Report on Web Accessibility of Public Service Homepages in Hong Kong

December 2000

Content

WEB ACCESSIBILITY OF PUBLIC SERVICE HOMEPAGES

PART I – INTRODUCTION

Background

1.   The emergence of the World Wide Web has made it possible for individuals with appropriate computer and telecommunications equipment to interact as never before. As the Internet is moving to becoming a major or principal channel of information, communication and services, it is necessary that measures be considered to ensure this channel does not exclude people with a disability (PWDs). At the meeting of 22 June 2000, the Information Technology Task Force (ITTF) of the Equal Opportunities Commission (EOC) agreed that a preliminary Web accessibility test should be conducted in order to identify areas for improvement.

Objective and Scope

2.   Government needs to be an effective role model to the rest of the community in delivering accessible on-line and e-commerce services. It needs to provide clear leadership in this area. Thus, the objective of the exercise is to find out the degree of accessibility to information made available on public service Websites. Actions to enhance Web accessibility would be recommended thereafter.

3.   Pages or folders in Websites may be different in the degree of accessibility. The scope of this exercise mainly targeted on the homepages of public services Websites because it is usually considered to be the gateway for new or frequent visitors to access information contained in that Website. Some public bodies' Websites were hosted by another site and so the page where the directory for that service first began would be considered as its "homepage". For example, the homepage address for the District Councils was http://www.info.gov.hk/had/major/admin/db/dbmain.html.

4.   163 homepages were identified from the Government Information Center (GIC) directory at http://www.info.gov.hk. They included central bodies for major government functions, policy bureaus, departments, agencies, related organizations and tertiary institutions. The list is attached at Appendix I and the distribution is as follows:

Table 1 – Classification of public service

	Number of homepages
Central bodies	12
Policy bureaus	16
Departments and agencies	74
Related organizations	51
Tertiary institutions	10
TOTAL	163

Methodology

5.   The exercise was carried out by EOC staff in two stages after the homepages were identified. On 9-10 November 2000, the 163 homepages were scanned to record following information:

- Available alternate mode such as text-only mode;
- Primary language used in the homepage and available choice of other language version(s);
- Information to contact the organization including email address, fax and phone number, mailing and office address, etc.;
- Links to other Websites for further information.

6.   On 14 November 2000, all homepages were grouped and analysed using the downloadable version of Bobby 3.2. The test was run on a computer of Intel Pentium III 550 MHz processor 64 Mb RAM and used IE5 as a browser, with 128kb leased line connected.

7.   Bobby is an accessibility checker developed by the Centre for Applied Special Technology (CAST) based in Massachusetts, USA. It is a free application for performing automated on-line tests of many of the checkpoints of the Web Content Accessibility Guidelines 1.0 (The Guidelines) developed by the W3C's Web Accessibility Initiative (WAI). The Guidelines were widely accepted as standards for ensuring Web accessibility in other districts.

8.   Part II of this Report outlines the major findings from the test and the scan in three sessions, namely, the Bobby test result, the availability of different language versions and alternate mode, and other assistance features. Part III of the Report outlines EOC's recommendations to the Government to enhance Web accessibility for PWDs.

9.   Finally, it should be emphasized that since the objective of the exercise is to evaluate the overall accessibility to public service homepages, names of the public service bodies whose homepage was found to have access problems would not be named.

PART II –FINDINGS AND ANALYSIS

Major Findings

Bobby Test

10.   Bobby analyses Web pages in accordance with the Guidelines which contains fourteen guidelines of general principles of accessible design. As not all of these guidelines could be evaluated by Bobby automatically and manual checking is still required. However, being not approved by Bobby implies that there were vital access problems existing in that particular Web page.

11.   Each of the fourteen guidelines is associated with one or more checkpoints describing how to apply that guideline to particular features of Web pages. Each checkpoint is assigned a priority level based on the checkpoint's impact on accessibility:
- **Priority 1**:Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents. A Web content developer <u>must</u> satisfy this checkpoint.
- **Priority 2**:Satisfying this checkpoint will remove significant barriers to accessing Web documents. A Web content developer <u>should</u> satisfy this checkpoint.
- **Priority 3**:Satisfying this checkpoint will improve access to Web documents. A Web content developer <u>may</u> address this checkpoint.

12.   A Web page must pass Priority 1 checkpoints, pending some manual checks, in order to be approved by Bobby. The result of the Bobby test on the 163 public service homepages showed that 130 (79.8%) could not pass the test:

Table 2 – Bobby approval status by organizations

	Bobby Approved	Bobby not Approved	Total
Central bodies	1	11	12
Policy bureaus	4	12	16
Departments and agencies	15	59	74
Related organizations	13	38	51
Tertiary institutions	0	10	10

	33 (20.2%)	130 (79.8%)	163 (100%)
Total			

13.   There were altogether 58 items of access issues found from the Bobby test. (Appendix II) They were grouped by their priority in terms of its' impact on accessibility. Most of the access issues (84.6%) belonged to Priority 1 to 2 levels:

Table 3 – Priority of Access Issues

	Access issues found	
	No.	Percentage
Priority 1 (high)	19	32.8%
Priority 2 (moderate)	30	51.7%
Priority 3 (low)	9	15.5%
Total	58	100%

14.   The access issues were also sorted based on the degree of ease to fix. [1] Of all the 58 access issues found, 81% of them were classified as easy or moderately easy to fix:

Table 4 – Ease to fix of Access issues

	Access issues found	
	No.	Percentage
Easy	17	29.3%
Moderate	30	51.7%
Hard	11	19.0%
Total	58	100%

15.   Among those access issues that were classified as easy to fix, 27.6% belonged to the Priority 1 or 2 level. Excluding those access issues that were classified as hard to fix, 69% belonged to these two priority levels:

Table 5 – Priority of Access Issues by ease to fix

	Priority 1	Priority 2	Priority 3	Total:
Easy	15.5%	12.1%	1.7%	
Moderate	10.4%	31.0%	10.3%	100%
Hard	6.9%	8.6%	3.5%	

Availability of different language versions and alternate mode

16.　　Homepages are designed in different styles that have long documents with all the topics contained on the homepage and other would simply be a welcoming page with minimum amount of text, providing links for users' choice of different language version. The primary language(s) used on the homepages may make a barrier to users who have limitation in understanding another language, or whose screen reader or software reads only one language.

17.　　When scanning the 163 homepages, it was found that all except for one had English version. Some homepages were bilingual and others had links to alternate language version pages. On the other hand, there were 14 homepages that did not have Chinese version at all.

Table 6 – Language used on homepages

	Number of homepages	Percentages
Both English and Chinese	85	52.1%
English and link to Chinese version	42	25.8%
Chinese and link to English version	21	12.9%
Only English	14	8.6%
Only Chinese	1	0.6%
Total	163	100%

18.　　Icons for choice of alternate language version were not always easily identifiable and information contained in that version was not compatible to the original page too. For example, in one homepage, the text in icon for clicking to Chinese version was written in English. In another, it was stated that only part of the English information was translated into Chinese.

19.　　Most of homepages were originally developed in graphic or flash mode. Some of them provided text-only mode, offering a choice for users. One homepage had monochrome mode and another one had a WAP mode in addition to others. Of the 163 homepages scanned, only 24 (14.7%) had choices for either English or Chinese text-only mode:

Table 7 – Availability of alternate text-only mode

	Number of homepage	Percentages
Offering either English or Chinese text-only mode	24	14.7%
No text-only mode at all	139	85.3%
Total	163	100%

20.	Similarly, the icon for clicking to text-only mode was not always easily identifiable. Among the 24 homepages that have text-only mode, 5 of them have the icon placed at the bottom of the homepage, 2 placed in the middle and 17 placed at the top. Of the 5 icons being placed at the bottom of the page, one of them appeared after all the images were downloaded. For those 17 icons placed at the top, 7 of these icons were placed at the far corner of the page and were smaller than other icons appeared on the same page.

21.	Having a text-only mode as an alternative did not necessary mean that the homepage would pass the Bobby test. It was found that Bobby did not approve 17 (70.8%) of the homepages which said there was text-only pages as an alternate mode. Of the 33 Bobby approved homepages, 26 (78.8%) of them did not provide text-only mode.

Table 8 – Availability of text-only mode by Bobby approval status

	No Eng / Chi Text-only Mode	With Eng / Chi Text-only Mode	Total
Bobby approved homepages	26 (78.8% of all approved)	7	33
Bobby not approved homepages	113	17 (70.8% of all have text-only mode)	130
Total	139	24	163

Other Assistance Features

22.　　Sometimes users would need to contact the organization for further information and for other assistance. Among the 163 homepages scanned, 100 (61.4%) of them did not provide any forms or information for contacts. For the rest 63, 28 gave phone number, fax, address and e-mail to contact the organization, or had an icon for further details. The rest 35 provided only part of this information.

Table 9 – Availability of information for contacts

	Number of homepages (%)
Information on / Icon for email, address, telephone and fax for contact	28 (17.2%)
Information on / Icon for email, address, telephone or fax for contact	35 (21.5%)
No Information /Icon for contact	100 (61.3%)
Total	163 (100%)

23.　　Links to other organization or department provide a channel for users to access to related information. It helps to locate relevant websites when requiring more information. 92 of the homepages scanned have a link to the GIC and some to the Interaction Government Service Directory (IGSD) as well. They were mainly homepages for government policy bureaus, departments or agencies

Table 10 – Availability of links to other service

	No links	Link to GIC and /or IGSD	Link to other departments or agencies	Total
Central bodies	2	10	0	12
Bureaus	5	11	0	16
Departments and agencies	14	60	0	74
Related Organizations	38	11	2	51
Tertiary Institutions	10	0	0	10
Total	69 (42.3%)	92 (56.5%)	2 (1.2%)	163

Analysis

24.　　Web inaccessibility for PWDs was evident by the low Bobby approval rate in public service homepages. Moreover, it did not appear that the barriers were either due to any inherent limitations in Web technology, or would be difficult to solve.

25.　　As could be seen from Appendix II, the major access issues were related to presentation of information (e.g. lacking in alternative text or descriptive title for images, links, tables or frames); choice of colours (e.g. colour contrast); format of tables and frames; uses of moving subjects and logical arrangement of information and control buttons.

26.　　These barriers prevented PWDs from accessing information made available on public service websites. For example:
-    Lacking alternative text makes it impossible for blind people using a screen reader to make sense out of images;
-    Weak colour contrast makes it difficult for people with visual impairment when reading text;
-    Without transcripts for audio files, people with hearing impairment could not access information contained only in those files;
-    People with intellectual disability would be confused by irregular orders of control keys.

27.　　One obvious example was that in a homepage, there were images for choice of reading either the English or the Chinese version of the Chief Executive's Policy Address 2000. However, the function of these images were not explained and what users with a text-based browser could read was just the "[LINK] [LINK]" on the page and did not know where it was linking to.

28.　　Like the physical access issue, alternate exit would sometimes be considered for PWDs. However, the low percentage in having an alternate text-only mode in this exercise (Table 7) revealed that the need of PWDs was not taken into consideration in developing the site. It was even worse when the access icon was not placed in a conspicuous way, but was "hiding" in a small corner of the page.

29.　　As shown in Table 8, having a choice for alternate text-only mode did not necessary imply homepage accessible. It is the design of the homepage that matters. Since homepage is always considered as the entry of the Web page, it is particularly important to ensure effective access to alternate pages of choice.

30.   Assistance and links for further information are important for all Internet but are more important for PWDs due to the inaccessible situation of most Web pages and the use of different assistive devices for reading digitalized information. Interactive services such as on-line applications or downloadable documents would hence become inaccessible under these circumstances. Human services through hotline, e-mail, fax or address are thus essential to ensure full access to public information. This scanning exercise carried out by EOC did not show that such information was commonly made available in public service homepages. Similar case appeared the same for different language versions although the rate of bilingual homepages was much higher.

31.   It should further be borne in mind that this Bobby test and scanning exercise was conducted on a relatively powerful computer and faster connection. People using computers with lower capacity or text-based browser might be experiencing other difficulties that were not identified in this exercise. For example, downloading images on computers with dial-up connection only is usually slower. Accordingly, it takes a while before users could realize that there is a text-only mode available to them if the access icon was placed at the bottom of the homepage.

32.   A further barrier associated with the computer capacity is regarding downloadable files. Having downloading area in homepages was not commonly found in this exercise but this function may exist in folders or pages linked to it. To be able to download files, users will have to acquire the suitable programme, for example, the Adobe Acrobat for PDF files. Whether the computer had capacity to install such programme is a question in mind.

33.   It is important that access issues found in this exercise be addressed to immediately so as to ensure Web accessibility. The Government needs to adopt a comprehensive approach, including long term as well as short action, to rectify the situation.

PART III – RECOMMENDATIONS

Short Term Actions

Prioritized actions to tackle access issues

34.   Not all access issues require immense resources to fix them up. The Government should prioritise access issues and a timetable to address to different level of priority issues should be set up. One of the prioritised areas for improvement is to address to those identified as Priority 1 access issues. A period of 6 months to rectify the access issues is reasonable with reference to similar requirements in other countries (Appendix III).

Targeting major homepages

35.   Some homepages are visited by members of the public more often than others. Therefore, the Government should identify those services and give priority to ensure their accessibility within a short period of time. For example, some central government bodies, policy bureaus and departments concerning education, employment, and support service provide important information and contacts for PWDs to improve their living. The Government should put more resources to address to access barriers existing in those homepages.

36.   The GIC is the primary Internet site for most of the government homepages. Also many have links to it and the IGSD. It is important to make those gateway services accessible as quickly as possible. It is worthwhile mentioning that the IGSD provides on-line services such as library and booking service and the GIC has multimedia presentation of information. Those areas deserve more attention in the design process so that PWDs would not be excluded from enjoying them equally as others.

Providing human service contact points

37.   The Government should ensure that contacts are available and clearly indicated at homepage level so that users know where to obtain human assistance. For those Web pages where interactive services such as bill payment service, downloadable application forms and lodging complaints, the contact information is even more important because those services may not be accessible for PWDs.

Alternate mode of access

38.   Text-only pages are not always recommendable except in very rare cases because they are always counterproductive to accessibility by being kept less up-to-date. However, the need to provide alternate mode is still valid due to the use of different types of browser or programmes. [2] Until full access to websites is achieved and assistive device is widely available, text-only mode should be considered as one way to facilitate PWDs' access to information.

39.   It should be emphasized that where a text-only mode is maintained, measures should be taken to ensure that information and service are compatible in both the text-only pages and original pages, and that images / icons for text-only mode should be clearly indicated in an easily identifiable place on the homepages.

Long Term Actions

Policy on Web Accessibility

40.   Some countries had or are in the process of setting mandatory Web Accessibility policy applicable to public service. (Appendix III) It is recommended that Hong Kong should institute similar policy on Web Accessibility as soon as possible to ensure competitive Internet environment. The policy should clearly state the requirement to revamp existing websites and in building new sites, language versions, obligation and timeframe, etc.

Setting standard for evaluating Web Accessibility

41.   Development of accessible Web pages are not more costly than having to redesign it if there are clearly standards and guidelines. We suggest that the W3C's Guidelines should be promoted as standards for Hong Kong public service. The preferred minimum conformance level for an accessible site is set at Conformance Level AA under the Guidelines. That means a equivalent pass in Bobby of Priority 2 access problems.

Procedure for periodic check

42.   Technology grows in a fast speed that it is necessary to keep update on its development. Likewise, new multimedia tools, for example, would present new barriers on Web pages development. Therefore, the Government needs to set up a

procedure to conduct periodic check on public service homepages to ensure their accessibility.

Support network for Web designers and PWD users

43.	Apart from ensuring Web accessibility in public services homepages, the Government should provide assistance and encouragement to Web content developers in designing accessible sites and give advice to PWD users on assistive technology. In Hong Kong, the absence of coordinated IT resource centres for these purposes makes it difficult both for Web designers and PWDs to identify support. The Government should allocate resources to set up a support network by researching, consolidating and regularly updating relevant information and resource for the Web content developers and PWD users in this respect.

Conclusions

44.	Equal opportunity to access information made available on the Internet is the basic right for PWDs and is protected by the law. Under the Disability Discrimination Ordinance (DDO), it is unlawful to discriminate against people on the ground of their disability in provision of public service. EOC is aware that the Government had working group and internal guidelines to enhance Web accessibility but recommends that concerted actions should be taken to rectify the present inaccessible situation so that everyone in Hong Kong could equally enjoy the opportunity in accessing public information and enhancing social participation.

Appendices

Appendix I – List of Public Service Homepages Tested and Scanned

Central bodies for government functions

1. Central Policy Unit http://www.info.gov.hk/cpu

2. Chief Secretary for Administration's Office http://www.info.gov.hk/cso/cs.htm

3. Financial Secretary's Office http://info.gov.hk/fso

4. The Office of the Government of HKSAR in Beijing http://info.gov.hk/bjo

5. Administration Wing http://www.info.gov.hk/admwing/adm.htm

6. Efficiency Unit http://www.info.gov.hk/eu

7. District Councils http://www.info.gov.hk/had/major/admin/db/dbmain.html

8. Judiciary http://www.info.gov.hk/jud

9. Legislative Council Secretariat http://legco.gov.hk

10. Executive Council http://www.info.gov.hk/info/exco.htm

11. HK Government Information Center (GIC) http://www.info.gov.hk

12. Interactive Government Service Directory (IGSD) http://www.igsd.gov.hk

Policy Bureaus

1. Civil Service Bureau http://www.csb.gov.hk

2. Commerce and Industry Bureau http://www.info.gov.hk/cib/

3. Constitutional Affairs Bureau http://www.info.gov.hk/cab

4. Economic Services Bureau http://www.info.gov.hk/esb

5. Education and Manpower Bureau http://www.info.gov.hk/emb

6. Environment and Food Bureau http://www.info.gov.hk/efb

7. Finance Bureau http://www.info.gov.hk/fb

8. Financial Service Bureau http://www.info.gov.hk/fsb

9. Health and Welfare Bureau http://www.info.gov.hk/hwb

10. Home Affairs Bureau http://www.info.gov.hk/hab

11. Housing Bureau http://www.info.gov.hk/hb

12. Information Technology and Broadcasting Bureau http://www.info.gov.hk/itbb/

13. Planning, Environment and Lands Bureau http://www.plb.gov.hk

14. Security Bureau http://www.info.gov.hk/sb

15. Transport Bureau http://www.info.gov.hk/tb

16. Works Bureau http://www.wb.gov.hk

Departments and agencies

1. AIDS Unit http://www.info.gov.hk/aids

2. Board of Review (Inland Revenue) http://www.info.gov.hk/borfb

3. Film Services Office http://www.fso-tela.gov.hk

4. Licensed Hotels and Guesthouses in Hong Kong http://www.info.gov.hk/had_la

5. Virtual SME Information Centre http://www.sme.gcn.gov.hk

6. Audit Commission http://www.info.gov.hk/aud/

7. Business and Services Promotion Unit http://www.info.gov.hk/bspu

8. Hong Kong Auxiliary Police Force

http://www.info.gov.hk/police/career/auxpolice/eng/index.htm

9. Innovation and Technology Commission http://www.info.gov.hk/itc

10. Insurance, Office of the Commissioner of http://www.info.gov.hk/oci

11. Agriculture, Fisheries and Conservation Department http://www.info.gov.hk/afcd

12. Architectural Services Department http://www.archsd.gov.hk

13. Auxiliary Medical Service http://www.info.gov.hk/ams

14. Buildings Department http://www.info.gov.hk/bd/

15. Census and Statistics Department http://www.info.gov.hk/censtatd/

16. Civil Aids Service http://www.cas.gov.hk

17. Civil Aviation Department http://www.info.gov.hk/cad/

18. Civil Engineering Department http://www.info.gov.hk/ced

19. Civil Service Training and Development Institute http://www.info.gov.hk/cstdi

20. Companies Registry http://www.info.gov.hk/cr/

21. Correctional Services Department http://www.correctionalservices.gov.hk

22. Customs and Excise Department http://www.info.gov.hk/customs

23. Department of Health http://www.info.gov.hk/dh

24. Department of Justice http://www.info.gov.hk/justice

25. Drainage Service Department http://www.info.gov.hk/dsd

26. Education Department http://www.info.gov.hk/ed

27. Electrical and Mechanical Services Department http://www.info.gov.hk/emsd

28. Environmental Protection Department http://www.info.gov.hk/epd/

29. Fire Services Department http://www.info.gov.hk/hkfsd

30. Food and Environmental Hygiene Department http://www.info.gov.hk/fehd

31. Government Flying Service http://www.info.gov.hk/gfs

32. Government Laboratory http://www.info.gov.hk/govlab/

33. Government Land Transport Agency http://www.info.gov.hk/glta

34. Government Property Agency http://www.info.gov.hk/gpa/

35. Government Supplies Department http://www.info.gov.hk/gsd

36. Highways Department http://www.hyd.gov.hk

37. Home Affairs Department http://www.info.gov.hk/had

38. Hong Kong Housing Authority and Housing Department http://www.info.gov.hk/hd

39. Hong Kong Observatory http://www.info.gov.hk/hko

40. Hong Kong Police Force http://www.info.gov.hk/police

41. Immigration Department http://www.info.gov.hk/immd/

42. Information Services Department http://www.info.gov.hk/isd/

43. Information Technology Services Department http://www.info.gov.hk/itsd

44. Inland Revenue Department http://www.info.gov.hk/ird

45. Intellectual Property Department http://www.info.gov.hk/ipd

46. Invest Hong Kong http://www.investHK.gov.hk

47. Labour Department http://www.info.gov.hk/labour/

48. Land Registry http://www.info.gov.hk/landreg/

49. Lands Department http://www.info.gov.hk/landsd/

50. Legal Aid Department http://www.info.gov.hk/lad

51. Leisure & Cultural Services Department http://www.lcsd.gov.hk

52. Management Services Agency http://www.info.gov.hk/msa

53. Marine Department http://www.info.gov.hk/mardep

54. Planning Department http://www.info.gov.hk/planning/

55. Post Office http://www.hongkongpost.com

56. Printing Department http://www.info.gov.hk/pd

57. Radio Television Hong Kong http://www.rthk.org.hk

58. Rating and Valuation Department http://www.info.gov.hk/rvd

59. Social Welfare Department http://www.info.gov.hk/swd

60. Student Financial Assistance Agency http://www.info.gov.hk/sfaa/

61. Television and Entertainment Licensing Authority http://www.info.gov.hk/tela

62. Territory Development Department http://www.info.gov.hk/tdd

63. Trade and Industry Department http://www.info.gov.hk/tid

64. Transport Department http://www.info.gov.hk/td

65. Treasury http://www.info.gov.hk/tsy

66. Water Supplies Department http://www.info.gov.hk/wsd/

67. Office of the Telecommunications Authority http://www.ofta.gov.hk

68. Official Languages Agency http://www.info.gov.hk/ola

69. Official Receiver's Office http://www.info.gov.hk/oro

70. Registration and Electoral Office http://www.info.gov.hk/reo

71. Travel Agents Registry http://www.info.gov.hk/tc/tar

72. Tourism Commission http://www.info.gov.hk/tc

73. Narcotics Division http://www.info.gov.hk/nd

74. Public Records Office http://www.info.gov.hk/pro

Related Organizations

1. Electronic Investor Resources Centre http://www.hkeirc.org/main.asp

2. Airport Authority, Hong Kong http://www.hkairport.com/

3. Broadcasting Authority http://www.hkba.org.hk/

4.   Independent Police Complaints Council http://www.info.gov.hk/ipcc

5.   Hong Kong Port and Maritime Board http://www.info.gov.hk/pmb

6.   Standing Commission on Civil Service Salaries and Conditions of Service, Secretariat for

http://www.hku.hk/hkgcsb/sc.htm

7.   Standing Committee on Disciplined Services Salaries and Conditions of Service, Secretariat for

http://www.hku.hk/hkgcsb/scds/index.htm

8.   Committee on the Promotion of Civic Education http://www.cpce.gcn.gov.hk

9.   Construction Industry Training Authority http://www.cita.edu.hk

10.   Consumer Council http://www.consumer.org.hk

11.   Council for the AIDS Trust Fund http://www.info.gov.hk/atf/

12.   Education Commission http://www.e-c.edu.hk/

13.   Electoral Affairs Commission http://www.info.gov.hk/eac/

14.   Employees Retraining Board http://www.erb.org

15.   Equal Opportunities Commission http://www.eoc.org.hk

16.   Estate Agents Authority http://www.eaa.org.hk/

17.   Hong Kong Arts Centre http://www.hkac.org.hk

18.   Hong Kong Arts Development Council http://www.hkadc.org.hk

19.   Hong Kong Council for Academic Accreditation http://www.hkcaa.edu.hk

20.   Hong Kong Council for Smoking and Health http://www.info.gov.hk/hkcosh

21.   Hong Kong Examinations Authority http://www.hkea.edu.hk/

22.   Hong Kong Export Credit Insurance Corporation http://www.hkecic.com

23.   Hong Kong Futures Exchange Ltd. http://www.hkfe.com/

24.   Hong Kong Housing Society http://www.hkhs.com/

25.   Hong Kong Industrial Estates Corporation http://www.hkiec.org.hk

26.   Hong Kong Industrial Technology Centre Corporation http://www.techcentre.org

27.   Hong Kong Monetary Authority http://www.info.gov.hk/hkma

28.   Hong Kong Productivity Council http://www.hkpc.org

29.   Hong Kong Science Park http://www.hksciencepark.com/

30.   Hong Kong Sports Development Board http://www.hksdb.org.hk

31.   Hong Kong Tourist Associationhttp://www.discoverhongkong.com

32.   Hong Kong Trade Development Councilhttp://www.tdctrade.com

33.   Hospital Authorityhttp://www.ha.org.hk

34.   Independent Commission Against Corruptionhttp://www.icac.org.hk

35.   Kowloon-Canton Railway Corporation http://www.kcrc.com/

36.   Law Reform Commission of Hong Kong http://www.info.gov.hk/hkreform

37.   Legal Aid Services Council http://www.info.gov.hk/lasc/

38.   Mandatory Provident Fund Schemes Authorityhttp://www.mpfahk.org

39.   Mass Transit Railway Corporation http://www.mtrcorp.com/

40. Occupational Safety and Health Council http://www.oshc.org.hk/

41. Office of the Ombudsmanhttp://www.sar-ombudsman.gov.hk

42. Office of the Privacy Commissioner for Personal Datahttp://www.pco.org.hk

43. Public Service Commission http://www.hku.hk/hkgcsb/psc

44. Quality Education Fund http://www.info.gov.hk/qef

45. Review Body on Bid Challenges http://www.info.gov.hk/reviewbody-gpa/

46. Securities and Futures Commission http://www.hksfc.org.hk/

47. Town Planning Board http://www.info.gov.hk/tpb/

48. Transport Complaints Unit http://www.info.gov.hk/tcu

49. University Grants Committee Secretariat http://www.ugc.edu.hk

50. Vocational Training Council http://www.vtc.edu.hk

51. Waste Reduction Committee http://www.info.gov.hk/wrc

Tertiary institutions

1. Chinese University of Hong Kong http://www.cuhk.hk

2. City University of Hong Kong http://www.cityu.edu.hk

3. Hong Kong Academy for Performing Arts http://www.hkapa.edu

4. Hong Kong Baptist University http://www.hkbu.edu.hk

5. Hong Kong Institute of Education http://www.ied.edu.hk

6. Hong Kong Polytechnic University http://www.polyu.edu.hk

7. Hong Kong University of Science & Technology http://www.ust.hk

8. Lingnan University http://www.ln.edu.hk

9. Open University of Hong Kong http://www.ouhk.edu.hk

10. University of Hong Kong http://www.hku.hk

Appendix II – Access Issues identified by Bobby

Priority 1 Access Issues

<u>Easy to fix</u>

1.   Provide alternative text for all images. (102)

2.   For tables not used for layout (for example, a spreadsheet), identify headers for the table rows and columns. (92)

3.   Provide alternative text for all image map hot-spots. (54)

4.   Give each frame a title. (22)

5.   Provide alternative text for each APPLET. (6)

6.   If the submit button is used as an image map, use separate buttons for each active region. (4)

7.   Use a client-side image map instead of a server-side image map. (2)

8.   Provide text links for all server-side image map hot-spots. (2)

9.   Provide alternative text for all image-type buttons in forms. (2)

<u>Moderate easy to fix</u>

1.   If you use color to convey information, make sure the information is also represented another way. (119)

2.   If an image conveys important information beyond what is its alternative text, provide an extended description. (112)

3.   If a table has two or more rows or columns that serve as headers, use structural markup to identify their hierarchy and relationship. (108)

4.   Provide alternative content for each SCRIPT that conveys important information or functionality. (70)

5.   Be sure pages are readable and usable if style sheets are ignored. (24)

6.   Provide visual notification and transcripts of sounds that are played automatically. (2)

<u>Hard to fix</u>

1.   Provide accessible alternatives to the information in scripts, applets, or objects. (25)

2.   Make sure programmatic objects do not cause the screen to flicker. (25)

3.   Make sure pages are still usable if programmatic objects do not function. (25)

4.   Do all audio files have transcripts? (1)

Priority 2 Access Issues

<u>Easy to fix</u>

1.   Check that the foreground and background colors contrast sufficiently with each other. (137)

2.   Add a descriptive title to links when needed. (121)

3.   Avoid using movement in images where possible. (115)

4.   Separate adjacent links with more than whitespace. (52)

5.   Ensure that labels of all form controls are placed immediately before the control. (12)

6.   Use Q and BLOCKQUOTE for quotations, not indentation. (4)

7. Avoid blinking text created with the BLINK element. (3)

<u>Moderately easy to fix</u>

1. Avoid use of deprecated language features if possible. (111)

2. Use relative sizing and positioning (% values) rather than absolute (pixels). (101)

3. If scripts create pop-up windows or change the active window, ensure that the user is aware this is happening. (74)

4. Ensure that all elements that have their own interface are operable without a mouse. (46)

5. Do not use pop-up windows or change the active window unless the user is aware this is happening. (41)

6. Mark up quotations with the Q and BLOCKQUOTE elements. (37)

7. Make sure event handlers do not require use of a mouse. (36)

8. Style sheets should be used to control layout and presentation wherever possible. (24)

9. Add a description to a frame if the TITLE does not describe its contents. (22)

10. Explicitly associate form controls and their labels with the LABEL element. (12)

11. Group related form controls and label each group. (10)

12. Use header elements in the proper sequence and not for bold text. (8)

13. Do not cause a page to redirect to a new URL. (7)

14. Group long lists of selections into a hierarchy. (5)

15. Page redirects to a new URL. (4)

16. Do not cause a page to refresh automatically. (3)

17. Create link phrases that make sense when read out of context. (1)

18. Avoid scrolling text created with the MARQUEE element. (1)

<u>Hard to fix</u>

1. Avoid using tables to format text documents in columns unless the table can be linearized. (108)

2. Make sure programmatic objects conform to Guideline 7 checkpoints. (25)

3. Make sure event handlers do not require use of a mouse. (15)

4. Provide a NOFRAMES section when using FRAMEs. (7)

5. Only use list elements for actual lists, not formatting. (2)

Priority 3 Access Issues

<u>Easy to fix</u>

1. Provide abbreviations for long row or column labels. (111)

<u>Moderately easy to fix</u>

1. Identify the language of the text. (157)

2. Specify a logical tab order among form controls, links and objects. (125)

3. Consider adding keyboard shortcuts to frequently used links. (125)

4. Provide a summary and caption for tables. (111)

5. Group related links. (34)

6. Consider furnishing keyboard shortcuts for form elements. (12)

<u>Hard to fix</u>

1.   Provided a linear text alternative for tables that lay out content in parallel, word-wrapped columns. (111)

2.   Provide metadata that identifies this document's location in a collection. (2)

( ) denotes number of homepages where access issue was identified.

Appendix III –Web Accessibility Policies

The following provides some examples of adopting a Web Accessibility policy, either mandatory or provided under a piece of legislation, for readers' reference.

Australia

The relevant legislation is the Disability Discrimination Act 1992 (DDA) under which commonwealth departments and agencies are obliged to ensure that online information and services are accessible by people with disabilities.

The Government Online Strategy requires Commonwealth departments and agencies to comply with some minimum online requirements and standards to ensure a basic level of consistency and quality of service across Commonwealth websites.

The Online Council had agreed to adopt the W3C's Web Content Accessibility Guidelines as the common best practice standard for all Australian government websites. Existing Government websites were to be tested for accessibility from 1 June 2000 and should be able to pass recognised tests by 1 December 2000. New developed websites should achieve accessibility as a key performance measure from 1 June 2000. Relevant information could be accessed at http://www.govonline.gov.au/project/standards/accessibility.htm.

Canada

The relevant legislation is the Canadian Human Rights Act 1977 which protects rights to access to premises, services and facilities (which includes the provision of online information) for PWDs unless there is undue hardship.

In February 1998, the Treasury Board Secretariat (TBS) (the central policy-making body for the federal Government) was directed to develop standards for all federal Internet and Intranet sites and electronic information. An inter-departmental Working Group was set up in June 1998 and recommendations were reported in January 2000. Later on 4 May 2000, the Treasury Board approved the Common Look and Feel (CLF) standards and guidelines for Government of Canada Internet sites.

Implementation of the CLF standards by Government departments and agencies is mandatory. All new Internet websites designed and built by Government institutions were required to comply with the standards immediately. A grace period was given for upgrading existing Internet sites and full implementation is required by 31 December 2002. All Government departments and institutions are required to provide their plans to upgrade the existing site by 31 December 2000.

The CLF standards state that all Government of Canada websites must comply with the W3C's priority 1 and priority 2 checkpoints to ensure access. Full version of the standards could be accessed at http://www.cio-dpi.gc.ca/clf-upe/a_e.asp.

Portuguese

On 30 June 1999, the Portuguese Parliament recommended to the Government, considered the suggestions presented in a "Petition for Accessibility of the Portuguese Internet", to adopts appropriated measures to guarantee to all the citizens with special needs, namely the PWDs and the elderly, full accessibility to the information made available on the Internet. The Petition was

coordinated and submitted by the Portuguese Accessibility Special Interest Group (PASIG) to the Portuguese Parliament in February 1999 after collecting 9000 electronic signatures.

On 29 July 1999, the Portuguese Government, through its Council of Ministries, approved a resolution making mandatory the adoption of accessibility features for PWDs in the Web design of the information made available by the General Directorate, agencies, departments or services, and any public corporation including State Corporations, State Universities, etc. Design of websites must ensure that "reading can be performed without resorting to sight, precision movements, simultaneous actions or pointing devices, namely mouses", and "information retrieval and searching can be performed via auditory, visual or tactile interfaces".

The Parliament Report could be accessed at:

http://www.accessibilidade.net/petition/parliament_resolution.html.

USA

Ensuring Web accessibility for PWDs in USA is mainly protected under the Rehabilitation Act and the Americans with Disabilities Act (ADA). The ADA "prohibits discrimination based on disability in employment, State and local government services, transportation, public accommodations, commercial facilities and telecommunications". Section 508 of the Rehabilitation Act Amendments 1998 requires all federal departments and agencies to ensure that technology is accessible to PWDs unless an undue burden would be imposed to the department or agency.

The Access Board (an independent federal agency created under the Rehabilitation Act) set up an advisory committee to develop standards for electronic and information technology. These standards were being developed under section 508 of the Rehabilitation Act Amendments of 1998. The Advisory Committee reported to the Board in May 1999, addressing for the needs for people with physical, sensory and cognitive disabilities. It recommended for establishing criteria that would allow PWDs to operate all of the input, control and mechanical functions, and to access available information. The report also dealt with compatibility with adaptive equipment PWDs commonly use for access.

The Proposed Electronic and Information Technology Accessibility Standards were released on 31 March 2000 for public comments. By 30 May 2000, the Access Board received over 100 comments. The Standards would be effective 6 months after the final standards being published.

The proposed standards could be accessed at:

http://www.access-board.gov/sec508/508index.htm.

United Kingdom

The relevant legislation is the Disability Discrimination Act 1995 which stipulates that it is unlawful to discriminate against PWDs in provision of services and facilities.

As part of the Government's Corporate IT Strategy announced in the Modernising Government White Paper, the Cabinet Office's Central IT Unit developed the Web Guidelines and requested all UK government institutions to follow. The Guidelines, adopted by the Information Age Government Champions on behalf of Ministers, were launched on 8 December 1999. Also, a New

Media Team was also set up to act as an agent for change, driving up standards of Government websites.

Full version could be downloaded at

http://www.iagchampions.gov.uk/iagc/guidelines/websites/websites.htm.

Appendix IV -- Reference Website addresses

The Access Board of USA

http://www.access-board.gov/

Australian Government Online

http://www.govonline.gov.au/

Bobby

http://www.cast.org/bobby/

Brown Policy Report on Assessing E-government

http://www.insidepolitics.org/egovtreport00.html

Cabinet Office of UK

http://www.cabinet-office.gov.uk/

Center for Applied Special Technology (CAST)

http://www.cast.org

Human Rights and Equal Opportunities Commission (HREOC) (Australia)

http://www.hreoc.gov.au/

Portuguese Accessibility Special Interest Group (PASIG)

http://www.accessibilidade.net/

Treasury Board of Canada Secretariat

http://cio-dpi.gc.ca/

WorldEnable

http://www.worldenable.com/

World Wide Web Consortium W3C

http://www.w3c.org/WAI/GL

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[1] The basis for classifying the ease to fix is a subjective determination by CAST on the guidelines as a whole but not on the analysis of each page tested.

[2] The ASAP 98 is used by blind people to read Chinese on Internet and it could only read purely text and frames would make no sense at all in such assistive device.