

# GOVERNMENT OF JAMAICA

## WEB STANDARDS TESTING GUIDE

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# 1 OVERVIEW

The Web Standards Testing Guide is a complement to the GOJ Web Standards and focuses on the best practices in verification and validation techniques. Whether a website is developed internally or externally, testing is an integral part of the compliance process.

This document is divided into two sections:

**Best Practices for Quality:** This section outlines the general tools and techniques that should guide any testing practice.

## 1.1 Audience

This document is intended to support those responsible for the functionality and acceptance testing of GoJ institutional web sites.

## 1.2 Related Documents

Readers of this document will need to make frequent references to the GOJ Web Standards Compliance Manual.

## 2 BEST PRACTICES FOR QUALITY

### 2.1 Work from templates

One of the best ways to ensure that pages meet the GOJ web standards is to develop page “templates”. A template is loosely defined as the elements of a webpage that do not change as you move around the site. For example, the common header and footer that are required on all GOJ sites do not change as the user navigates between pages.

A template does not have to be implemented using a technically sophisticated tool or content management system. Simply creating a page that is fully tested and creating a copy of this “template” for each new page that is added to the site will greatly simplify efforts to comply with the standards.

### 2.2 Validate all pages

“Validating” a page refers to an automated process that checks whether or not the document is “syntactically correct”. This can be thought of as a “spell checker for code” a tool that will highlight coding inconsistencies that are often the cause of many of the compliance issues and visual inconsistencies on GOJ sites.

Validation should be integrated into all website development practices, whether coding static HTML pages or writing web applications. Validating pages is a relatively quick process and starting from a validated document will make subsequent tests much easier.

### 2.3 Recommended testing tools

#### 2.3.1 Link Checker

##### 2.3.1.1 XENU (<http://home.snafu.de/tilman/xenulink.html>)

XENU is a free standalone link checker that can be run against websites, although it is most effective when used on sites that validate using validation tools. It can “spider” the site, detecting and following links that it finds within the pages.

- If pages do not show up that were expected, this is likely an indicator that the coding used to link to the pages does not conform to the technical standards as described in the Web Compliance Manual
- XENU is configured using a base URL and a list of URLs to include or exclude. Getting XENU properly configured involves tuning this list, along with the “exclude external links” option. Some site elements, however, cannot be effectively tested with this tool. Web scripts that are infinitely recursive (such as a calendar of events application) must not be tested as the tool will detect each new URL as a distinct page and will never finish testing the site.
- The tool will only detect that a link is broken, but it cannot tell if a page is the page you intended to link to. For this reason it is important to manually verify the external links on a site on a regular basis, even if the link checker has identified them as not being broken. XENU will generate a list of external links that you can use for your manual checks.

#### 2.3.2 Website validation

##### 2.3.2.1 W3C Validator

The standards body for the World Wide Web Consortium (W3C) provides a free validation service for both XHTML and CSS files. This service is located at <http://validator.w3.org/>. The validator has been extensively tested and provides decent feedback about how to resolve errors.

### 2.3.2.2 A Real Validator

There are two key limitations to the validator provided by the W3C: There is currently no feature that would allow for the batch processing of many files (for example, an entire site), and because it is located on the public internet, any files that are validated must be transmitted over the public internet, which may not be acceptable for sensitive documents with controlled release dates.

A Real Validator allows the user to prepare a “project” of files to test – these batches can be saved for future use; for example they can be used to run a site wide validation on a regular basis. Because the files are not transmitted over the public internet the security can be controlled, and the application runs at desktop speeds regardless of Internet connection speeds.

### 2.3.3 Browser compatibility

In order to test that a site renders properly in all browsers a testing workstation should be configured with all of the browsers that are required to be supported. In order to determine the browsers to support, the server logs for the site should be analyzed to find which browsers site visitors are using. The site should function properly on any browser that makes up 5% or more of the visitors to the site.

If you do not have access to the logs, or the site is starting up without a history of user visits, aggregate statistics on browsers from a US source can be found at <http://www.thecounter.com/stats/>

You can download and install browsers by visiting their web sites and following download instructions (please note, only one version of Internet Explorer can be installed on one PC):

- Internet Explorer 7 for Windows:  
<http://www.microsoft.com/windows/products/winfamily/ie/default.mspx>
- Internet Explorer 6 for Windows and MAC:  
<http://www.microsoft.com/windows/ie/ie6/downloads/critical/ie6sp1/default.mspx>
- Firefox 2 for Windows: <http://www.mozilla.com/en-US/>
- Safari 3 for MAC: <http://www.apple.com/safari/>

If you are unable to install these browsers, there are relatively low-cost commercial services that will test your site using various combinations of platform and browser versions. For example <http://www.browsercam.com> allows the tester to see how the site pages appear on different Operating Systems with different browsers.

## 2.4 Security

Testing websites for security vulnerabilities is beyond the scope of this document, however an excellent unbiased reference can be found from the Open Web Application Security Project (OWASP) website at [www.owasp.org](http://www.owasp.org). Specific techniques and checklists are available and all GOJ website testers are encouraged to familiarize themselves with the documentation and resources available from OWASP.

## 3 VISUAL IDENTITY STANDARDS

### 3.1 Page Layout Guidelines

Make sure that all pages<sup>1</sup> include the following mandatory elements: Header, Footer, Content

For each template used on the site, test the template in order to ensure that these elements are present prior to using it to create pages.

Test each page once the template has been applied to ensure that the mandatory elements are present..

1. Non-HTML pages such as downloadable files (.rtf, .doc, .pdf) are not required to have the header and the footer.

Check that all mandatory elements are vertically aligned and have the same width

For each template on the site, test the template to ensure that the elements are vertically aligned prior to creating pages.

Pay special attention to pages with wide or long content areas as these might cause the

Make sure that when you resize a browser window all elements are visible (vertically aligned)

Test pages with different browsers

Verify that when you increase/decrease text size using the browser settings the page layout does not break

Change text sizes in the browser and check how it affects the site page.

Follow next instructions to change text sizes in different browsers:

- Internet Explorer 6+
  - Select View
  - Scroll to Text Size and choose your preference
- Netscape 6+
  - Select View
  - Scroll down to Text Zoom and choose your preferences.
- FireFox 1.5+ :
  - Select View
  - Scroll to Text Size and choose your preference

### 3.2 GOJ Common Menu Bar

Make sure that all pages<sup>1</sup> include the common menu bar at the top.

For each template used on the site, test the template to ensure that the GOJ Common Menu Bar is included prior to creating pages.

Test each page once the template has been applied to ensure that the GOJ Common Menu Bar is present.

Ensure that the Common Menu Bar contains the following left-aligned links: Home, About Us, Contact Us, and the following right-aligned links: Search and Jamaica.gov.jm

1. Non-HTML pages such as downloadable files (.rtf, .doc, .pdf) are not required to have the header and the footer

Make sure that the navigation links and dividers are in high contrast with the menu bar background.

Check that foreground and background colour combinations provide sufficient contrast

Tools

1. Colour Contrast Analyser” tool at <http://juicystudio.com/services/colourcontrast.php>  
(based on the W3C color contrast algorithm)
2. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

Check that the banner image containing the institution and GOJ identifiers is of good quality and is of the same width as the common menu bar

Be sure to test not just with default settings, but also with different browsers and different display resolutions

### 3.3 Home

Ensure that the Home link leads to the site main page.

Browse to different sections of the site and click the “Home” link. The XENU link checker can also be used to automate this test by spidering the site. The resulting report will list all of the pages that link to “Home”. Pages that do not show up on the results list should be manually inspected to ensure that this link works properly.

### 3.4 About Us

Ensure that the “About Us” link takes users to the “About Us” page with information about the government institution.

Browse to different site sections and click the “About Us” link. The XENU link checker can also be used to automate this test by spidering the site. The resulting report will list all of the pages that link to “About Us”. Pages that do not show up on the results list should be manually inspected to ensure that this link works properly.

### 3.5 Contact Us

Ensure that the “Contact Us” link leads users to the “Contact Us” page with the government institution contact information.

Browse to different site sections and click the “Contact Us” link. The XENU link checker can also be used to automate this test by spidering the site. The resulting report will list all of the pages that link to “Contact Us”. Pages that do not show up on the results list should be manually inspected to ensure that this link works properly.

Audit the the contact us page content to ensure that it includes detailed contact information

Check the contact us page for the following data:

- Information on how to contact the government institution by e-mail, phone, fax and mail.
- Information about the customer support line, its scheduling and services offered.
- Information on how to reach the institution for both local and overseas site visitors

### 3.6 Search

Make sure that the “Search” link leads users to the search page

Test the template prior to creating pages to ensure that the link points to search.gov.jm.

### 3.7 Common Footer

Make sure that all pages<sup>1</sup> include the common footer at the bottom of the page.

For each template that is used on the site:

1. Non-HTML pages such as downloadable files (.rtf, .doc, .pdf) are not required to have the header and the footer

Check that the common footer contains the following links/messages: Important Notices, Help, Copyright Date Modified, Government of Jamaica, All Rights Reserved and Last Modified Date

1. For every template test a few pages where this template has been used.
2. Select different web site sections to test a template

Make sure that the following set of links/messages is left aligned: Important Notices | Help | Copyright Date, Government of Jamaica, All Rights Reserved

1. For every template test a few pages where this template is integrated.
2. Select different web site sections to test a template

Check that Last Modified Date is right aligned

1. For every template test a few pages where this template is integrated.
2. Select different web site sections to test a template

Make sure that the navigation links and dividers are in high contrast with the menu bar background.

Check that foreground and background colour combinations provide sufficient contrast

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html/>

Check that the footer is the same width as the common menu bar and the content area

1. For every template test a few pages where this template is integrated.
2. Select different web site sections to test a template

### **3.7.1 Important Notices**

Make sure that the "Important notices" link takes users to the "Important notices" page with information about the government institution.

Browse to different site sections and click the "Important notices" link

Check that the page includes 3 sections: Hyperlinking Notice, Copyright/Permission and Privacy Notice

N/A

#### **3.7.1.1 Hyperlinking Notice**

Please check GOJ Web Standards document for information about the Hyperlinking Notice content (2.3.1.1 Rationale)

N/A

#### **3.7.1.2 Copyright/Permission**

Please check GOJ Web Standards document for information about the Copyright/Permission content (2.3.1.2 Rationale)

N/A

#### **3.7.1.3 Privacy Notice**

Please check GOJ Web Standards document for information about the Privacy Notice content (2.3.1.3 Rationale)

N/A

### **3.7.2 Help**

Make sure that the “Help” link takes users to the “Help” page with information about the government institution.

Browse to different site sections and click the “Help” link

Please check GOJ Web Standards document for information about the Help content (2.3.2 Rationale)

N/A

### 3.7.3 Date Indicator

Make sure that either “Date published” or “Date modified” indicator is available at the bottom of every page. It should be a part of the footer.

1. For every template test a few pages where this template is integrated.
2. Select different web site sections to test a template

Verify that “Date published” or “Date modified” is correct

Select a few pages from different site sections and verify that “Date published” or “Date modified” is correct. To do that you can check Content Management System or ask the publisher/editor to provide you with required information.

Make sure that dates formats complies with ISO all-numeric date standard (YYYY-MM-DD) (ex. 2007-07-19)

1. For every template test a few pages where this template is integrated.
2. Select different web site sections to test a template

### 3.8 Disclaimers

Make sure that pages that include externally sources information such as third party information hosted on the institutional Web site or links to other Web sites not under the control of the institution have a disclaimer

Browse to different site sections and look for pages that are supposed to have a disclaimer

### 3.9 Institutional Menus

Check that an institutional menu design is consistent with other page elements design

1. Check for templates that include additional menus
2. For every template test a few pages where this template is integrated.

Verify that menu links lead to correct pages

1. Check for templates that include additional menus
2. For every template test a few pages where this template is integrated.
3. Click menus links to make sure that they lead to correct pages

If the menu has any additional functionality make sure that it works according to the requirements documentation

Check the requirements documentation for additional menus functionality information

### 3.10 Logos and Symbols

Make sure that the site pages does not display third-party icons, symbols or logos<sup>1</sup> that represent products and services

Make sure that this rule is applied to all web site pages

<sup>1</sup> See for exceptions GOJ Web Standards document (2.6 Rationale)

### 3.11 Formatting Guidelines

Validate pages to XHTML 1.0

Make sure that pages validate to XHTML 1.0

Tools

1. Real Validator <http://arealvalidator.com>
2. W3C Validator <http://validator.w3.org/>
3. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

Validate pages to CSS-2 Transitional

Make sure that pages validates to CSS-2 Transitional

Tools

1. W3C Validator <http://jigsaw.w3.org/css-validator/>
2. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

Validate pages for W3C Priority 1 and 2 Checkpoints and CLF Standards

Make sure that pages validate to W3C Priority 1 and 2 Checkpoints and CLF Standards

Resources

1. W3C Priority 1 and 2 checklist <http://www.w3.org/TR/WCAG10/full-checklist.html/>

Tools

1. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

Make sure that web site pages are readable with style sheets disabled

Test pages in a browser with style sheets disabled.

Follow next instructions to disable CSS in different browsers:

Internet Explorer 6+

1. Select Tools and click Internet Options
2. Select the General tab and click the box entitled Accessibility
3. Ensure that all three buttons under Formatting are checked
4. Click OK in Accessibility dialog box
5. Click OK in Internet Options dialog box
6. Click Refresh

Netscape 6+

1. Select Edit and click Preferences
2. Click on the Advanced category and deselect the item entitled Enable Style Sheets
3. Click OK
4. Click Reload

FireFox 1.5+ :

1. Select Tools and click Options
2. Select Content and click Font & Colors Advanced
3. Make sure that the “Allow to choose their own fonts, instead of my selections above” checkbox is not selected
4. Click OK in the Font Box
5. Click OK in the Options Box
6. Click Reload

Validate pages for most popular browser compatibility

Make sure that the site is compatible with the site visitors' browsers and resolutions

## 3.12 Web Design

Make sure that colours are used effectively thought web site pages

1. Make sure that there is contrast between foreground and background colours
2. Check that coloured text and lines are thicker (so they are not hard to see on printed pages)
3. Check that only “Browser-safe” colors are used

Resources

1. <http://www.lighthouse.org/accessibility/effective-color-contrast/>
2. Cross-browser color palette [http://www.w3schools.com/html/html\\_colors.asp](http://www.w3schools.com/html/html_colors.asp)

## Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

### Make sure that the navigation system is effective and consistent

1. Make sure that navigation controls such as menus, breadcrumbs, anchors, links and buttons are consistent on all pages
2. Check that the site has a site map
3. Make sure that users have a link/option to go back to the home page
4. Check that users are able to use browsers "back" and "previous" buttons

### Check that graphics are used effectively and selectively

1. Check that images are used only for graphical presentation and not for text
2. Make sure that graphics are consistent throughout the site pages
3. Make sure that all images have alternative text
4. Check that big images don't slow down the page load speed

### Verify that page layout is consistent

Check that layout is consistent throughout the web site

## 3.13 Contact Information

### Make sure that the web site provides users with the institution email information

1. Browse to the contact us page and check that there are email links to contact different institution departments/individuals
2. Verify that the site has at least one feedback form and that users are informed about privacy of collected information.

### 3.13.1 Email

#### Verify email format

Browse to pages that have contact information and make sure that emails include name, title, ministry/agency, physical address, telephone, facsimile, email address and URL

Verify that when users click on an email link their default email client launches and the “To” field is populated with an appropriate email address.

Browse to the contact us page and click in any email link. Your default email client should launch. The “To” field should be pre-populated with an appropriate email address.

Make sure that URLs are not broken and lead to correct web sites/pages

Browse to pages that include contact information and click on institutions/departments URLs.

### 3.13.2 Forms

Make sure that the form includes all required elements

Browse to the feedback/contact us form and check that the following fields are present:

- Name
- Email address
- Mailing address
- Notes (comments, questions, etc.)
- Preferred method of communication (by mail, email, phone, etc.)
- “Reset” button
- “Submit” button

Check the proper use of labels

Check that all fields are clearly labelled. Verify that fields labels immediately precede their controls or are on the line preceding their controls (WCAG Guidelines 1.0 - Checkpoint 10.2)

Make sure users are aware of mandatory fields

Verify that mandatory fields are marked with asterisks. These asterisks should be wrapped in a `<abbr title="Mandatory"></abbr>` tag.

Make sure that users can separate errors from the form content

Check that error messages are clear and visible on the page (formatting, different colour, etc.) and are easily associated with the field for which the error occurred.

Make sure that all validation is made on the server-side.

Client side scripting can be used to validate the input from a form, but the form must also only accept valid input if client side scripting is disabled. To test this, run the same validation tests that are used on the form with scripting disabled in the test browser.

Verify that users cannot submit malicious input such as HTML tags, SQL injections, JavaScript codes, etc

A good primer on SQL injections can be found on the OWASP project site:  
[http://www.owasp.org/index.php/Testing\\_for\\_SQL\\_Injection](http://www.owasp.org/index.php/Testing_for_SQL_Injection)

Check that the system returns an error for an invalid email format.

Try entering the following emails ("test@test", "test@test@test", "test.test.com", etc.)

Make sure that ALL valid email formats are accepted by validation.

Try to submit emails that include different characters from the list of characters allowed in the local part of an email address

[a-z] [A-Z] [0-9] [! # \$ % & ' \* + - / = ? ^ ` { | } ~ . ]

For example you can try the following addresses:

test.test@test.com

test\_test@test.com

test+test@test.com

Resources

For more information about allowed characters in email addresses please check RFC2821 and RFC2822

<http://www.remote.org/jochen/rfc/rfc821.txt>

<http://www.remote.org/jochen/rfc/rfc822.txt>

Make sure that emails up to 319 characters long are accepted by validation

Try to submit an email that is 319 characters in length. According to RFC 2818 the local-part of an e-mail address can have a maximum of 64 characters and the domain name maximum of 255 characters.

Make sure that information submitted by users is emailed to appropriate recipients

Fill in valid information into all fields and submit a form. Make sure that all appropriate recipients receive an email with user information.

## 3.14 Domain Naming

### 3.14.1 Primary Domain

Make sure that the institutional web site domain name is .gov.jm

Even if the site has multiple legacy domain names, it is important that all pages link to the .gov.jm domain. To test this a site-wide search for non .gov.jm local pages can be used.

### 3.14.2 Formatting of Domain Names

Verify that the institution domain name adheres to the following domain naming convention:

`www.organization.gov.jm`

Ensure that the address points to the correct live server and that the domain name resolves both with and without the “www.” prefix. For example, both [www.organization.gov.jm](http://www.organization.gov.jm) and organization.gov.jm should both resolve to the same website.

## 4 TECHNICAL STANDARDS

### 4.1 Mandatory Standards

#### 4.1.1 Text Equivalents

Make sure that text equivalents are used to describe the purpose and function of non-text content including images, text graphics, symbols, image maps, animations, applets, objects, ASCII art, frames, scripts, graphical bullets, spacers, graphical buttons, sounds, stand-alone audio files, video audio-files and video clips

Test that all non-text content include text equivalent:

Tools

1. Screen readers <http://www.w3.org/WAI/References/Browsing>
2. Text – based and voice web browsers [http://en.wikipedia.org/wiki/List\\_of\\_web\\_browsers](http://en.wikipedia.org/wiki/List_of_web_browsers)  
<http://www.w3.org/WAI/References/Browsing>
3. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>
4. You can also verify test equivalents by changing settings in your browser. For example you can disable “Load Images” and “Enable JavaScript”.

#### 4.1.2 Server-side Image Maps

Make sure that there are test links for all active regions of a server-side image map

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.3 Colour

Ensure that all information conveyed with colour is also available without colour, for example from context or mark-up.

There are a few ways to test that the page still works without the colour:

1. Use a monochrome monitor
2. Turn off browser colours
3. Set up a colour scheme in your browser to use only black, white, and the four browser safe greys

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.4 Colour Contrast

Make sure that all text and images that convey information are visible when viewed by someone having colour deficits or when viewed on a monochrome display.

There are a few ways to test that the colour contrast work for people with colour deficits:

1. Set the test workstation to use monochrome settings for display
2. Print pages on a black and white paper (with backgrounds and colours appearing in greyscale)
3. Also try taking the printout and photocopying it for two or three generations to see how it degrades. This will show you where you need to add redundant cues (example: hyperlinks are usually underlined on Web pages), or whether the cues are too small or indistinct to hold up well.

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.5 Bitmap Images

Make sure that as little as possible information is represented with images<sup>1</sup>

1. Turn off “Load Images” to check what content is represented with images
  - In Firefox you can disable images by going to Tools -> Options -> Content Tab and unselecting the “Load images automatically” checkbox
  - In Internet Explorer you can disable images by going to Tools -> Internet Options -> Advanced Tab -> scroll down to the Multimedia section and unselect the “Show pictures” checkbox
2. Make sure that image content has text equivalent

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

1 Images can be used when the text is serving a graphical function (logo), or if the text effect cannot be achieved with CSS, or if a text equivalent provided for the image

#### 4.1.6 Valid Documents

Make sure that all pages validate to published formal grammars

Validate you web site against XHTML 1.0 Transitional or higher

Tools

1. Real Validator <http://arealvalidator.com/>
2. W3C Validator <http://validator.w3.org>
3. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.7 Style Sheets

Make sure that style sheets are used to control layout and presentation.

Make sure that pages validates to CSS-2 Transitional

Tools

1. W3C Validator <http://jigsaw.w3.org/css-validator/>
2. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.8 Units

Make sure that all sizes in style sheets and attributes must use either percentages or “em” (be relative rather than absolute) <sup>1</sup>

1. Try to change the size of text in the browser window. If you cannot resize text, this means that the font size has been defined with absolute sizes
2. Test the site on various browser window sizes and monitor sizes. If you cannot see all of the content without scrolling horizontally, this means that the width of the window, or the tables on the page have been defined with absolute sizes.

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

<sup>1</sup> One exception to this rule is permissible – the width of a page container or the width of a column within the page container may be defined using fixed units

#### 4.1.9 Heading

Ensure that headings are used to convey document structure

Check that headers are used to define content hierarchy.

Make sure that header tags (H1 – H6) are used correctly. For example, in HTML, H2 elements should follow H1 elements, H3 elements should follow H2 elements, etc

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.10 Lists

Make sure that lists are used and coded properly

Check that list elements are used only for lists and not for formatting.

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.11 Quotations

Make sure that quotation mark-up is used for quotations, but not for formatting

Use a screen-reader to check that quotation elements are used only for quotations and not for formatting.

#### 4.1.12 Natural Languages

Make sure that changes in the natural language of a document's text and any text equivalents are clearly identified

If the page includes a few languages:

Make sure that any changes in language is identified with the "lang" tag and its value is set to one of ISO 639 language codes <http://xml.coverpages.org/iso639a.html>

Example:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
  "http://www.w3.org/TR/html4/strict.dtd">
<HTML lang="fr">
<HEAD>
<TITLE>Un document multilingue</TITLE>
</HEAD>
<BODY>
...Interpreted as French...
<P lang="es">...Interpreted as Spanish...
<P>...Interpreted as French again...
<P>...French text interrupted by<EM lang="ja">some
      Japanese</EM>French begins here again...
</BODY>
</HTML>
```

Tools

Screen readers <http://www.w3.org/WAI/References/Browsing>

#### 4.1.13 Table Headers

Make sure that data tables include row and column headers

Check that the following attributes are used for <table>, <th> and <td>: "summary", "headers" and "id"

Tools

1. Screen readers <http://www.w3.org/WAI/References/Browsing>
2. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.14 Avoid Tables for Layout

Check that tables are used for data representation and not for layout

Tools

1. Screen readers <http://www.w3.org/WAI/References/Browsing>
2. Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.15 Order Style Sheets

Make sure that pages are readable with disabled CSS

Follow next instructions to disable CSS in different browsers:

Internet Explorer 6+

1. Select Tools and click Internet Options
2. Select the General tab and click the box entitled Accessibility
3. Ensure that all three buttons under Formatting are checked
4. Click OK in Accessibility dialog box
5. Click OK in Internet Options dialog box
6. Click Refresh

Netscape 6+

1. Select Edit and click Preferences
2. Click on the Advanced category and deselect the item entitled Enable Style Sheets
3. Click OK
4. Click Reload

FireFox 1.5+ :

1. Select Tools and click Options
2. Select Content and click Font & Colors Advanced
3. Make sure that the "Allow to choose their own fonts, instead of my selections above" checkbox is not selected
4. Click OK in the Font Box
5. Click OK in the Options Box
6. Click Reload

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.16 Update Dynamic Content

Make sure that equivalents for dynamic content are updated when the dynamic content changes

N/A

#### 4.1.17 Programmatic Objects

Make sure that pages are usable when scripts, applets, or other objects are turned off

1. Turn off JavaScript to check that pages are still usable and text equivalents are available
2. Turn off “Enable Java” to check that pages are still usable and text equivalents are available
3. Check with the development team what additional programmatic objects are used and how to disable them in your browser

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.18 Event Handlers

N/A

#### 4.1.19 Design for Device Independence

Make sure that applets, scripts or other objects are directly accessible

Verify that you can access and manipulate applets, scrip objects and other object with a keyboard rather than with a mouse

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.20 Accessible Dynamic Content

Ensure that dynamic content is accessible

Verify that frames and script elements have alternative representation

1. Disable frames in your browser and check that pages are still accessible
2. Disable scripts and check that pages are still accessible

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

Ensure user control of time-sensitive content changes

#### 4.1.21 Flickering

Make sure that there are no banners, ads, animations, etc. that may cause rapid screen flickering

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.22 Blinking

Make sure that there are no banners, ads, animations, etc. that may cause rapid screen blinking

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.23 Moving Content

Make sure that there are no banners, ads, animations, etc. that may cause movement on the page

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.24 Auto-Refreshing Pages

Check that the site doesn't include auto-refreshing pages

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.25 Redirected Pages

Check that there is no automatic page redirect

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.26 Embedded Objects

Ensure that programmatic elements such as applets and scripts directly accessible with assistive technologies

Use the following assistive technologies for testing:

1. Screen-reader
2. Braille terminal
3. Screen magnifier

#### Resources

W3C Alternative Web Browsing

<http://www.w3.org/WAI/References/Browsing>

#### 4.1.27 Client-Side Image Maps

Make sure that client-side maps are used. Server-side images maps may be used only if the geometry of a region cannot be represented with values of the shape attribute.

#### Tools

Web Accessibility Toolbar

<http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.28 Element Interface

Ensure that page elements are accessible through a keyboard

Check that all elements can be operated through a keyboard

#### 4.1.29 Pop-up and New Windows

Make sure that there are no pop-up windows and current window is not changed without informing the user

1. Block pop-ups in your browser and verify that one can still browse through the site or use any interactive tools or forms

#### 4.1.30 Control Labels

Ensure that the labels for a form is properly positioned

Check that on all forms:

1. Labels positioned on the same line as the control when there are two or more controls on a single line.
2. Labels positioned on the line before the control when there is only one control on a line.
3. Text labels for checkboxes and radio buttons immediately follow the form element.
4. Text labels for text fields immediately precede the form element
5. Buttons must be labelled using the value attributes or enclosed text

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.31 Document Technologies

Verify that available W3C technologies are used

List of W3C technologies:

MathML for mathematical equations

1. HTML, XHTML, XML for structured documents
2. RDF for meta data
3. SMIL to create multimedia presentations
4. CSS and XSL to define style sheets
5. XSLT to create style transformations
6. PNG for graphics (although some are best expressed in JPG, a non-w3c spec)

#### 4.1.32 Deprecated Elements

Make sure that deprecated elements are not used

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.33 Accessible Equivalents

In case that the page cannot be fully accessible check that there is a link to an alternative page that uses W3C technologies

N/A

#### 4.1.34 Frames

Make sure that there are no frames

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.35 Information Blocks

Check that large blocks of text are divided into logical groups

Verify that large blocks of text are divided into logical groups with help of tables, nested lists, new lines, section headings, etc.

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.36 Link Targets

Make sure that link text is clear and make sense

1. Browse through the site pages and check links text. The example of unclear link text would be “click here”. The example of clear text link is “Click here to read about version 4.3”
2. Make sure that if there are a few links with the same link text they point to the same resource. For example there are 2 text links “Click here to visit the Health Ministry web site”. Both links should point to the Health Ministry web site home page.
3. Make sure that if there are a few links with the same link text pointing to different resources they have different “titles”. To check link titles move the mouse over a link.

#### 4.1.37 Metadata

Verify that appropriate meta data elements are applied to every page

Make sure that the following meta data elements are applied to every page: Title, Description and Keywords

Tools

Web Accessibility Toolbar <http://www.snapfiles.com/get/AccessibilityToolbar.html>

#### 4.1.38 Navigation

Make sure that navigation is consistent thought the web site pages

Browse through web site pages and make sure that navigation is presented consistently on all pages. For example all pages have a top navigation menu, left navigation menu, breadcrumbs, anchors for long blocks of text, etc.

#### 4.1.39 Writing Styles

Make sure that the site content is clear and is written in a simple language

Browse through we site pages and make sure that the content, labels, instructions, errors, headers are easy to understand.

#### 4.1.40 Alternate Formats

Make sure that pages that offer information in alternate format (not included into the list of W3C technologies) has a link to the site where an appropriate viewer application can be downloaded

Browse through the site and make sure that non-W3C format pages include instructions where and how to download a software to view the page.

For example if there is a link to a PDF page users should be informed that they are about to open a page in PDF format. There also should be information that they can download Adobe Reader from the Adobe web site and a link to the Adobe download page.

## **4.2 Recommended Standards**

### **4.2.1 Auditory Description**

Make sure that an auditory description of the important information of the visual track of a multimedia presentation is provided

1. Check that auditory descriptors are available through the media player
2. Play a video and listen to the describer

### **4.2.2 Synchronize Equivalents**

Make sure that for any time-based multimedia presentation equivalent alternatives are synchronized with the presentation.

1. Play a video and check that captions are synchronized with a presentation
2. Play a video and check that an auditory description is synchronized with a presentation

### **4.2.3 Table Structure**

Make sure that data tables that have two or more logical levels of row or column headers have markup to associate data cells and header cells.

Resources

Identifying rows and column information example

<http://www.w3.org/TR/WCAG10-HTML-TECHS/#identifying-table-rows-columns>