Internet Accessibility for Persons With Disabilities

MEAC-SIG
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PRELUDE

- The internet offers opportunities for Persons With Disabilities (PWDs) to be more independent and to contribute productively in the socio-economic development processes
- Web is an increasingly useful resource and the interface through which users interact with the internet
- While the world has taken huge strides to harness this potential, MEAC region is unfortunately lagging behind in this regard.
- The true success of the Information and Communication Technologies (ICT) in a country depends on an inclusive and equal access to the IT services and World Wide Web to all its people.

AIM

- To highlight the web related accessibility issues faced by PWDs;
- To provide awareness and direction to the MEAC-SIG participants about the topic;
- To generate a debate on web accessibility as a step towards accessible web environment in MEAC region

SEQUENCE

- What is Web Accessibility?
- Universal Design
- An overview of the Web Accessibility Initiative
- Web Content Accessibility Guidelines 2.0
- Case for Making Web Accessible
- General Accessibility Barriers
- Technical Standards of Web Accessibility
- Intellectual and Social Standards
- Principles of an Accessible Institution
- Website Accessibility Audits
- Drivers of Web Accessibility Approach
- Accessibility and Pakistan
- Bibliography

- W3C
- WAI
- WCAG 2.0
- BS 7788
- Section 508
- JAWS, Windows Eyes, NVDA, Dragon, Voice Over, Talk Back

What is Web Accessibility?

- **The term 'Web Accessibility' refers to a set of guidelines and tools, that when implemented by either the users or the designers of a website, would remove the obstacles that prevent PWDs from accessing it**

- **Working to standards and responsive design are both important criteria for accessibility**

- **A website should be accessible both in terms of design and content**

Universal Design

- Working to blend accessibility standards and usability principles together in order to create technology that is usable for everyone.
- Creating pathways for individuals to learn, communicate, and share via information technology, regardless of their individual learning and processing styles, or physical characteristics.
- Flexible and adaptable to different users' needs or preferences
- Accessible through a variety of different technologies, including mobile devices or assistive technologies
- More cost effective than designing a product that needs to be retrofitted for accessibility later on. Re-designs are expensive!

An overview of the Web Accessibility Initiative

- The World Wide Web Consortium (W3C) and Web Accessibility Initiative (WAI) develop web accessibility guidelines for the different components including:

A. Authoring Tool Accessibility Guidelines (ATAG)

B. Web Content Accessibility Guidelines (WCAG)

C. User Agent Accessibility Guidelines (UAAG)

- It is done through W3C process in cooperation with individuals and organizations around the world

Web Content Accessibility Guidelines 2.0

- Stable, reference-able technical standard that has 12 guidelines organized under 4 principles: perceivable, operable, understandable, and robust
- For each guideline, there are testable success criteria, which are at three levels: A, AA, and AAA

Web Content Accessibility Guidelines 2.0

- **Perceivable**
  - Provide text alternatives for non-text content;
  - Provide captions and other alternatives for multimedia;
  - Create content that can be presented in different ways, including by assistive technologies, without losing meaning; and
  - Make it easier for users to see and hear content.
- **Operable**
  - Make all functionality available from a keyboard;
  - Give users enough time to read and use content;
  - Do not use content that causes seizures; and
  - Help users navigate and find content.

Web Content Accessibility Guidelines 2.0

- **Understandable**
  - Make text readable and understandable;
  - Make content appear and operate in predictable ways; and
  - Help users avoid and correct mistakes.
- **Robust**
- Maximize compatibility with current and future user tools.

Case for Making Web Accessible

- The significance of internet for socio-economic development and growth
- Large numbers of PWDs in world and in MEAC region
- Accessibility provisions in United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)
- Potential of internet to uplift the education and employment opportunities for PWDs,

General Accessibility Barriers

- **Availability of technology**
- **Its affordability**
- **Awareness about the technology**
- **Willingness of industry / Developers to adopt accessibility guidelines**

Technical Standards of Web Accessibility

- Provide appropriate alternative text
- Provide appropriate document structure
- Provide headers for data tables
- Ensure users can complete and submit all forms
- Ensure links make sense out of context
- Caption and/or provide transcripts for media
- Ensure accessibility of non-HTML content, including PDF files, Microsoft Word documents, PowerPoint presentations and Adobe Flash content
- Allow users to skip repetitive elements on the page
- Do not rely on color alone to convey meaning
- Make sure content is clearly written and easy to read
- Make JavaScript accessible
- Design to standards

Intellectual and Social Standards

1. Human beings are all different and diverse.
2. Accessible design is innovative design.
3. Technology has the potential to be a great equalizer — but inaccessible technology only further excludes people.
4. Accessibility service awareness needs to be a standard part of web development training.

Principles of an Accessible Institution

1. Coordination and Harmonization.
2. Monitoring and Enforcement.
3. Guidance and Leadership.
4. Access Considerations.
5. Technical Dimensions.
6. Research and Education.
7. Social Inclusion.

Website Accessibility Audits

- Automated tools
- Expert technical reviewers
- User testing
- A combination of methods should be used to assess the accessibility of a website.

Drivers of Web Accessibility Approach

1. The website itself
2. User agents
3. Assistive technologies
4. Users' knowledge and experience
5. Developers
6. Authoring tools
7. Evaluation tools
8. Defined web accessibility standard

Myths related to accessibility

1. Incorporating accessibility in applications or mobile apps will make them look dull and unattractive.
2. Accessibility will not make a considerable impact on the reach of the mobile app.
3. Building accessible apps will prolong the mobile application development process unreasonably.
4. Making the mobile apps accessible requires highly complicated skills.

Accessibility and Pakistan

- Accessible websites: MOITT and PTA
- PTA Mobile App Competition 2016: “Embracing Mobile Accessibility for Persons With Disabilities in Pakistan”
- Guidelines for Accessible Banking for Person with visually impaired / Blind Persons in Pakistan by State Bank of Pakistan 2014
- Input by PWDs for upcoming National IT Policy
- Superior Services Exams and PWDs

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THANK YOU