

Office of the Government Chief Information Officer

Web Accessibility

無障礙網頁

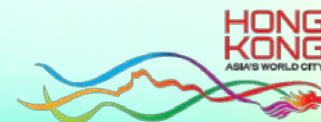
Digital Inclusion Division

數碼共融部

31 July 2013



政府資訊科技總監辦公室
Office of the Government Chief Information Officer



Agenda

1. What is and Why Web Accessibility?
2. International Standards & Broad Principles
3. Web Accessibility Campaign
4. Web Accessibility Recognition Scheme



What is Web Accessibility?

- Making web **Content** available for **ALL**
- **ALL** people of the community
- Including persons with disabilities (361,000 about 5.2% of total population)



Common Pitfalls in Web Accessibility

1. No alternatives for non-text content

- Persons with visual impairment cannot perceive the image content



Alt = "Image 1"



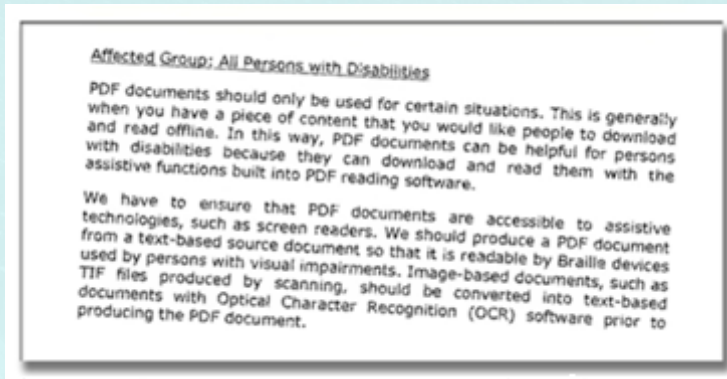
Alt = "Officiating guests attending the Launch Ceremony of the Web Accessibility Recognition Scheme"

- ✓ e.g. contain descriptive text alternative for image

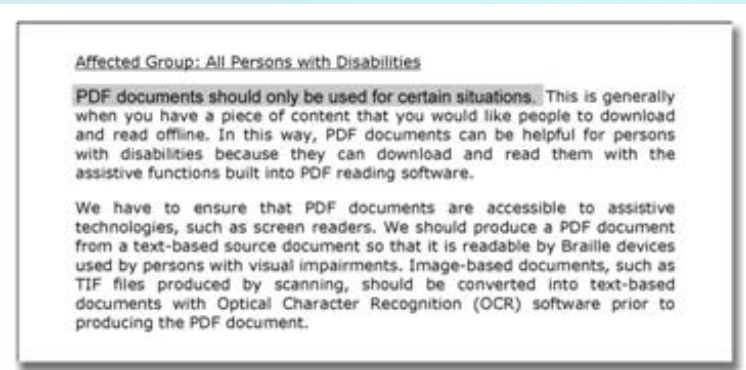
Common Pitfalls in Web Accessibility

2. Inaccessible PDF Files

- Screen reader cannot read the content



Scanned Image not accessible



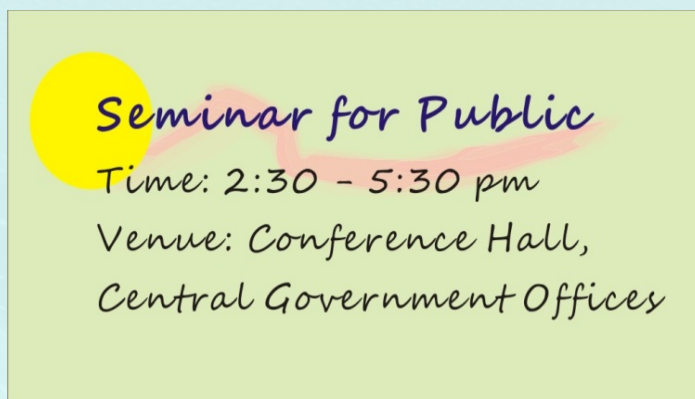
Text-based accessible PDF

- ✓ e.g. use proper PDF generator to produce a PDF document from a text-based source document;
- ✓ use Optical Character Recognition (OCR) software after scanning

Common Pitfalls in Web Accessibility

3. Text in Image is not accessible

- Information is not conveyed to all



Text in image



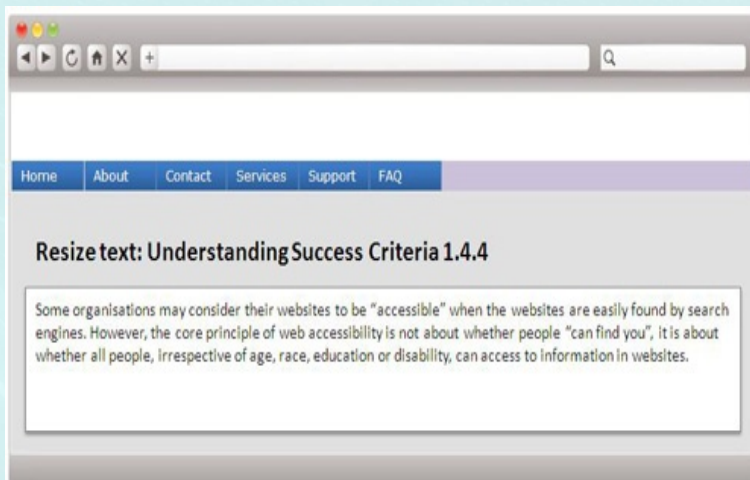
Accessible text on a webpage

- ✓ Avoid to convey information of wide public interest
- ✓ If avoidable, provide descriptive text alternatives

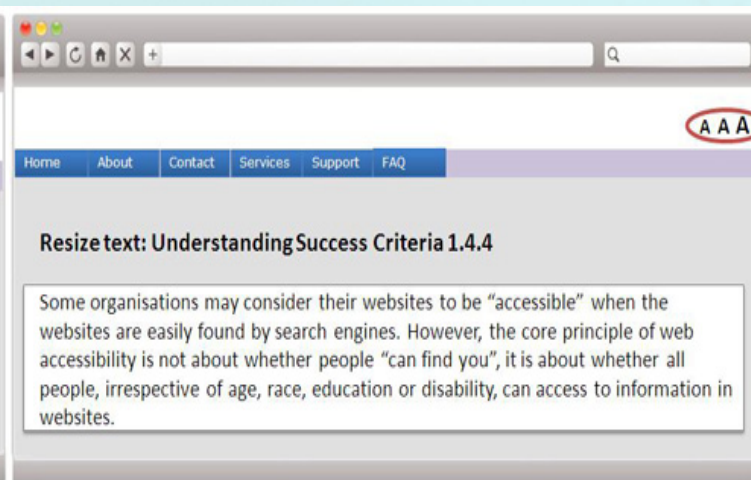
Common Pitfalls in Web Accessibility

4. Small font sizes

- Persons with low vision cannot read the text



Cannot resize text



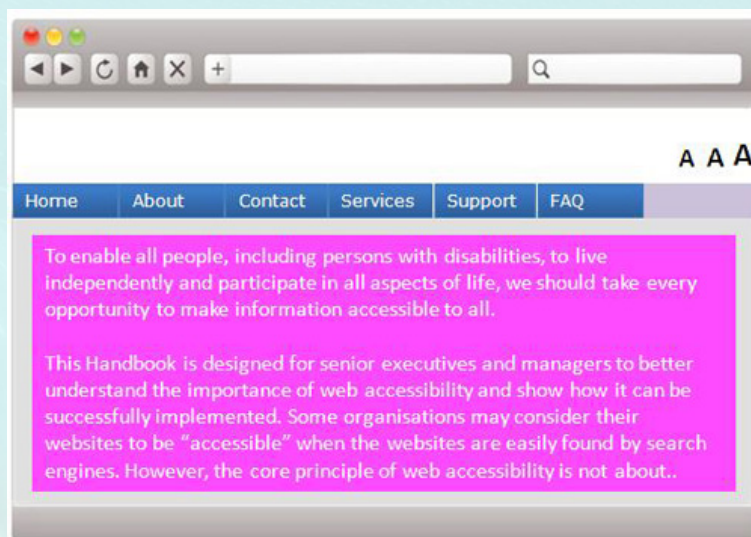
Can resize text

✓ e.g. provide text resize function

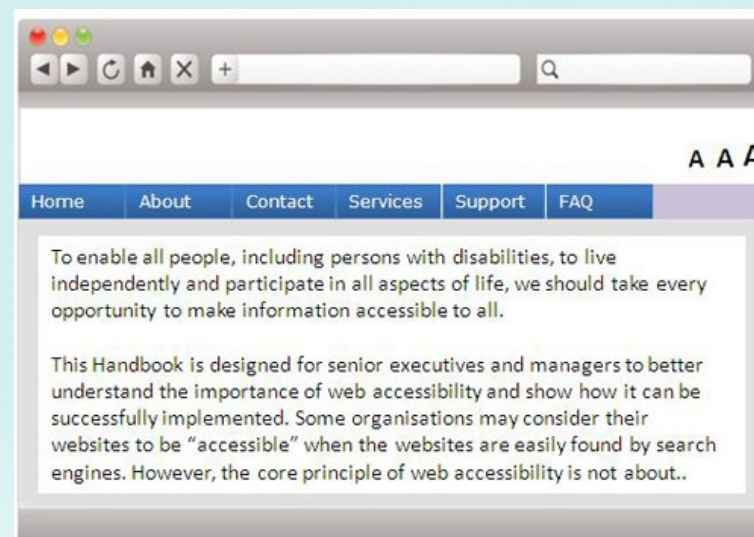
Common Pitfalls in Web Accessibility

5. Insufficient colour contrast

- Persons with low vision have difficulty reading text that does not contrast with its background



Poor background contrast



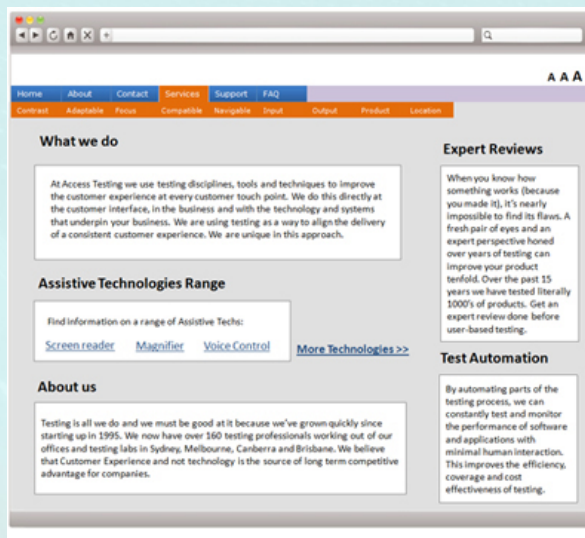
Easier to read with higher contrast

- ✓ e.g. provide sufficient contrast ratio

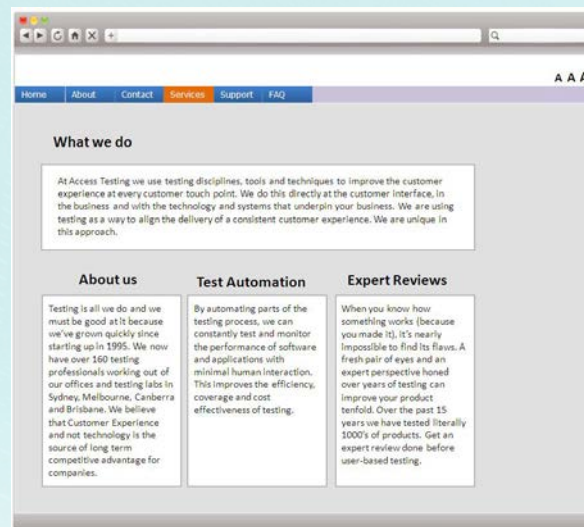
Common Pitfalls in Web Accessibility

6. Complicated website infrastructure

- Persons with cognitive impairment have difficulty reading complex website structures



Complex structures

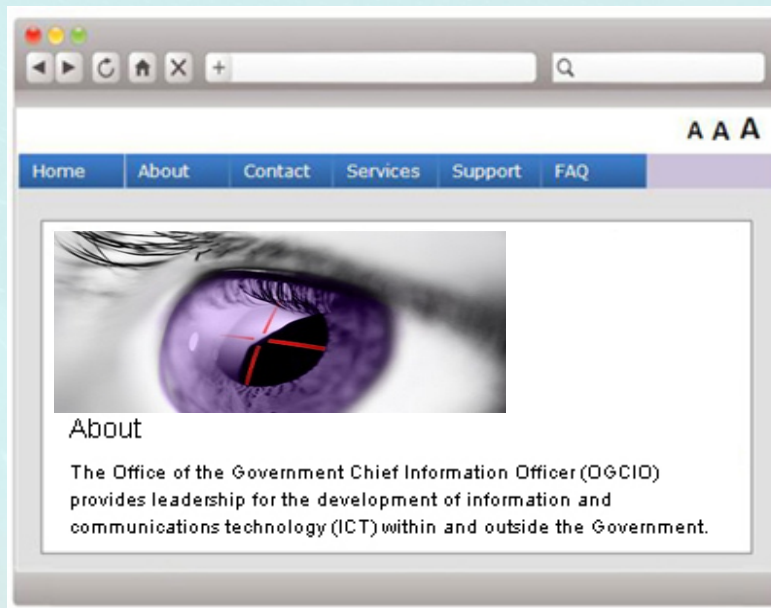


Simple structure

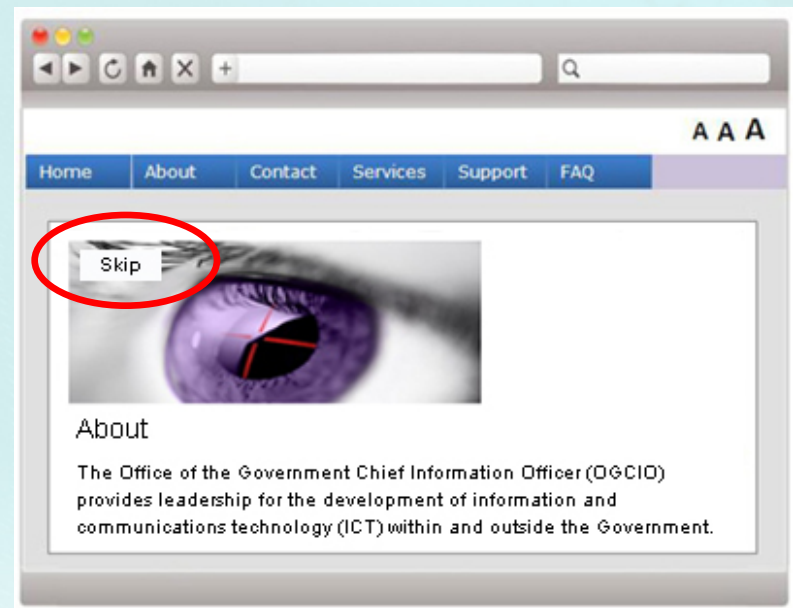
- ✓ e.g. provide simpler and ordered website structure

Common Pitfalls in Web Accessibility

7. Unable to skip inaccessible Adobe Flash and moving objects



Unable to skip



Skip function added

✓ e.g. add a skip function

Common Pitfalls in Web Accessibility

8. Websites with background audio



Background audio plays automatically



Function to control background audio

- ✓ e.g. add a function to control background audio

Common Pitfalls in Web Accessibility

9. Video without captions and audio description

- Persons with visual or hearing impairments have difficulty to understand the video



- ✓ e.g. provide captions and audio description

Why Web Accessibility?



- **Equal opportunities**

- United Nations' Convention on the Rights of Persons with Disabilities
聯合國《殘疾人權利公約》
- Disability Discrimination Ordinance
《殘疾歧視條例》 (Cap 487) has created a legal duty for organisations to ensure their services are available to everyone

- **Social responsibility**

- Build positive corporate image
- contribute to a more caring and inclusive society

Why Web Accessibility?



- **Search engine friendly**
 - get more prominent ranking in search engine results
- **Widest possible reach-out**
 - reach out to more online customers
- **Lower costs in the long term**
 - easier to maintain which saves time and money in the long term
 - avoid unnecessary lawsuits



Legislation / Guideline

Country	Legislation / Guideline
Australia	<ul style="list-style-type: none">• Disability Discrimination Act (DDA) of 1992• WWW Access: DDA Advisory Notes• The Guide to Minimum Website Standards
Canada	<ul style="list-style-type: none">• Canadian Human Rights Act of 1977• The Government of Canada Internet Guide
China	<ul style="list-style-type: none">• 國務院令第622號 - 《無障礙環境建設條例》• 《殘疾歧視條例》 - (香港法例第487章) <p>The Disability Discrimination Ordinance (DDO) Cap 487</p>
United Kingdom	<ul style="list-style-type: none">• The Equality Act 2010• Formal investigation report on Web Accessibility
United States	<ul style="list-style-type: none">• American with Disability Act (ADA)• Section 508 of the Rehabilitation Act• Assistive Technology Act of 1998• Section 255 of the Telecommunications Act of 1996
European Union	<ul style="list-style-type: none">• Accessibility of Public Websites – Accessibility for PWDs: Council Resolutions, 2002

Legislation in China

《無障礙環境建設條例》

- 縣級以上人民政府發布重要政府信息和與殘疾人相關的信息，應為殘疾人**提供語音**和**文字提示**；
- 國家舉辦的考試(如：升學、職業資格等)，應當為視力殘疾人提供**盲文試卷**、**電子試卷**等；
- 設區的市級以上人民政府設立的電視台在播出電視節目時配備字幕，每周播放至少一次配播**手語的新聞節目**；



Legislation in China

- 設區的市級以上人民政府設立的公共圖書館應當開設視力殘疾人閱覽室；
- 殘疾人士組織的網站應當達到**無障礙網站設計標準**，設區的市級以上人民政府網站、政府公益活動網站，逐步達到無障礙網站設計標準。
- http://www.gov.cn/zw/gk/2012-07/10/content_2179864.htm



Local Complaint Cases

- A NGO issued a press release in June 2012
- Complained about inaccessible PDFs published on Government website

選舉處涉歧視殘障



A A

無法在月底前向選舉處申索的人士，將不能在9月投票。

【本報訊】選舉事務處在核實選民登記冊時涉觸犯《殘疾歧視條例》。香港失明人士協進會會長莊陳有昨去信平機會，指選舉事務處在本月15日公佈的臨時選民登記冊及抽樣調查信件，只提供一般文字版本，視障人士無法查閱，隨時在不知情的情況下喪失選民資格。

莊陳有指失明人士看不見選舉事務處發出的抽樣信件，可能連需要核實身份也不知道。「事務處嘅網頁都係只得文字，欠缺無障礙設施，香港話就話無障礙城市，事實仲好落後。」莊陳有已在本月15日去信選舉管理委員會主席馮驊，要求改善，至今仍未獲回覆。

Source: Apple Daily Newspaper

Local Complaint Cases

- Complained about restaurant websites causing issues in online ordering



<http://life.mingpao.com/cfm/basicref3b.cfm?File=20120723/braa02a/gma1.txt>

盲人勝利 麥當勞網頁去障礙 多間連鎖餐廳網頁 視障者難叫外賣

文章日期：2012年7月23日

【明報專訊】本港不少連鎖餐廳均會在網頁提供「網上訂購」服務，但有視障者組織留意到本港大型連鎖餐廳網頁不設「無障礙」文字版，令視障者無法透過屏幕報讀軟件瀏覽網頁，致全港約12萬名視障者在網上叫外賣障礙重重。有失明者早前透過報讀軟件上網，到麥當勞網頁叫外賣，但該網主頁不斷重複播放音樂，干擾報讀軟件，令他苦無辦法讀到外賣電話及餐單落單，遂於今年2月透過香港失明人協進會向平機會投訴。本報與視障者測試另外4間連鎖餐廳，亦發現不設無障礙文字版，令視障者難「叫外賣」。

Local Complaint Cases

多間連鎖餐廳網頁無障礙情況

麥當勞
■ 首頁重複播放音樂，干擾盲人屏幕閱讀軟件；網頁設計成以滑鼠控制，盲人無法操作
回應：已改善；關掉音樂，加入純文字檔，包括麥麥送熱線，現已研究全面提升網站，以進一步達至無障礙

必勝客
■ 主頁圖片並沒載有文字描述或替代文字 (ALT Text)，網站導航排序並非依序排列，「網上訂購」以圖片展示，要逐一進入才有文字，另盲人無法找到「立即訂購」按鈕
回應：留意到問題，希望今年推出便利視障者訂購的網頁，現階段先由電話服務員提供協助，請出外賣項目及細節

吉野家
■ 首頁為 Flash 動畫配直排的文字圖片，軟件斷續讀出不相干單字，無法繼續進入
回應：截稿前未獲回覆

板長壽司
■ 首頁為 Flash 動畫，整頁以沒載有文字描述的圖片組成，軟件只能重複讀出「板長壽司，和之味集團成員」，無法繼續進入
回應：暫未設無障礙網頁，將來考慮作改善

肯德基
■ 主頁圖片並沒載有文字描述或替代文字 (ALT Text)，熱線電話以沒有文字描述的圖片顯示
■ 如直接進入「網上訂購」頁面，讀到首頁「今期推介」餐單，但無法讀到「登入訂購」、「網上訂購」頁面，其他頁面的按鈕只附連結，無文字描述
回應：截稿前未有回覆

<http://hk.news.yahoo.com>

上網叫外賣薄餅 找半小時食白果

明報 - 2012年7月23日星期一 上午5:24

電郵 推薦 0 推文 +1 列印

【明報專訊】失明者鄭灼培 (John) 和任博輝網上訂購外賣屢試屢敗，兩人早前協助檢視本港主要連鎖快餐店的網頁，令記者體會他們叫外賣之艱。

例如兩人登入必勝客網頁，由於頁面沒有文字描述或替代文字 (ALT Text)，報讀軟件只能讀出網頁圖片的檔案名字，兩人呆聽30分鐘，才聽到「delivery (外賣)」，但點進去又再遇到大量圖案，要逐一打開，才能知悉按鈕代表的是一人套餐、必勝批還是升級優惠，阿輝無奈說：「那些連結有如抽屜，我們永遠不知裏面有什麼，要逐個逐個打開。」兩人最後決定作罷。

圖像動畫充斥 報讀器讀不到

肯德基網頁情況亦類近，兩人登入「網上訂購」頁面，軟件可讀到首頁「今期推介」的文字，其他頁面的按鈕只附連結，無文字描述。如想改打電話叫外賣，網頁的熱線電話亦只以圖片顯示，報讀軟件無法讀出，兩人最終亦無法完成外賣程序。

至於吉野家，首頁是Flash動畫配以直排的文字圖片，軟件斷續讀出不相干的單字，最終兩人找不到方法登入。另一連鎖店板長壽司的網頁，首頁同樣是Flash動畫，一般人可看到頁頂的外賣電話，但由於整頁以沒載有文字描述的圖片組成，軟件只能重複讀出「板長壽司，和之味集團成員；板長壽司，和之味集團成員……」沒完沒了，兩人最終亦決定作罷。



Local Complaint Cases



聯招網兩障礙 視障生難改選

[昔日文章]

文章日期：2012年07月23日

f Like 0

【明報專訊】在剛放榜的中學文憑試，考生只可在「大學聯合招生辦法」網頁修改選科，但該網頁設計為視障生帶來兩大障礙，一是要使用視障生無法操作的滑鼠；二是網頁圖片不設文字描述，令屏幕報讀軟件無法閱讀。平機會檢測後亦指聯招網不太有利視障生，促作改善。

聯招處回覆，將為完全失明學生作特別安排，並繼續檢視需改善地方，但為維持網頁穩定性，今年難以改正所有頁面。

聯招處：將檢視需改善處

香港失明人協進會項目經理高碧姬稱，近月接獲視障學生投訴無法使用聯招網，主要問題是要使用拖拉形式（drag-and-drop）進行學科改選，即要求使用者以滑鼠按着按鈕，拉至另一位置放下，對於只能使用鍵盤操作網頁的視障學生來說並不可行。

<http://life.mingpao.com/htm/hkdse/cfm/news3.cfm?File=20120723/news/gma3.txt>



Agenda

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2. International Standards & Broad Principles
3. Web Accessibility Campaign
4. Web Accessibility Recognition Scheme



International Standards

- **World Wide Web Consortium (W3C) 萬維網聯盟** consists of people from industries, disability organisations, governments, and research labs from around the world, develops strategies, guidelines, and resources to help make the web accessible to people with disabilities
- **Web Content Accessibility Guidelines (WCAG)** 《無障礙網頁內容指引》 have been developed over the years by W3C
- Version 1.0 in 1999; version 2.0 in 2008
<http://www.w3.org/WAI/>



International Standards

- The WCAG consist of four parts —

4 Principles 原則

12 Guidelines 準則

61 Success Criteria 成功準則

Many Techniques 技巧



WCAG - Principles

4 Principles

- Content is **Perceivable**
- User interface components and navigation are **Operable**
- Information and operation are **Understandable**
- Content is **Robust** enough to be interpreted reliably by a wide range of web browsers, assistive technologies, etc.



WCAG 2.0 - Principles

1 - Perceivable

- Example - Audio CAPTCHA

Home > [Community Initiatives and IT Services](#) > Web Accessibility

Web Accessibility Suggestion Box

Name :


Telephone Number :


(Please provide country/area codes if outside Hong Kong)

E-mail Address :

Suggestion / Comment :

Enter the characters in the image
(CAPTCHA):





Audio Support

2 - Operable

- Example - Provide users enough time to read and use content



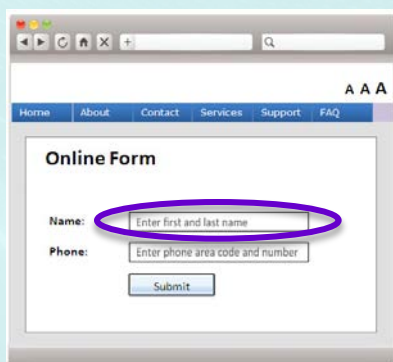
Provide Pause Function

www.ogcio.gov.hk

WCAG 2.0 - Principles

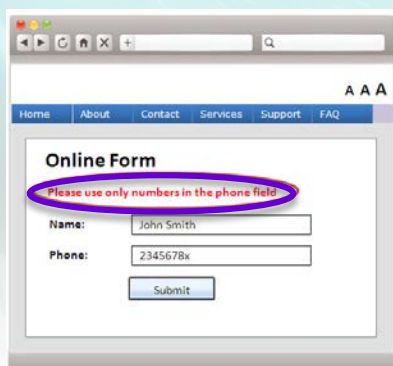
3 - Understandable

- Example – Clear label with cue and error identification



A screenshot of a web browser showing an online form. The form has two input fields: "Name:" with the placeholder text "Enter first and last name" and "Phone:" with the placeholder text "Enter phone area code and number". A "Submit" button is located below the fields. The "Name:" label and its corresponding input field are circled in blue, indicating clear labeling and cues.

Input Assistance



A screenshot of a web browser showing the same online form as above. The "Name:" field contains "John Smith" and the "Phone:" field contains "2345678x". A red error message "Please use only numbers in the phone field" is displayed above the phone field, which is circled in blue. The "Submit" button is visible below the fields.

Error Identification

4 - Robust

- Compatibility with browsers

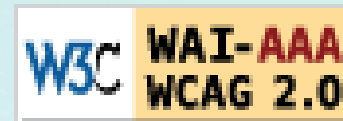
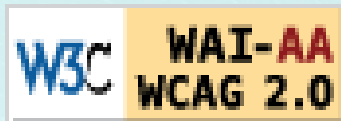
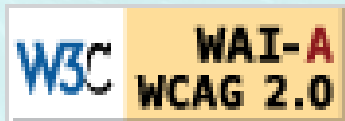


WCAG - Conformance

- There are three Levels of conformance –

Level A 25 success criteria	Level AA +13 success criteria	Level AAA +23 success criteria
Basic	Recommended	Ideal

Level AA Conformance



WCAG - Conformance

- Example - Video Requirements

	Level A	Level AA	Level AAA
Pre-recorded Video	Captions + (audio description / text transcript)	Captions + audio description	Extended audio description + Text description + Sign language



Overseas Government Practices

- Governments websites adopting WCAG

Country	Standard	Timeline to achieve standard
New Zealand	WCAG 2.0 Level AA	June 2010
United Kingdom	WCAG 1.0 Level AA	March 2011
Hong Kong	WCAG 2.0 Level AA	January 2013
Canada	WCAG 2.0 Level AA	July 2013
Singapore	WCAG 1.0 and key aspects of WCAG 2.0	December 2013
Australia	WCAG 2.0 Level A & AA	December 2014



Testing Techniques

1. Code scanning

- Many accessibility issues can be detected automatically using specialist software and tools
- Example tools –
 - AChecker
 - WAVE
 - PDF Accessibility Checker



Testing Techniques

2. Visual review

- A simple look at a website can reveal many potential web accessibility issues for persons with disabilities
 - Can the content be easily read?
 - Is the text too small?
 - Does it use pale coloured text on a pale background, making the text hard to read?
 - Move around the webpage using just a keyboard. Can we access all the links and functions?
- Example tools –
 - Vischeck
 - Colour Contrast Check



Testing Techniques

3. Manual testing with screen readers

- Navigate website and access the content through the screen readers
- Example tools –
 - Jaws
 - NVDA
 - VoiceOver



Testing Techniques

4. Manual testing with other assistive technologies

- Screen magnification tools and voice control tools
- Example tools –
 - ZoomText
 - Dragon Naturally Speaking



Testing Techniques

5. Human testing

- The most thorough approach to ensure web accessibility is to test a website by persons with disabilities
- Some organisations supporting persons with disabilities offer human testing services



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Web Accessibility Campaign

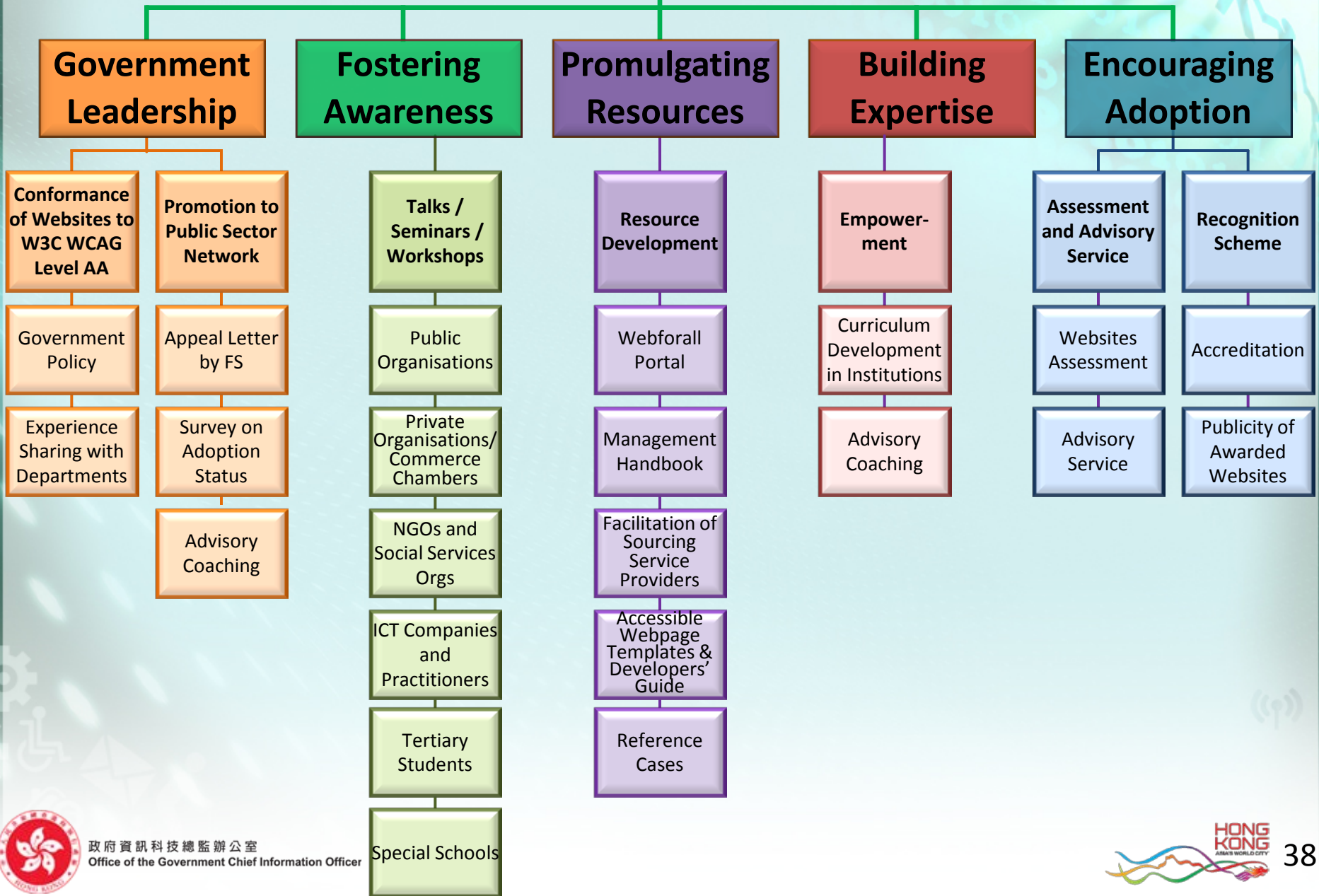
Launched in October 2011

Objective

- To facilitate access to online information and services for all segments of the community including persons with disabilities
- To promote wider adoption of web accessibility design in both public and private websites



Web Accessibility Campaign



Web Accessibility Campaign

Government Leadership

Government Websites



Fostering Awareness

Seminars & Workshops



Public-sector organisations



Over 3000 participants

Web Accessibility Campaign

Promulgating Resources

Webforall Portal

www.webforall.gov.hk



Accessible Webpage Templates



Mobile Applications Accessibility Handbook

Mobile Applications Accessibility Handbook



```
<html>
<head>
<title>主頁</title>
<link rel="stylesheet" type="text/css" href="style.css" />
<META http-equiv="Content-Script-Type" content="text/javascript">
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">

<script src="js/jquery-1.8.3.js"></script>
<script src="js/scroll.js"></script>
<script src="js/cycle.js"></script>
<script src="js/menu.js"></script>
<script src="js/script.js"></script>
```



Webforall Portal

Web Designers' Corner

- facilitating the sourcing of ICT professional services for the implementation of web accessibility designs
- www.webforall.gov.hk/web_designers_corner

Web Accessibility Services Providers List

Index: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [0-9](#) [Misc](#)

A

Supplier and Contact	Gap Analysis	Website Design	Website Dev.	Website Maint.	Website Testing
[Supplier Name] [Address] [Phone] [Email] [Website]	✓	—	—	—	✓
Projects Reference					
[Supplier Name] [Address] [Phone] [Email] [Website]	✓	✓	✓	✓	✓
Projects Reference					



Accessible Webpage Templates

- www.webforall.gov.hk/web_template
- Sample codes incorporated with essential web accessibility features, e.g.

4. Provide User-initiated background audio

1. Provide “Skip To Content”

2. Provide meaningful alt text for images

3. Allow to play or pause the auto-scrolling latest news



5. Allow text resize

6. Provide keyboard accessible menu

7. Provide embedded video channel

8. Provide sufficient colour contrast

Web Accessibility Campaign

Building Expertise

Incorporate Web Accessibility into ICT curricula



Web Accessibility Campaign

Encouraging Adoption

Web Accessibility Recognition Scheme



- Reference to International standard
- Verified by persons with disabilities
- Free assessment and advisory services
- Webforall accreditation logos

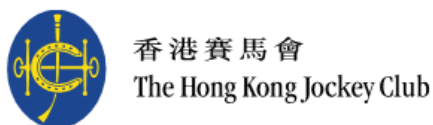
Agenda

1. What is and Why Web Accessibility?
2. International Standards & Broad Principles
3. Web Accessibility Campaign
4. **Web Accessibility Recognition Scheme**



Web Accessibility Recognition Scheme

1st Recognition Scheme



44 Gold Awards and 26 Silver Awards



Web Accessibility Recognition Scheme

Recognition Scheme 2013/14

- Co-organise with Equal Opportunities Commission
- Website / Mobile Apps **NEW!** streams
- Application Period: **Sep to Dec 2013**
- Awards Presentation Ceremony in April 2014
- Details to be announced in webforall portal - www.webforall.gov.hk/recognition_scheme



Your Support to Web Accessibility

- Adopt web accessibility for websites/mobile apps
- Ensure colleagues and content providers are aware of the importance and having relevant skills
- Encourage clients/business partners to do the same



Your Support to Web Accessibility

- Download and use **Accessible Webpage Templates**
- Enrol **Web Accessibility Recognition Scheme 2014**
- Fill out and return the Survey on Content Management System
- Check out Social Welfare Development Fund latest news



Enquiry

Web Accessibility Programme Office

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Telephone no. : 2582 6079

Website : www.webforall.gov.hk





*Let's join hands in making a
digitally inclusive society*

Thank you!

