ITU REGIONAL WORKSHOP ON ICT ACCESSIBILITY FOR PERSONS WITH DISABILITIES FOR AFRICA REGION

A Web Without Barriers

Cynthia D. Waddell, Juris Doctor
International Center for Disability Resources on the Internet
Overview - Web Without Barriers

- Technology Crossroad
- The Problem - Barriers & Solutions
- Resources
Technology Crossroad

- Explosive Growth of Electronic Commerce
- Shift from Web Content Publishing to Interactive Web Applications
- Web Evolution to Multi-Modality Architecture
- Global Human Rights Alignment
Accessibility or Universal Design

- Accessibility is the Accessible Design of Products, Services and the Environment where the user interface is flexible enough to accommodate the widest range of user needs, preferences and abilities.
The Problem

- Disability Law & Public Policy Historically has Reflected the Medical Model
- Focus on Diagnosis & Disability Rather than Ability & Equal Opportunity
- Leads to Isolation & Segregation due to Ignorance, Neglect, Superstition or Fear
The Problem

- Web Design Historically Has Not Included Accessible Design for People with Disabilities
- Web Developers have Lacked Training, Tools and Resources to Design Accessibly; Web Tools Would Break Accessibility
- Governments & Businesses Had No Incentive to Address Accessible or Universal Design
The Problem

- People with Disabilities are being locked out from participation on the Web
- Why? The Design of the Web Site is Not Addressing Accessibility or Universal Design
The Problem

An Inaccessible Web:

- People who are Blind or have Specific Learning Disabilities Cannot Use Screen-reading Software that Audibly Reads the Web Page Out Loud

- Can be a Barrier for People with Busy Eyes, Or Work in a Dark Room Or Have a Slow Modem
Demonstration of Screen Reader

Six Minute Video Clip of Neal Ewers, a Blind Software Engineer, Using a Screen Reader

http://www.doit.wisc.edu/accessibility/video/intro.asp
Inaccessible Content

Examples:
- Images that Contain Content: Pictures, Charts, Graphs
- PDF Documents
- Online Forms Missing Labels
The Solution

- **Images-Pictures**: Add “Alt” attributes or Alternative Text
- **Images-Charts/Graphs**: Add Link that Describes the Chart/Graph
- **PDF Documents**: Tag the PDF for Structure OR Also Post an Accessible Format
- **Online Forms**: Techniques for W3C Web Content Accessibility Guidelines 1.0

[www.w3.org/TR/WAI-WEBCONTENT-TECHS/](http://www.w3.org/TR/WAI-WEBCONTENT-TECHS/)
The Problem

An Inaccessible Web:

- People with Mobility Disabilities Need Keyboard Access when They Cannot Use a Mouse
- People who have Busy Hands, Or Limited Dexterity Or No Hands Available
The Solution
An Accessible Web:
- Provides Logical Linear Tab Order
- Provides Device Independence so that Mouse is Not Required for Operation
- Exposes Content for All Devices
- Implements Techniques for W3C WCAG 1.0
The Problem

An Inaccessible Web:

- People Using Speech Technology Input Cannot Access Web Content
- People with Low Vision Cannot Increase Web Text Size
The Solution

An Accessible Web:

- Implements Accessibility Standards W3C WCAG 1.0
- Uses Relative Rather than Absolute Units in Markup so that Text can be Resized by User without Breaking Layout
The Problem
An Inaccessible Web:

- People who are Deaf Cannot Access Audio-Streaming or Multi-Media that are not Captioned
- People who Cannot Hear in a Noisy Room or Place Cannot Understand without Captioning
The Solution

An Accessible Web:
- Provides Captioning for Audio in Multi-media
- Try MAGpie (Media Access Generator) to Create Captions and Audio Description for Rich Media-Free Software at ncam.wgbh.org/webaccess/magpie/
Resource

Web Accessibility: Web Standards and Regulatory Compliance

By Jim Thatcher, Cynthia Waddell et al

Published by Apress 2006

Published in Japanese 2007
ISBN: 978-4-8399-2220-7

Lusaka, Zambia, 15-16 July 2008
www.itu.int/ITU-D/sis
Speaker Contacts

Cynthia WADDELL
Executive Director
International Center for Disability Resources on the Internet (ICDRI)
E-mail: cynthia.waddell@icdri.org
Web: www.icdri.org
ITU Contacts

Asenath MPATWA
Head, Special Initiatives
Phone: +41 22 730 5430
E-mail: asenath.mpatwa@itu.int
Web: www.itu.int/ITU-D/sis