

Ensuring Content Accessibility

Introduction

1. Developing client-centric content extends beyond the selection, style and structure of the content. It includes the content formats used for the dissemination of information. Unlike the content for printed publications, content on the Internet is not restricted to text. For viewers with the most up-to-date computer software, the viewer experience can be enhanced through the provision of graphics, downloadable files, audio, video and interactive mechanisms. The use of these formats, however, can detract from the usefulness of the site for viewers who are unable to access the variety of formats.

2. The Government has taken a step towards ensuring accessibility for its target audience by requiring all government sites to be provided in both English and Chinese. The requirement for bilingual websites is an important step but only the beginning for ensuring accessibility. The target audience may be using older versions of Internet browsers, have visual impairments that require the use of a text reader or hearing impairments that invalidate audio content.

3. Ensuring accessibility requires a careful “balancing act” between leveraging the benefits of new and innovative Internet capabilities, such as the use of video files, and retaining basic techniques such as providing a text-only viewing option. Ensuring accessibility of web content covers four areas:

- Using new technologies;
- Providing documents for downloading;
- Providing interactive content; and
- Making homepages more accessible to the visually impaired.

Using New Technologies

4. It cannot be assumed that the consumer base will have the latest browsers capable of supporting the latest features such as advanced HTML and/or JavaScript. Older versions of browsers may support text only.

5. To ensure accessibility:

- (a) HTML code should be written such that the use of the latest JavaScript or HTML is optional depending on the browser being used;
- (b) graphics and other non-text objects should be labelled using descriptive tags (i.e. "Alt=") so that they can be identified by the description;
- (c) audio and video formats should be accompanied by a text-based alternative if practicable;
- (d) the pre-requisites of using more advanced browsers or plug-in should be stated and their downloading be provided, otherwise some Internet users may encounter unexpected difficulties in browsing; and
- (e) animation at the entry page – Features requiring plug-in, such as Flash used at the entry page, though visually attractive, may be an obstacle for viewers to enter the site. This can be addressed by testing through the use of various popular browsers and providing an alternate entry point e.g. version without animation, so that the viewer can still enter the site without downloading the plug-in. Furthermore, a “skip” option should also be provided in case the viewers do not wish to wait for the playing of the entire animation program.

Providing Documents for Downloading

6. Improved convenience, customer service and potential cost savings are the key drives for providing downloadable documents on websites.
7. A potential accessibility issue surrounding providing downloadable documents is that the customer must have the requisite software to view the document. This limitation can be overcome by providing documents in formats such as Portable Document Format (PDF) and Dynadoc. Such formats can be viewed using software that are freely available on the Internet at no charge from the software vendors. PDF is particularly valuable for its graphical and accurate representation of formatted documents such as official forms. A hyperlink for accessing the required software should be provided when downloadable documents are provided.
8. Nevertheless, PDF and Dynadoc formats are still not accessible to those restricted to text readers and larger files may be cumbersome to download for those with slow modem connections. It is useful to provide an email link or telephone contact to enable the viewer to request a physical copy of the document if required.

Providing Interactive Content

9. Interactive content such as on-line transactions is used to improve upon traditional forms of “one-way” customer service. As with the formats discussed above, access to interactive content is dependent on the capabilities of the browser in use and therefore, may not be accessible to all viewers. To ensure accessibility to content, a site should always provide alternatives for interactive services such as email links or phone numbers to allow the service to be easily obtained through other channels where interactive channels are not available.

Making Homepages More Easily Accessible to People with Disabilities

10. Internet users with visual impairment usually read homepages with the aid of screen access programs. Those programs enable the visually-impaired to understand texts appearing on the screen. Still, they cannot comprehend graphics.

11. There are two approaches to facilitate accessibility of websites by the visually-impaired. They are:

- (a) providing an additional text-only version in addition to the existing website; and
- (b) including features, such as brief descriptions and text links, in existing websites to make them more accessible to the visually-impaired (please see para. 15 below for details).

12. The Hong Kong Blind Union is of the view that providing additional text-only version can cater for more Internet users such as the cognitively-impaired who would have difficulties in comprehending complicated patterns, the visually-impaired with less advanced screen readers or users with less powerful computer equipment. However, some websites adopting this approach have reflected that subsequent maintenance and updating are major problems.

13. According to the Hong Kong Blind Union, the second approach is sufficient for the visually-impaired and can meet the World Wide Web Consortium requirement. Our advice is that in the long-term, this approach appears to be more cost-effective from the providers’ point of view since it saves the effort and expenditure in maintaining and updating two versions. It can also prevent asymmetrical contents appearing in two versions due to updating fault.

14. Since most users of Government and public websites are Hong Kong residents who, we surmise, normally possess relatively sophisticated computer equipment, the possible problem of being unable to cater for users with less powerful computer equipment in adopting this approach may not be significant. Of course the departments/organisations concerned have the ultimate authority to decide which approach to be adopted to suit the objectives and target audience of their websites.

15. With reference to the approach mentioned in para. 11(b) above, the followings are

concise design considerations for improving accessibility of web pages:

- (a) Alt-text should be used for hyperlinks accessible through image map;
- (b) a brief descriptive text should be provided for significant diagrams and pictures, e.g. the whole screen is occupied by a picture;
- (c) avoid complicated frames;
- (d) avoid animation effects, such as flash, animated GIF, marquee effect, and etc. (note 2);
- (e) provide navigation anchors for hot links;
- (f) keep good color contrast. Select colors that will make the pages easy to read by people with color blindness. One good test is to see if the pages are readable in black and white;
- (g) use separate pages for Chinese and English versions (note 3);
- (h) provide file attachments in text format (note 4);
- (i) for complex tables, e.g. those that require several row/column headings to describe a single data cell, a text equivalent of the table should be provided; and
- (j) text descriptions should be provided, if practicable, for all sound clips and video clips.

References

16. More information concerning helping those with disabilities are available in the World Wide Web Consortium website at <http://www.w3.org/WAI/>.

17. Please visit the websites of GIC and ITSD (text-only version) at <http://www.info.gov.hk> and <http://www.info.gov.hk/itsd> respectively for reference as they are considered accessible by the Hong Kong Blind Union.

18. Some tips and techniques to enhance web accessibility can also be found in the Digital 21 website at <http://www.digital21.gov.hk>

Notes:

1. Paras. 15(a) to (i) are based on advice provided by the Hong Kong Blind Union, to which we wish to record our gratitude.
2. In websites where animation effect is considered to be absolutely necessary (e.g. advertisement banners), a non-animated version should be provided. If the animation/graphics is not purely decorative but contains information, e.g. an animated clip which describes a work flow, a graph, a pie chart with figures etc, an alternate text-page can be provided which contains the information in its text equivalent.
3. For bilingual websites, the navigation button on the front page for linking to the English version should be located at the top of the page. This can avoid the situation that sometimes the English screen reader may misinterpret the Chinese characters as control characters and cause a system upset.
4. Adobe Acrobat has provided accessibility plug-in for converting English PDF files into text format. However, the corresponding plug-in for Chinese PDF files is not yet available.