Report of
Survey on Web Accessibility Adoption Level
in
the Asia Pacific Region

Conducted by The Hong Kong Blind Union

1. Background

1.1 In the WBUAP Regional Mid-term Assembly held in UlaanBaatar, Mongolia in September 2018, the Hong Kong Blind Union (HKBU) was asked to initiate a web accessibility campaign. HKBU conducted a survey on web accessibility adoption level within the Region in mid 2019 with the aim to provide basic reference for WBUAP members in formulating future plans and strategies in promoting web accessibility. The result of the survey was reported to the WBUAP Board in its meeting dated 22 February 2020.

1.2 Web and mobile app accessibility has become a critical factor for the realization of the rights of people with visual impairments. Information technology brings along opportunities of an inclusive society. It enables people with visual impairment to be on the same footing with sighted counterparts in education, employment and social life. However, lack of accessibility to web and mobile apps will mean an exclusion which deny and limit people with visual impairment in all areas of citizen life. The Survey is designed to understand the current situation and explore ways forward.

1.3 HKBU has been an active advocate for computer literacy, consumer rights and IT solutions for the blind since 1981 when it formed a computer interest group. HKBU has helped to computerize the production of Chinese braille in both Hong Kong and on Mainland China. In 1998, HKBU presented its proposal on web accessibility for blind to Hong Kong Government which adopted and implemented the recommendations. The Hong Kong Government has made all its websites accessible and been actively promoting accessibility in the community. HKBU is now a leading provider of accessibility consultant and also a member of the World Wide Web Consortium (W3C), and with long cooperation with the Web Accessibility Initiative (WAI) (www.w3.org/WAI). HKBU has setup a social enterprise called WAFA (Web Accessibility For All) to engage in accessibility testing. The latest projects include mobile banks, websites and mobile apps from banks.

2. Methodology

2.1 Design

HKBU conducted the Survey on Web Accessibility from July 2019 to August 2020. The survey was divided into two parts. Part I was a questionnaire completed by WBUAP members. Part II was a web accessibility assessment of selected websites of the countries of affiliates which had returned the questionnaire in part I.

2.2 Questionnaire

2.2.1   The content of questionnaire was mainly about the adoption of relevant policy and standard about web accessibility within the countries/regions. The questionnaire also collected information about the major barriers in implementing web accessibility.

2.2.2   An invitation email was sent to members in 21 countries within the region in August 2019 and total 15 completed questionnaires from 11 countries were received. Questionnaires from the same countries were combined. The Mainland China and Hong Kong Special Administrative Region (HKSAR) are counted as separate respondents in this survey.

2.3 Web Accessibility Assessment

2.3.1   web accessibility assessment exercise was conducted from December 2019 to August 2020 for the selected websites of the respondents' countries/regions;

2.3.2   6 categories of website were selected. The 6 selected categories are Government portal, Banking, Transportation, Media, Health care institution and Online shopping platforms;

2.3.3   10 testing criteria related to visually impaired users were selected from Web Content Accessibility Guidelines (WCAG) 2.1 published by the World Wide Web Consortium (W3C) (http://www.w3.org/TR/WCAG21/). The entire testing is conducted by experienced reviewers with procedures such as visual review, manual test with screen reader and user test;

2.3.4   Websites were rated "0" as "not qualified", "1" as "acceptable", "2" as "good", and N as "not applicable" according to each criterion;

2.3.5   Scope of the webpages assessed included four first-level webpages of core business/services together with the Main page. A total 5 webpages of each website were assessed. The test was conducted under Google Chrome version with NVDA as screen reader.

3. Results

3.1 Questionnaire

3.1.1 List of the 12 respondents is as below:

- Australia
- China
- Hong Kong
- Japan
- Lao People's Democratic Republic
- Malaysia
- Mongolia
- Myanmar
- Philippines
- Republic of Korea (South Korea)
- Thailand
- Vietnam

3.1.2 Government Policy

- Among the 12 respondents, 8 reported the existence of legislation or regulations on web accessibility requirements while 7 highlighted initiative/strategy/policy by government regarding the promotion and adoption of web accessibility;
- 4 out of 12 mentioned initiative in mobile app accessibility.

3.1.3 Standard of accessibility adopted

- 11 out of 12 respondents are aware of Web Accessibility Initiative (WAI) theme page in the W3C website and 9 of out them reported the adoption of Web Content Accessibility Guidelines (WCAG) as the standard of compliance ;
- Only 4 out of 12 countries/regions have set out any standard of mobile app accessibility adopted in their country/regions.

3.1.4 Education and consultation services

- Among the 12 countries/regions, web accessibility is included as part of the curriculum of information technology courses in tertiary education institutes in 5 countries/regions while web accessibility checking/consultation service provided by professional body/association can be found in 7 countries/regions.

3.1.5   Barriers and difficulties

Below is the key barriers and difficulties mentioned in the collected questionnaires:

- Lack of legislation/regulations or force of implementation
- lack of awareness (designer, developer, community and investor)
- Lack of knowledge and formalized training
- Lack of resources (costs incurred for implementation)

3.2   Web Accessibility Assessment

3.2.1   The number of websites meeting the 10 selected criteria and average accessibility scores:

- Only 2 out of 12 countries/regions met all 10 criteria in **government portal** category. They are Hong Kong and Philippines. Overall average scores is 1.28.
- Only 5 out of 12 countries/regions met all 10 criteria in **banking** category. They are Australia, Hong Kong, Japan, Mongolia and South Korea. Overall average scores is 1.33.
- Only 2 out of 12 countries/regions met all 10 criteria in **transportation** category. It is Australia and Japan. Overall average scores is 1.43.
- Only 3 out of 12 countries/regions met all 10 criteria in **media** category. They are Australia, Hong Kong and Mongolia. Overall average scores is 1.78.
- No countries/regions can meet all 10 criteria in **health care institution** category. Overall average scores is 1.18.
- No countries/regions can meet all 10 criteria in **online shopping platform** category. Overall average scores is 1.12.

3.2.2   Average web accessibility score of the 12 countries/regions

- Australia obtained the highest average score (1.75) while South Korea is the second highest (1.57) and Hong Kong is the third one (1.48). The average score is the sum of the score of each category divided by the number of categories (six).

3.2.3   Performance among the selected assessment criteria

Among the 72 websites (6 categories x 12 countries/regions) selected for checking of web accessibility level, the top three accessibility issues found are:

- Missing text description for the image (47 out of 72 websites, 65%);
- Some content cannot be operated through a keyboard (36 out of 72 websites, 50%);
- Missing link text (34 out of 72 websites, 47%).

Visually impaired persons cannot understand images and links without proper text description. Some websites are hard to operate through keyboard, which create obstacle for visually impaired persons and physically handicapped persons to access the online information and services.

4. Conclusion and Recommendations

4.1 Overall web accessibility level across countries/regions and categories

Among the 12 countries/regions, Australia is with the highest average accessibility scores (1.75) as well as meets all the 10 criteria in 3 categories (Banking, Transportation and Media). South Korea (1.57) and Hong Kong (1.48) also show satisfactory performance in the survey. All these three countries/regions have set out a certain extend of regulations and policy regarding the promotion and adoption of web accessibility in both website and mobile apps. The three countries/regions also use WCAG as the standard or reference of standard of the accessibility requirement adopted at their countries/regions. Professional consultation services on web accessibility can be found at these three countries/regions too.

However, the overall web accessibility level across the countries/regions is not so ideal according to the results of this survey. Only a few countries/regions' websites can reach satisfactory accessibility level. Among the six selected categories, health care institution and online shopping platform show a relatively low web accessibility level in most of the countries/regions. This can be reflected by none of websites meeting the 10 criteria as well as the average accessibility scores 1.18 and 1.12 for Health care institute and Online shopping platform respectively. The finding that medical service and online shopping score lower marks is worrying especially in the Covid-19 pandemic. It is recommended that urgent action be taken to address the problem. Banking industry shows satisfactory performance in accessibility in this survey as there are 4 websites (Australia, Japan, Hong Kong and South Korea) reaching the full marks (2) in the web accessibility assessment test and 5 out of 12 websites meeting all 10 criteria.

4.2 Recommendation

4.2.1 Legislation and Regulations

- By Government: The governments should make use of legislation and regulations to require public services, business, educational institutes on web and mobile apps accessibility. This is a matter of citizen rights embodied in article 9 of the Convention on Rights of Persons with Disabilities. A process of complaints should be in place for users to report non-compliance. Penalties should be in place for non-compliance;
- Self-Regulation Industry Associations: International industry bodies should adopt

accessibility as a best practice or standard of compliance. Stock exchanges can require web accessibility as part of its listing rules. Association of banks, for example, may require members to adopt accessibility to its services;

- Award or Recognition Schemes: Governments and private sector can hold high profile public recognition schemes to promote web accessibility to the community. It is about good business practice and corporate citizenship.

4.2.2 Training in institutes

- Making accessible design and technical training an essential part of the curriculum in tertiary education institutes;
- Establishment of Accessibility Open Academy;
- Development of easy guides to inform design and application;
- Increasing the availability of resources to meet technical and non-technical needs for users of different perspectives;
- Simplifying WCAG 2.1 and providing free training videos;
- Conducting public awareness programs at technology schools and training centers to promote accessibility issues.

4.2.3 Sharing of training resources

- Setting up Web Accessibility Online Training (e-study);
- Establishing a resource bank of best practice resources, case studies and examples across the Asia Pacific region to facilitate collaborative information exchange;
- Publishing an easy to read booklet explaining the guidelines in an easy to read way;
- Case studies with metrics identifying benefits that results from accessible design and implementation.

4.2.4 Recommendation for the WBUAP Region

Accessibility is a critical component of full citizen rights for people with visual impairment. The Covid-19 has accentuated the importance. Without full accessibility, we will be excluded from education, jobs, public services such healthcare, banking and media. We recommend WBUAP to take this as a major issue going forward. While advocacy has to be based at home countries, there are a lot of collaboration and mutual learning and partnership that can be achieved.