text-only version of this page".

			-HTML Editor	
Checkpoint 13.2 Provide metadata to add semantic information to pages and sites.	Standard	Vision Cognitive		Refer to UNSW Meta Data Guidelines
Checkpoint 13.3 Provide information about the general layout of a site (e.g., a site map or table of contents).	Guideline	Cognitive Vision	Content Writer Visual Designer	A consistent style of presentation on each page allows users to locate navigation mechanisms more easily and to skip navigation mechanisms to find important content. This helps people with learning and reading disabilities but also makes navigation easier for all users. Providing navigation bars, site maps, and search features all increase the likelihood that a user will reach the information they seek at your site , or avoid it when they so desire. http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 13.4 Use navigation mechanisms in a consistent manner.	Guideline	Cognitive Vision Hearing		Navigation styles and mechanisms and where and when they need to be applied are contained in the ***UNSW Visual Design Guidelines***.
Use of tables ***(Priority 2)***				
Guideline 5 Create tables that transform gracefully. Checkpoint 5.3 Do not use tables for layout unless the table makes sense when linearised. Otherwise, if the table does not make sense, provide an alternative equivalent (which may be a linearised version).	Guideline	Cognitive Vision	Encoder -Programmer -HTML Editor Content Writer	Screen readers read from left to right (linearised) on a computer screen. A table would be read cell by cell from left to right. Data in complex tables may not be properly read back to the user. Use of Table Column and Table Row Headers is highly recommended for complex data tables. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 5.4 If a table is used for layout, do not use	Guideline	Vision	Encoder -Programmer	Structural marking of tables is utilised by assistive technologies to make complex data more comprehensible.

any structural markup for the purpose of visual formatting.			-HTML Editor Content Writer Visual Designer	This allows table cells to be read back with meaning. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure

Use of frames ***(Priority 2)***				
Guideline 12 Provide context and orientation information to help users understand complex pages or elements. Checkpoint 12.2 Describe the purpose of frames and how frames relate to each other if it is not obvious by frame titles alone.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	Assists users who use screen readers, in terms of navigation. E.g. Label frames, for example; navigation frames, footer frames. See also comment for ***Priority 1*** Guideline 12- ***Provide context and orientation information to help users understand complex pages or elements-*** Checkpoint 12.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Use of forms ***(Priority 2)***				
Guideline 10 Use interim solutions. Checkpoint 10.2 Until user agents support explicit associations between labels and form controls, for all form controls with implicitly associated labels, ensure that the label is properly positioned.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	Assists users with vision impairment. Screen readers try to identify the correct text prompts by looking in the table cell immediately to the left of the cell. Well written code is essential for this to work. For example: First Name, Surname with Field, Field. It is better to have: First Name- First Name Field, Surname- Surname Field and Address- Address Line 1 Field, Address Line 2 Field. Tab structure\index should be consistent throughout the form. Use access keys to get to form fields.

Guideline 12 ***Provide context and orientation information to help users understand complex pages or elements.*** Checkpoint 12.4 Associate labels explicitly with their controls.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	A label is implicitly associated with its form control either through markup or positioning on the page. Consistent and correct labelling allows easier access to the form or data with screen reading technologies. See also above example for ***Priority 2*** Guideline 10-Checkpoint 10.2
Use of applets and scripts ***(Priority 2)***				
Guideline 6 ***Ensure that pages featuring new technologies transform gracefully.*** Checkpoint 6.4 For scripts and applets, ensure that event handlers are input device-independent.	Guideline	Physical	Encoder -Programmer -HTML Editor	E.g. Don't assume input by mouse only. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Guideline 7 ***Ensure that moving, blinking, scrolling, or auto-updating objects or pages may be paused or stopped.*** Checkpoint 7.3 Until user agents allow users to freeze moving content, avoid movement in pages.	Standard	Vision Cognitive	Visual Designer	See comment for ***Priority 1*** Guideline 7-Checkpoint 7.1 If movement in pages is conveying information it should be provided in alternate form. Consider your audience needs.
Guideline 8 ***Ensure that the user interface follows principles of accessible design: device-independent access to functionality, keyboard operability, self-voicing, etc.*** Checkpoint 8.1 Make programmatic elements such as scripts and applets directly accessible or compatible with assistive technologies [Priority 1 if functionality is important	Guideline	Vision Cognitive Hearing	Encoder -Programmer -HTML Editor Visual Designer	If an applet requires user interaction (e.g., the ability to manipulate a physics experiment) that cannot be duplicated in an alternative format, make the applet directly accessible. If an applet creates motion, developers should provide a mechanism for freezing this motion. Also, please refer to the next section for information about making audio and video presentations accessible. See comment for ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.4

and not presented elsewhere, otherwise Priority 2.]				
Guideline 9 Design for device-independence. Checkpoint 9.2 Ensure that any element that has its own interface can be operated in a device-independent manner.	Standard	Physical	Encoder -Programmer -HTML Editor	As there are a multitude of assistive technologies for users who are physically disabled in some way, this is to ensure that web interfaces do not favour one input device over another
Checkpoint 9.3 For scripts, specify logical event handlers rather than device-dependent event handlers.	Standard	Physical	Encoder -Programmer -HTML Editor	Not every user has a graphic environment with a mouse or other pointing device. Some users rely on keyboard, alternative keyboard or voice input to navigate links, activate form controls, etc. Content developers must ensure that users may interact with a page with devices other than a pointing device. A page designed for keyboard access (in addition to mouse access) will generally be accessible to users with other input devices. Designing a page for keyboard access will usually improve its overall design as well.

(Priority 3) ***In General***				
Guideline 4 Clarify natural language usage. Checkpoint 4.2 Specify the expansion of each abbreviation or acronym in a document where it first occurs.	Guideline	Vision Cognitive	Content Writer	Assists vision impaired users who use screen readers and users with cognitive disabilities. Mark up abbreviations and acronyms with ABBR and ACRONYM and use "title" to indicate the expansion:
Checkpoint 4.3 Identify the primary natural language of a document.	Guideline	Cognitive	Encoder -Programmer -HTML Editor Content Writer	It is good practice to identify the primary language of a document, either with markup (as shown below) or through HTTP headers. For example: <HTML lang=”fr”> ….rest of an HTML document written in French … </HTML> See also comment for ***Priority 1*** Guidleine 4- ***Clarify natural language usage***- Checkpoint 4.1
Guideline 9 Design for device-independence. Checkpoint 9.4 Create a logical tab order through links, form controls, and objects.	Guideline	Vision Cognitive	Content Writer	See also ***Priority 2*** Guideline 13- ***Provide clear navigation mechanisms*** - Checkpoint 13.2 and Checkpoint 13.4
Checkpoint 9.5 Provide keyboard shortcuts to important links (including those in client-side image maps), form controls, and groups of form controls.	Guideline	Vision Cognitive Physical	Encoder -Programmer -HTML Editor	See also ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.2
Guideline 10 Use interim solutions.	Guideline	Vision	Encoder	When links are grouped into logical sets (for example, in a navigation bar that

Checkpoint 10.5 Until user agents (including assistive technologies) render adjacent links distinctly, include non-link, printable characters (surrounded by spaces) between adjacent links.		Cognitive	-Programmer -HTML Editor Content Writer	appears on every page in a site) they should be marked up as a unit. Navigation bars are usually the first thing someone encounters on a page. For users with speech synthesizers, this means having to hear a number of links on every page before reaching the interesting content of a page. This is especially useful for frequent users of a website. There are several ways to allow users to bypass groups of links (as users with vision do when they see the same set on each page): • Include a link that allows users to skip over the set of navigation links. • Provide a style sheet that allows users to hide the set of navigation links. • Use the HTML 4.01 MAP element to group links, then identify the group with the "title" attribute.
Guideline 11 Use W3C technologies and guidelines. Checkpoint 11.3 Provide information so that users may receive documents according to their preferences (e.g., language, content type, etc.)	Guideline	Cognitive	Content Writer Encoder -Programmer -HTML Editor	There are a variety of strategies to allow users to select the appropriate content: 1. Include links to other versions of content, such as translations. For example, the link "Refer to the French version of this document" links to the French version. 2. Indicate content type or language through markup (e.g., in HTML use "type" and "hreflang"). 3. Use content negotiation to serve content per the client request. For example, serve the French version of a document to clients requesting French. http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Guideline 13 Provide clear navigation mechanisms. Checkpoint 13.5 Provide navigation bars to highlight and give access to the navigation mechanism.	Guideline	Cognitive	Visual Designer	See comment for ***Priority 2*** Guideline 13-Checkpoint 13.2 and ***Priority 3*** Guideline 10-Checkpoint 10.5 http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation

Checkpoint 13.6 Group related links, identify the group (for user agents), and, until user agents do so, provide a way to bypass the group.	Guideline	Cognitive	Encoder -Programmer -HTML Editor	See comment for ***Priority 2*** Guideline 13-Checkpoint 13.2 and ***Priority 3*** Guideline 10-Checkpoint 10.5
Checkpoint 13.7 If search functions are provided, enable different types of searches for different skill levels and preferences.	Guideline	Cognitive	Encoder -Programmer -HTML Editor Content Writer	http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 13.8 Place distinguishing information at the beginning of headings, paragraphs, lists, etc.	Guideline	Vision Cognitive	Content Writer	Assists vision impaired users. Screen readers can read the headings allowing the user to determine the contents without having to go through the whole paragraph or headings. http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension
Checkpoint 13.9 Provide information about document collections (i.e., documents comprising multiple pages.).	Guideline	Vision Cognitive	Content Writer	E.g. one or more documents are split across multiple pages but are only displayed one at a time. Advise users as such.
Checkpoint 13.10 Provide a means to skip over multi-line ASCII art.	Guideline	Vision Cognitive		Why would developers still use ASCII art? Screen readers will attempt to read the ASCII characters as they appear which will not make sense to someone who is vision impaired.
Guideline 14 Ensure that documents are clear and simple. Checkpoint 14.2 Supplement text with graphic or auditory	Guideline	Vision Hearing Cognitive	Content Writer Visual	See comment for ***Priority 1*** Guideline 1***- Provide equivalent alternatives to auditory and visual content***- Checkpoint 1.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension

presentations where they will facilitate comprehension of the page.			Designer	
Checkpoint 14.3 Create a style of presentation that is consistent across pages.	Guideline	Vision Cognitive		Refer to ***UNSW Visual Design Guidelines***.
Use of images and image maps (Priority 3)				
Guideline 1 ***Provide equivalent alternatives to auditory and visual content.*** Checkpoint 1.5 Until user agents render text equivalents for client-side image map links, provide redundant text links for each active region of a client-side image map.	Guideline	Vision	Encoder -Programmer -HTML Editor	See ***Priority 1*** Guideline 1-Checkpoint 1.2 See ***Priority 1*** Guideline 9- ***Design for device-independence-*** Checkpoint 9.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Use of tables ***(Priority 3)***				
Guideline 5 ***Create tables that transform gracefully.*** Checkpoint 5.5 Provide summaries for tables.	Guideline	Vision Cognitive	Encoder -Programmer -HTML Editor Content Writer	This is one method to help the comprehension of complex tables. Provide summaries for data tables. Layout tables should have none. See ***Priority 2*** Guideline 5-Checkpoint 5.3 http://www.w3.org/TR/WCAG10-HTML-TECHS/#table-summary-info
Checkpoint 5.6 Provide abbreviations for header labels.	Guideline	Vision Cognitive	Content Writer	http://www.w3.org/TR/WCAG10-HTML-TECHS/#table-summary-info

Guideline 10 Use interim solutions. Checkpoint 10.3 Until user agents (including assistive technologies) render side-by-side text correctly, provide a linear text alternative (on the current page or some other) for ***all*** tables that lay out text in parallel, word-wrapped columns.	Guideline	Vision Cognitive	Encoder -Programmer -HTML Editor Content Writer	If this is an issue, upgrade your Assistive Technologies. http://www.w3.org/TR/WCAG10-HTML-TECHS/#wrapped-text

Use of forms
(Priority 3)

Guideline 10 Use interim solutions. Checkpoint 10.4 Until user agents handle empty controls correctly, include default, place-holding characters in edit boxes and text areas.	Guideline		Encoder -Programmer -HTML Editor	http://www.w3.org/TR/WCAG10-HTML-TECHS/#forms-specific

UNSW Web Accessibility Checklist – Numerical View

This section displays the Guidelines in numerical order as they appear on the W3C website.

Guideline Priorities

The Web Content Accessibility Guidelines v1.0 classifies guidelines under the following 3 Priority Areas:Each checkpoint has a priority level assigned by the Working Group based on the checkpoint's impact on accessibility.

Priority 1

A Web content developer ***must*** satisfy this checkpoint. Otherwise, one or more groups will find it impossible to access information in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents.

Priority 2

A Web content developer ***should*** satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document. Satisfying this checkpoint will remove significant barriers to accessing Web documents.

Priority 3

A Web content developer ***may*** address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access information in the document. Satisfying this checkpoint will improve access to Web documents.

W3C Standards: ***In General (Priority 1)***	***Compliance level***	***Disability Group affected:*** Vision Impaired Hearing Impaired Cognitive\ Learning Disability Physical Disability	***Primary Role*** Visual Designer Encoder -Programmer -HTML Editor Content Writer	***Comments***
Guideline 1 ***Provide equivalent alternatives to auditory and visual content.*** Checkpoint 1.1 Provide a text equivalent for every non-text element (e.g., via "alt", "longdesc", or in element content). ***This includes***: images, graphical representations of text (including symbols), image map regions, animations (e.g., animated GIFs), applets and programmatic objects, ascii art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds (played with or without user interaction), stand-alone audio files, audio tracks of video, and video.	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	Ideally only apply alt-tags to images which represent meaningful interaction with the website. E.g. Assistive technologies will read all alt-tags and interaction with the website can actually be impaired if non meaningful content is also tagged such as borders etc. Null Alt tags indicating that images have been used as spacers will be ignored by screen readers Such judicious use of alt-tags will provide a superior experience for users utilizing assistive technologies but will cause automated page checkers such as Bobby to complain that a page is not accessible. For vision impaired users, allows screen reader technology such as JAWs, Windows Eyes, and ZoomText to read alt tags associated with non text element. For the hearing impaired, text equivalent for elements such as sound files allow users in this group to maximize their web experience. http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent

Checkpoint 1.2 Provide redundant text links for each active region of a server-side image map.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	An ***Image map*** is an image that has "active regions". When the user selects one of the regions, some action takes place -- a link may be followed, information may be sent to a server, etc. To make an image map accessible, content developers must ensure that each action associated with a visual region may be activated without a pointing device. Text is considered accessible to almost all users since it may be handled by screen readers, non-visual browsers, and braille readers. As you design a document containing non-textual information (images, applets, sounds, multimedia presentations, etc.), supplement that information with textual equivalents wherever possible. For complex content (charts, graphs, etc.), the text equivalent may be longer and include descriptive information. Text equivalents must be provided for logos, photos, submit buttons, applets, bullets in lists, ASCII art, and all of the links within an image map as well as invisible images used to lay out a page. Also provide redundant text links for any auditory elements as well. http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Checkpoint 1.3 Until user agents can automatically read aloud the text equivalent of a visual track, provide an auditory description of the important information of the visual track of a multimedia presentation.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	E.g. a CC track in a video could be provided or a transcript of auditory content.
Checkpoint 1.4 For any time-based multimedia presentation (e.g., a movie or animation),	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	With Macromedia Flash MX, web developers can create content that works with assistive technologies. It supports Microsoft Active Accessibility (MSAA), content magnification, mouse-free navigation, sound synchronization, and custom colour palettes.

synchronize equivalent alternatives (e.g., captions or auditory descriptions of the visual track) with the presentation.			Content Writer	Synchronization of slides with video and audio content can also be achieved via Quick Time or Windows Media Player technologies.
Checkpoint 1.5 Until user agents render text equivalents for client-side image map links, provide redundant text links for each active region of a client-side image map.	Guideline	Vision	Encoder -Programmer -HTML Editor	See ***Priority 1*** Guideline 1-Checkpoint 1.2 See ***Priority 1*** Guideline 9- ***Design for device-independence-*** Checkpoint 9.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Guideline 2 ***Don't rely on colour alone.*** Checkpoint 2.1 Ensure that all information conveyed with colour is also available without colour, for example from context or markup.	Standard	Vision	Visual Designer	For vision impaired users who may be colour blind. For example, an online quiz that shows a correct answer in the colour green is not as accessible as having words describing the correct answer. E.g. Who was the first Prime Minister of Australia? A: Authur William Fadden B: Harold Holt C: Edmund Barton - is not as accessible as ***The correct answer is Edmund Barton*** http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 2.2 Ensure that foreground and background colour combinations provide sufficient contrast when viewed by someone having colour deficits or when viewed on a black and white screen. [Priority 2 for images, Priority 3 for text].	Standard	Vision	Visual Designer	See comment for ***Priority 1*** Guideline 2-Checkpoint 2.1

Guideline 3 ***Use markup and style sheets and do so properly.*** Checkpoint 3.1 When an appropriate markup language exists, use markup rather than images to convey information.	Guideline	Vision Hearing	Content Writer Encoder -Programmer -HTML Editor	Structure vs. presentation When designing documents, content developers should try and identify the desired structure for their documents before thinking about how the documents will be graphically presented to the user. Distinguishing the structure of a document from how the content is presented offers a number of advantages, including improved accessibility, manageability, and portability. For instance, many developers consider that a horizontal line communicates a structural division. This may be true for sighted users, but to unsighted users or users without graphical browsers, a horizontal line may have next to no meaning. Use of style sheets to separate style from content e.g. so that user defined styles can be applied. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure http://www.w3.org/TR/WCAG10-CSS-TECHS/#Generated
Checkpoint 3.2 Create documents that validate to published formal grammars.	Standard	Vision	Encoder -Programmer -HTML Editor	DTD should be placed in front of documents. DTD: Document Type Description.
Checkpoint 3.3 Use style sheets to control layout and presentation.	Standard	Vision Hearing Cognitive	Visual Designer	Style Sheets should be used in preference to frames. Content developers should use style sheets to style text rather than representing text in images. Using text instead of images means that the information will be available to a greater number of users (with speech synthesizers, braille displays, graphical displays, etc.). Using style sheets will also allow users to override author styles and change colours or fonts sizes more easily. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.4 Use relative rather than absolute units in markup language attribute values and style sheet property values.	Guideline	Vision	Visual Designer	For example: text moves\resizes accordingly depending on browser\screen resolution. Locked search form fields.

			Encoder -Programmer -HTML Editor	
Checkpoint 3.5 Use header elements to convey document structure and use them according to specification.	Guideline	Vision Hearing	Encoder -Programmer -HTML Editor	See comment for ***Priority 2*** Guideline 3- ***Use markup and style sheets and do so properly -*** Checkpoint 3.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.6 Mark up lists and list items properly.	Standard	Vision Cognitive Hearing	Encoder -Programmer -HTML Editor	See comment for ***Priority 2*** Guideline 3- ***Use markup and style sheets and do so properly*** Checkpoint 3.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 3.7 Mark up quotations. Do not use quotation markup for formatting effects such as indentation.	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	
Guideline 4 ***Clarify natural language usage*** Checkpoint 4.1 Clearly identify changes in the natural language of a document's text and any text equivalents (e.g., captions).	Standard	Vision	Encoder -Programmer -Html editor Content Writer	If web pages contain multiple languages such as English and French, clear indications of the change in language allow speech synthesizers to automatically switch to the new language. The natural language of content may be indicated with the "lang" attribute in HTML and the "xml:lang" attribute in XML http://www.w3.org/TR/WCAG10-HTML-TECHS/#changes-in-lang
Checkpoint 4.2 Specify the expansion of each abbreviation or acronym in a document where it first occurs.	Guideline	Vision Cognitive	Content Writer	Assists vision impaired users who use screen readers and users with cognitive disabilities. Mark up abbreviations and acronyms with ABBR and ACRONYM and use "title" to indicate the expansion:
Checkpoint 4.3	Guideline	Cognitive	Encoder	It is good practice to identify the primary language of a document, either with

Identify the primary natural language of a document.			-Programmer -HTML Editor Content Writer	markup (as shown below) or through HTTP headers. For example: <HTML lang="fr"> ….rest of an HTML document written in French … </HTML> See also comment for ***Priority 1*** Guideline 4- ***Clarify natural language usage***-Checkpoint 4.1
Guideline 5 ***Create tables that transform gracefully.*** Checkpoint 5.1 For data tables, identify row and column headers.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Screen readers read from left to right (linearised) on a computer screen. Therefore complex data tables would not make sense if read by a screen reader. Row and table headers need to be linked to cells to provide contextual information and care needs to be used in the design of data tables so the information makes sense when read linearly. Avoid Row Span. Screen Readers perform better with Column Span. See also comment for ***Priority 2*** Guideline 5-Checkpoint 5.3 See the following link for the W3C example on table design: www.w3.org/TR/WCAG10-HTML-TECHS/#identifying-table-rows-columns
Checkpoint 5.2 For data tables that have two or more logical levels of row or column headers, use markup to associate data cells and header cells.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	See above comment for ***Priority 1*** Guideline 5-Checkpoint 5.1.

Checkpoint 5.3 Do not use tables for layout unless the table makes sense when linearised. Otherwise, if the table does not make sense, provide an alternative equivalent (which may be a linearised version).	Guideline	Cognitive Vision	Encoder -Programmer -HTML Editor Content Writer	Screen readers read from left to right (linearised) on a computer screen. A table would be read cell by cell from left to right. Data in complex tables may not be properly read back to the user. Use of Table Column and Table Row Headers is highly recommended for complex data tables. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 5.4 If a table is used for layout, do not use any structural markup for the purpose of visual formatting.	Guideline	Vision	Encoder -Programmer -HTML Editor Content Writer Visual Designer	Structural marking of tables is utilised by assistive technologies to make complex data more comprehensible. This allows table cells to be read back with meaning. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 5.5 Provide summaries for tables.	Guideline	Vision Cognitive	Encoder -Programmer -HTML Editor Content Writer	This is one method to help the comprehension of complex tables. Provide summaries for data tables. Layout tables should have none. See ***Priority 2*** Guideline 5-Checkpoint 5.3 http://www.w3.org/TR/WCAG10-HTML-TECHS/#table-summary-info
Checkpoint 5.6 Provide abbreviations for header labels.	Guideline	Vision Cognitive	Content Writer	http://www.w3.org/TR/WCAG10-HTML-TECHS/#table-summary-info

Guideline 6 ***Ensure that pages featuring new technologies transform gracefully.*** Checkpoint 6.1 Organize documents so they may be read without style sheets. For example, when an HTML document is rendered without associated style sheets, it must still be possible to read the document.	Standard	vision Cognitive	Encoder -Programmer -HTML Editor	Allows screen reader technology and users with learning impairment to be able to access and comprehend data if associated style sheets are not available. In conjunction with ***Priority 1*** Guideline 14- ***Ensure that documents are clear and simple-*** Checkpoint 14.1. Or provide alternative CSS which present table data and page data in a linearised text only fashion. http://www.w3.org/TR/WCAG10-CSS-TECHS/#Generated
Checkpoint 6.2 Ensure that equivalents for dynamic content are updated when the dynamic content changes.	Standard	Vision	Encoder -Programmer -HTML Editor	A static equivalent should be referred as often as possible to keep it in sync with the dynamic offering. http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent
Checkpoint 6.3 Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported. If this is not possible, provide equivalent information on an alternative accessible page.	Standard	Vision Hearing	Encoder -Programmer -HTML Editor	If Java applications, for example, are used to convey content, then an alternate means of describing the material should be made available. If such applications are used purely for graphic and decorative effect, and are not providing informative content, the content need not be represented in an alternative form. e.g. javascript for nested menus – one of the most common uses – should include a hyperlink from the top level menu to a page with all the nested links listed for those who cannot access nested menus. http://www.w3.org/TR/WCAG10-HTML-TECHS/#applet-text-equivalent
Checkpoint 6.4 For scripts and applets, ensure that event handlers are input device-independent.	Guideline	Physical	Encoder -Programmer -HTML Editor	E.g. Don't assume input by mouse only. http://www.w3.org/TR/WCAG10-CORE-TECHS/#structure
Checkpoint 6.5 Ensure that dynamic content is accessible or provide an alternative presentation or	Standard	Vision Hearing	Encoder -Programmer	Although it is possible to make most content accessible, it may happen that all or part of a page remains inaccessible. Additional techniques for creating

page.			-HTML Editor Content Writer	accessible alternatives include: 4. Allow users to navigate to a separate page that is accessible, contains the same information as the inaccessible page, and is maintained with the same frequency as the inaccessible page. 5. Instead of static alternative pages, set up server-side scripts that generate accessible versions of a page on demand. 6. Provide a phone number, fax number, e-mail, or postal address where information is available and accessible. This is for sensitive data that cannot be accesed via the web e.g case studies of active legal disputes. See also ***Priority 1*** Guideline 11- ***Use W3C technologies and guidelines-*** Checkpoint 11.4
Guideline 7 ***Ensure that moving, blinking, scrolling, or auto-updating objects or pages may be paused or stopped.*** Checkpoint 7.1 Until user agents allow users to control flickering, avoid causing the screen to flicker.	Standard	Vision Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Screen readers cannot read elements such as flickering and scrolling text. Users with learning difficulties may also find it hard to comprehend the desired effect these elements are trying convey. See also ***Priority 2*** Guideline 7-Checkpoint7.3 Flickering or flashing screens, while annoying, to some it can be a ***genuine*** health hazard for epilepsy sufferers and the like. Also, for example, clocks on a webpage causes an auto-refresh which triggers screen readers to re-read a page.
Checkpoint 7.2 Until user agents allow users to control blinking, avoid causing content to blink (i.e., change presentation at a regular rate, such as turning on and off).	Standard	Vision Hearing Cognitive	Visual Designer	Screen readers cannot read elements such as flickering and scrolling text. Users with learning difficulties may also find it hard to comprehend the desired effect these elements are trying convey.
Checkpoint 7.3 Until user agents allow users to freeze moving content, avoid movement in pages.	Standard	Vision Cognitive	Visual Designer	See comment for ***Priority 1*** Guideline 7-Checkpoint 7.1 If movement in pages is conveying information it should be provided in alternate form. Consider your audience needs.
Checkpoint 7.4	Standard	Vision	Visual	Content developers sometimes create pages that refresh or change without the

Until user agents provide the ability to stop the refresh, do not create periodically auto-refreshing pages.		Cognitive	Designer Encoder -Programmer -HTML Editor	user requesting the refresh. This automatic refresh can be very disorienting to some users. Screen readers would re-set and start reading again from the top of the page.
Checkpoint 7.5 Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects.	Guideline	Vision Cognitive	Content Writer	See above comment for ***Priority 2*** Guideline 7- Checkpoint 7.4 It may be appropriate at times, to do so if providing necessary information e.g. advising of copyright, legal issues etc. Inform the user of the destination of the re-direct.
Guideline 8 ***Ensure that the user interface follows principles of accessible design: device-independent access to functionality, keyboard operability, self-voicing, etc.*** Checkpoint 8.1 Make programmatic elements such as scripts and applets directly accessible or compatible with assistive technologies [Priority 1 if functionality is important and not presented elsewhere, otherwise Priority 2.]	Guideline	Vision Cognitive Hearing	Encoder -Programmer -HTML Editor Visual Designer	If an applet requires user interaction (e.g., the ability to manipulate a physics experiment) that cannot be duplicated in an alternative format, make the applet directly accessible. If an applet creates motion, developers should provide a mechanism for freezing this motion. Also, please refer to the next section for information about making audio and video presentations accessible. See comment for ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.4
Guideline 9 ***Design for device-independence.*** Checkpoint 9.1 Provide client-side image maps instead of server-side image maps except where the regions cannot be defined with an	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Visual Designer	Refer also to ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.1, Checkpoint 1.2, and Checkpoint 1.5.

available geometric shape.				
Checkpoint 9.2 Ensure that any element that has its own interface can be operated in a device-independent manner.	Standard	Physical	Encoder -Programmer -HTML Editor	As there are a multitude of assistive technologies for users who are physically disabled in some way, this is to ensure that web interfaces do not favour one input device over another
Checkpoint 9.3 For scripts, specify logical event handlers rather than device-dependent event handlers.	Standard	Physical	Encoder -Programmer -HTML Editor	Not every user has a graphic environment with a mouse or other pointing device. Some users rely on keyboard, alternative keyboard or voice input to navigate links, activate form controls, etc. Content developers must ensure that users may interact with a page with devices other than a pointing device. A page designed for keyboard access (in addition to mouse access) will usually improve its overall design as well.
Checkpoint 9.4 Create a logical tab order through links, form controls, and objects.	Guideline	Vision Cognitive	Content Writer	See also ***Priority 2*** Guideline 13- ***Provide clear navigation mechanisms*** - Checkpoint 13.2 and Checkpoint 13.4
Checkpoint 9.5 Provide keyboard shortcuts to important links (including those in client-side image maps), form controls, and groups of form controls.	Guideline	Vision Cognitive Physical	Encoder -Programmer -HTML Editor	See also ***Priority 1*** Guideline 1- ***Provide equivalent alternatives to auditory and visual content-*** Checkpoint 1.2
Guideline 10 ***Use interim solutions.*** Checkpoint 10.1 Until user agents allow users to turn off spawned windows, do not cause pop-ups or other windows to appear and do not change the current window without informing the user.	Standard	Vision Cognitive	Content Writer	This may confuse screen readers and users with learning difficulties. Also re-sets screen readers. See above comment for ***Priority 2*** Guideline 7 Checkpoint 7.4 User Agents can stop pop-ups. It maybe appropriate to spawn, for example, a video in a separate window provided that the link that does so informs the user e.g. “play video in new window”
Checkpoint 10.2	Standard	Vision	Encoder	Assists users with vision impairment. Screen readers try to identify the correct text prompts by looking in the table cell immediately to the left of the cell. Well

Until user agents support explicit associations between labels and form controls, for all form controls with implicitly associated labels, ensure that the label is properly positioned.			-Programmer -HTML Editor Content Writer	written code is essential for this to work. For example: First Name, Surname with Field, Field. It is better to have: First Name- First Name Field, Surname- Surname Field and Address- Address Line 1 Field, Address Line 2 Field. Tab structure\index should be consistent throughout the form. Use access keys to get to form fields.
Checkpoint 10.3 Until user agents (including assistive technologies) render side-by-side text correctly, provide a linear text alternative (on the current page or some other) for ***all*** tables that lay out text in parallel, word-wrapped columns.	Guideline	Vision Cognitive	Encoder -Programmer -HTML Editor Content Writer	If this is an issue, upgrade your Assistive Technologies. http://www.w3.org/TR/WCAG10-HTML-TECHS/#wrapped-text
Checkpoint 10.4 Until user agents handle empty controls correctly, include default, place-holding characters in edit boxes and text areas.	Guideline		Encoder -Programmer -HTML Editor	http://www.w3.org/TR/WCAG10-HTML-TECHS/#forms-specific
Checkpoint 10.5 Until user agents (including assistive technologies) render adjacent links distinctly, include non-link, printable characters (surrounded by spaces) between adjacent links.	Guideline	Vision Cognitive	Encoder -Programmer -HTML Editor Content Writer	When links are grouped into logical sets (for example, in a navigation bar that appears on every page in a site) they should be marked up as a unit. Navigation bars are usually the first thing someone encounters on a page. For users with speech synthesizers, this means having to hear a number of links on every page before reaching the interesting content of a page. This is especially useful for frequent users of a website. There are several ways to allow users to bypass groups of links (as users with vision do when they see the same set on each page): • Include a link that allows users to skip over the set of navigation links.

				• Provide a style sheet that allows users to hide the set of navigation links. • Use the HTML 4.01 MAP element to group links, then identify the group with the "title" attribute.

Guideline 11 ***Use W3C technologies and guidelines.*** Checkpoint 11.1 Use W3C technologies when they are available and appropriate for a task and use the latest versions when supported.	Guideline			The latest W3C technologies are available from the W3C Technical Reports and Publications page.
Checkpoint 11.2 Avoid deprecated features of W3C technologies.	Guideline		Encoder -Programmer -HTML Editor	Refers to changes of html standards over v1-v2. Text- font is deprecated – font tag superseded by CSS Browsers may not support deprecated code. For example, ***Bold*** became ***strong***.
Checkpoint 11.3 Provide information so that users may receive documents according to their preferences (e.g., language, content type, etc.)	Guideline	Cognitive	Content Writer Encoder -Programmer -HTML Editor	There are a variety of strategies to allow users to select the appropriate content: 4. Include links to other versions of content, such as translations. For example, the link "Refer to the French version of this document" links to the French version. 5. Indicate content type or language through markup (e.g., in HTML use "type" and "hreflang"). 6. Use content negotiation to serve content per the client request. For example, serve the French version of a document to clients requesting French. http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 11.4 If, after best efforts, you cannot create an accessible page, provide a link to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality), and is updated as often as the inaccessible (original) page.	Standard	Vision Hearing Cognitive	Encoder -Programmer -HTML Editor Content Writer Visual	For example, create a plain text alternative with an accessible link off the main web page. Note: For text only websites, firewalls may block HTTP referrers.

			Designer	
Guideline 12 ***Provide context and orientation information to help users understand complex pages or elements.*** Checkpoint 12.1 Title each frame to facilitate frame identification and navigation.	Standard	Vision	Encoder -Programmer -HTML Editor Visual Designer	Use of Frames is discouraged. Accessible technologies can only work in the current frame and therefore have to move from frame to frame to interact. E.g. data in a frame within a frame. No feedback that a change has occurred in a destination frame if the current frame remains unchanged.
Checkpoint 12.2 Describe the purpose of frames and how frames relate to each other if it is not obvious by frame titles alone.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	Assists users who use screen readers, in terms of navigation. E.g. Label frames, for example; navigation frames, footer frames. See also comment for ***Priority 1*** Guideline 12- ***Provide context and orientation information to help users understand complex pages or elements-*** Checkpoint 12.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#text-equivalent
Checkpoint 12.3 Divide large blocks of information into more manageable groups where natural and appropriate.	Guideline	Vision Cognitive	Content Writer	A universal design issue. Allows users with visual and\or learning difficulties to be able to comprehend the data easily and efficiently with the help of screen readers or other assistive technology. See comment for ***Priority 1*** Guideline 14- ***Ensure that documents are clear and simple***- Checkpoint 14.1
Checkpoint 12.4 Associate labels explicitly with their controls.	Standard	Vision	Encoder -Programmer -HTML Editor Content Writer	A label is implicitly associated with its form control either through markup or positioning on the page. Consistent and correct labelling allows easier access to the form or data with screen reading technologies. See also above example for ***Priority 2*** Guideline 10-Checkpoint 10.2

Guideline 13 ***Provide clear navigation mechanisms*** Checkpoint 13.1 Clearly identify the target of each link.	Guideline	Vision Cognitive	Visual Designer Encoder -Programmer -HTML Editor	Good link text should not be overly general; for instance "click here" says nothing about what is to be found if the link is followed. Instead of "click here", link text should indicate the nature of the link target, as in "Course Notes Accounting 1001" or "text-only version of this page".
Checkpoint 13.2 Provide metadata to add semantic information to pages and sites.	Standard	Vision Cognitive		Refer to UNSW Meta Data Guidelines
Checkpoint 13.3 Provide information about the general layout of a site (e.g., a site map or table of contents).	Guideline	Cognitive Vision	Content Writer Visual Designer	A consistent style of presentation on each page allows users to locate navigation mechanisms more easily and to skip navigation mechanisms more easily to find important content. This helps people with learning and reading disabilities but also makes navigation easier for all users. Providing navigation bars, site maps, and search features all increase the likelihood that a user will reach the information they seek at your site , or avoid it when they so desire. http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 13.4 Use navigation mechanisms in a consistent manner.	Guideline	Cognitive Vision Hearing		Navigation styles and mechanisms and where and when they need to be applied are contained in the ***UNSW Visual Design Guidelines***.
Checkpoint 13.5 Provide navigation bars to highlight and give access to the navigation mechanism.	Guideline	Cognitive	Visual Designer	See comment for ***Priority 2*** Guideline 13-Checkpoint 13.2 and ***Priority 3*** Guideline 10-Checkpoint 10.5 http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 13.6 Group related links, identify the group	Guideline	Cognitive	Encoder -Programmer	See comment for ***Priority 2*** Guideline 13-Checkpoint 13.2 and ***Priority 3***

(for user agents), and, until user agents do so, provide a way to bypass the group.			-HTML Editor	Guideline 10-Checkpoint 10.5
Checkpoint 13.7 If search functions are provided, enable different types of searches for different skill levels and preferences.	Guideline	Cognitive	Encoder -Programmer -HTML Editor Content Writer	http://www.w3.org/TR/WCAG10-CORE-TECHS/#navigation
Checkpoint 13.8 Place distinguishing information at the beginning of headings, paragraphs, lists, etc.	Guideline	Vision Cognitive	Content Writer	Assists vision impaired users. Screen readers can read the headings allowing the user to determine the contents without having to go through the whole paragraph or headings. http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension
Checkpoint 13.9 Provide information about document collections (i.e., documents comprising multiple pages.).	Guideline	Vision Cognitive	Content Writer	E.g. one or more documents are split across multiple pages but are only displayed one at a time. Advise users as such.
Guideline 14 ***Ensure that documents are clear and simple.*** Checkpoint 14.1 Use the clearest and simplest language appropriate for a site's content.	Standard	Vision Cognitive	Content Writer	Screen readers may not be able to correctly pronounce complex words, abbreviations or acronyms. Consider the language capabilities of the intended audience. While it is desirable to use the simplest words to convey meaning, it is not always possible to use “simple” language to describe everything on a website. For example, specific websites dealing in high technology, law and science may find it difficult and impractical to simplify every term, notation naming convention. Attention should be paid to the intended target audience. However, content such as instructions, requirements and descriptions should always be carefully structured, logical and clear. (e.g. would the instructions make sense if given

				over the telephone) http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension
Checkpoint 14.2 Supplement text with graphic or auditory presentations where they will facilitate comprehension of the page.	Guideline	Vision Hearing Cognitive	Content Writer Visual Designer	See comment for ***Priority 1*** Guideline 1***- Provide equivalent alternatives to auditory and visual content***- Checkpoint 1.1 http://www.w3.org/TR/WCAG10-CORE-TECHS/#comprehension
Checkpoint 14.3 Create a style of presentation that is consistent across pages.	Guideline	Vision Cognitive		Refer to ***UNSW Visual Design Guidelines***.