Principles of Evaluation

• Accessibility evaluation is often limited to assessing conformance to accessibility standards such as WCAG.

• It's a good way to help check that you've adequately covered the range of accessibility issues. However, when the focus is only on the technical aspects of accessibility, the human interaction aspect can be lost.
Principles of Evaluation

• Goals
  ▪ Quick evaluation; Conformance evaluation

• Challenges
  ▪ Evaluator; Limited time & money

• Scoping
• Evaluation tools selection
Five Testing Techniques

1. Code Scanning

- Many accessibility issues can be detected automatically using specialist software and tools.
- No automated accessibility evaluation tool can find all of your content's accessibility errors.

Example Tools -
AChecker
WAVE
Web Accessibility Checker
Evaluating Websites for Accessibility

• Markup Validation Service
  - http://validator.w3.org/
Evaluating Websites for Accessibility

- WAVE
  - http://wave.webaim.org/

Welcome to WAVE
WAVE is a free web accessibility evaluation tool provided by WebAIM. It is used to aid humans in the web accessibility evaluation process. Rather than providing a complex technical report, WAVE shows the original web page with embedded icons and indicators that reveal the accessibility of that page.

Enter a web site address
Enter the URL of the web site you want to evaluate.

Upload a file
If you have files that are not publicly available on the internet, you can upload the files for WAVE evaluation. Simply browse to the file using the form below.

Check HTML code
Paste HTML code into the text area below.
Evaluating Websites for Accessibility

• Web Accessibility Checker
Five Testing Techniques

2. Visual Review

• A great deal can be learnt by browsing your own website while keeping in mind certain guidelines.
  
  ➢ Can your content be easily read?
  
  ➢ Can your forms be used effectively?
Five Testing Techniques

2. Visual Review

- We suggest paying particular attention to anything visual that might not work well for a visually impaired user.
  
  - Is your text too small?
  
  - Are you using pale colour text on a pale background making it hard to read?
Five Testing Techniques

2. Visual Review

- 7 approaches to examine pages using graphical browsers;
  
  a) Turn off images, and check whether appropriate alternative text is available.
  
  b) Turn off the sound, and make sure audio content is still available through text equivalents.
Five Testing Techniques

2. Visual Review

c) Use browser controls to vary font-size: verify that the font size changes on the screen accordingly; and that the page is still usable at larger font sizes.

d) Change the display colour to grey scale (or print out page in grey scale or black and white) and observe whether the colour contrast is adequate.
2. Visual Review

e) Test with different screen resolution, and/or by resizing the application window to less than maximum, to verify that horizontal scrolling is not required (caution: test with different browsers, or examine code for absolute sizing, to ensure that it is a content problem not a browser problem).
Five Testing Techniques

2. Visual Review

f) Without using the mouse, use the keyboard to navigate through the links and form controls on a page (for example, using the "Tab" key), making sure that you can access all links and form controls, and that the links clearly indicate what they lead to.

g) Also examine page with scripts, style sheets, applets, and other embedded objects not loaded.
Five Testing Techniques

2. Visual Review

Example Tools -
Vischeck
Web Developer (Firefox plugin)
Colour Contrast Check
Evaluating Websites for Accessibility

- **Vischeck**

**Vischeck**

**Try Vischeck on a Webpage**

Select the type of color vision to simulate:

- Deuteranope (a form of red/green color deficit)
- Protanope (another form of red/green color deficit)
- Tritanope (a blue/yellow deficit - very rare)

Enter the URL of any webpage - eg. [www.google.com](http://www.google.com)

URL: [Run Vischeck!](http://www.vischeck.com/vischeck/vischeckURL.php)
Evaluating Websites for Accessibility

• Web Developer (Firefox/Chrome plugin)
Evaluating Websites for Accessibility

- Colour Contrast Check
  - [http://snook.ca/technical/colour_contrast/colour.html](http://snook.ca/technical/colour_contrast/colour.html)
Five Testing Techniques

3. Manual Screen Reader Testing

- Navigate your website and determine just how much information you’re able to access through the screen reading software.

  - Did everything make sense?
  - Did the screen reader access all of the content?
Five Testing Techniques

3. Manual Screen Reader Testing

- Was the alternative text for images appropriate and equivalent enough to convey the content and meaning of the image?
- Was the reading order of the content logical?
- Are link labels descriptive?
- Were forms accessible via the keyboard?
- Were form labels included?
Five Testing Techniques

3. Manual Screen Reader Testing

- If the page includes data tables, were data cells associated with headers?
- Did the navigation structure make sense?
- Was there an option to navigate within lengthy pages of content?
Five Testing Techniques

3. Manual Screen Reader Testing

- Was content structure, such as headings and lists, correctly implemented?
- Was any multimedia accessible (i.e., did video have captions, audio have transcripts, Flash have an alternative, etc.)?

Example Tools -
- Jaws
- VoiceOver
- Window Light
4. Testing with Other Tools

• As well as screen reader tools, persons with disabilities will use a variety of other tools to interact with your website.

For Example -
Screen Magnification Tools
Voice Control Tools
4. Testing with Other Tools

- Test your website with these tools and rectify issues found.

Example Tools -

ZoomText

Dragon Naturally Speaking
5. Human Testing

- Many organisations that support persons with disabilities can help by providing free or affordable human testing services.
- Many persons with disabilities prefer graphical version of websites, as more information services will be disseminated usually.
Evaluation approach for specific contexts

• Evaluation during the development process
• On-going monitoring and maintaining accessibility
• Evaluation of legacy sites
• Evaluation of dynamically generated Web pages
Evaluation during the development process

1. Establishing Requirement

2. Project Planning
   1. Review Schedule
   2. Human resource planning

3. Evaluation
   1. Evaluation approach
   2. Result review

Expected Accessibility Conformance Level
On-going monitoring and maintaining

- Define Expected Conformance Level
- Rectification & Implementation
- Selection & Scoping
- Evaluation
On-going monitoring and maintaining

- Clear expectations with regard to **frequency**, **approaches**, and **scope of evaluations**.
- Processes for validating and evaluating all changed pages and new types of pages before they are added to the site.
- Software to facilitate evaluation.
- Incorporation in web site of contact point for user feedback comment or suggestion on web accessibility.
Evaluation of dynamically generated Web pages

- Dynamically generated pages are usually assembled from one or more templates that provide common layout and navigation features, and
Evaluation of dynamically generated Web pages

- Content provided automatically from a database or other content management system.
- To achieve full conformance the accessibility of both templates and generated content must be evaluated.
Evaluation of dynamically generated Web pages

- It is not sufficient to evaluate only templates: content may also contain markup, or be required to contain markup in order to be accessible.

- Evaluate static templates using WCAG 2.0
Evaluation of dynamically generated Web pages

• Evaluate the capability of the content management system to store and generate accessibility information:

• Are images supplied with alt texts, and if needed, the longdesc?
Evaluation of dynamically generated Web pages

- Do generated data tables have accessibility aids (for example: summary, id on th header cells, etc.)?
Evaluation of dynamically generated Web pages

- If generated audio narrative, is textual equivalent available?
Evaluation of dynamically generated Web pages

- Is the generated markup valid?
Where to find help for your web accessibility project

- W3C website - http://www.w3.org/TR/WCAG20
A good web design with web accessibility elements

- GovHK (http://www.gov.hk/en/about/accessibility/)

Features:
- Resize Text
- Separate Textual Content with Links
- Handle Multi-level Menus
- Provide Supplementary Information
- Personalised Colours
A good web design with web accessibility elements

- Put links on separate independent lines
- Provide links with meaningful and complete description
- Eliminate “Click Here” phenomenon

Application for registration as Registered Energy Assessor (REA) commenced

With the Buildings Energy Efficiency (Registered Energy Assessors) Regulation put in operation on 21 March 2011, applications for registration as REAs were opened up immediately (please [click here](#) for how to apply and [click here](#) for the Register of REA).
A good web design with web accessibility elements

- Include useful supplementary information on hidden text
A good web design with web accessibility elements

- Provide 6 colour scheme options with various colour contrasts and combinations
- Customise for specific users (e.g. colour blindness, maculopathy, light and colour sensitive, etc.)
A good web design with web accessibility elements

• Search Engine Optimisation (SEO)
  
  ➢ Many web accesses are referred by search engine output
  
  ➢ Put commonly referred keywords or abbreviation on hidden text or “meta keyword tag” to facilitate search with such terms, e.g. P1/Primary One, Passport/ Travel Document, CRE/Common Recruitment Examination, 移民局/人民入境事務署，搵工/招聘
A good web design with web accessibility elements

• Implement search engine friendly website

  ➢ Provide “meta description tag” to describe your webpage

  1. GovHK: Online Application for HKSAR Passport
     ... Online Application for HKSAR Passport. Your current location in this website. ... An online application without a standard photograph, full supporting documents or payment will not be processed. Passport Collection. ...

  2. GovHK: HKSAR Passport
     ... For enquiries about passport application or collection, please contact the Immigration Department hotline at (852) 2824 6111 ... can also find answers to some of the frequently asked questions about HKSAR Passports here. ...

  ➢ Implement appropriate headers <h1>, <h2>, <h3> in page

  ➢ Provide sitemap in text and not be JavaScript driven
Web Accessibility Campaign

Launched in 2011 -

- Focus group discussion
- Survey with persons with disabilities
- Management handbook
- Portal with Illustration webpages (www.webforall.gov.hk)
- Awareness building seminars
Web Accessibility Campaign

Upcoming events

• Experience sharing sessions & Technical workshops
• Inculcating professional ethics in tertiary education institutions
• Recognition scheme
Web Accessibility Campaign

Let’s join hands in making a caring and inclusive society
Thank you
Questions and Answers