



W3C India Workshop

On

“Web Accessibility Initiative in India: Technology, Standards and Implementation”

Organized by W3C India in close co-ordination with Yahoo! R & D, India



11th December, 2010

Bangalore, India

Introduction

Web accessibility means that people with disabilities can use the Web. More specifically, Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web

In India , approximately 2.0 crore population [Ref Census 2001] suffers from various kinds of disabilities and the challenge lies in providing citizen centric web based services to these section of society for more inclusive growth. The complexity of Indian scenario is augmented manifold, as India has 22 constitutionally recognized languages and we need to develop solutions in all these languages.

The World-Wide Web Consortium (W3C) has taken a pioneering role in development of standards and guidelines for development of tools, technologies and web interface accessible for persons with disabilities. The Web Content accessibility guideline [WCAG 2.0] is the key achievement in this direction. In India, though few initiatives have been undertaken towards development and deployment of assistive technologies, still lot more needs to be done in terms of affordable multilingual assistive technology development, adoption of standards, awareness and education, implementation and policy level aspects to provide web based accessible solutions to include these specially-abled citizens towards nation building.

Objectives

- This Workshop would provide the technology developers, web service and solution providers, Policy makers, NGOs and users a unique platform for understanding the common needs and implementation issues.
- The special focus of workshop will be on multilingual requirements in web accessibility area.
- Capturing the requirements for Indian languages as per W3C WCAG 2.0 Standards

Agenda

10.00-11.00am	Inaugural Session	
1.	Welcome Address	Swaran Lata , W3C India
2.	Inaugural Keynote	Shouvik Mukherjee, Yahoo!
3.	Expert Keynote Address	Victor Tsaran, Yahoo !
11.00-11.15am	Tea Break	
11.15-1.15pm	Session 1:W3C and Web accessibility Initiative	
4.	Overview of WAI,W3C 2.0 and Adoption	Shilpi Kapoor ,Barrier Break Technologies
5.	WAI-ARIA	Victor Tsaran, Yahoo !
6.	Challenges Multilingual web Access	Swaran lata , W3C India
7.	Multimodal Interface	Shreekanth,C-DAC,Bangalore
8.	Indianizing Web Content Accessibility	Dr. T V Gopal , Anna University
1.15-2.15pm	Lunch Break	
2.15-3.15pm	Session 2: Emerging Technology and web accessibility Implication	
9.	Language Technology to Enable Accessibility	A G Ramakrishnan, IISc Bangalore
10.	Creating Accessible PDFs	Mamta Tandel, BarrierBreak Technologies
11.	Flash Accessibility For all	Vivek GaiKWad,Cognizant Technologies
3:15-3:30pm	Tea Break	
3.30-4:15 pm	Session3:Business and Strategic perspective of Web Accessibility	
12.	Talk By Wipro	kenny kesar
13.	Spoken Web , IBM	Anupam Jain
4:15-5:00pm	Session 4 : Technology Development for Multilingual Accessibility in India	
14.	TTS for visually challenged in Indian Languages	Ram Ramachandran, Nuance India
15.	Talk By Microsoft	Kalika Bali
5.00-5.30pm	Summary & Recommendations	

Workshop Venue

The workshop held at Yahoo ! R & D Centre, Bagmane Tridib,
Block 'A',
Bagmane Tech Park, C.V. Raman Nagar,
Bangalore - 560093



Welcome Address

Ms. Swaran Lata, Country Manager W3C India gave away the welcome address. She gave the brief introduction on W3C India Office activities and Web Accessibility.



Inaugural Keynote

Mr. Shouvick Mukherjee, Vice-president & CEO ,Yahoo! R& D started with inaugural address and welcomed all the speakers as well as the delegates in the workshop. He Talked about the activities carried out by Yahoo! India in the field of Accessibility.



Expert Keynote Address

Victor Tsaran, Sr. Accessibility Program Manager, Yahoo! was expert keynote speaker of the workshop. He told about the importance of Web Accessibility for disable persons in India.

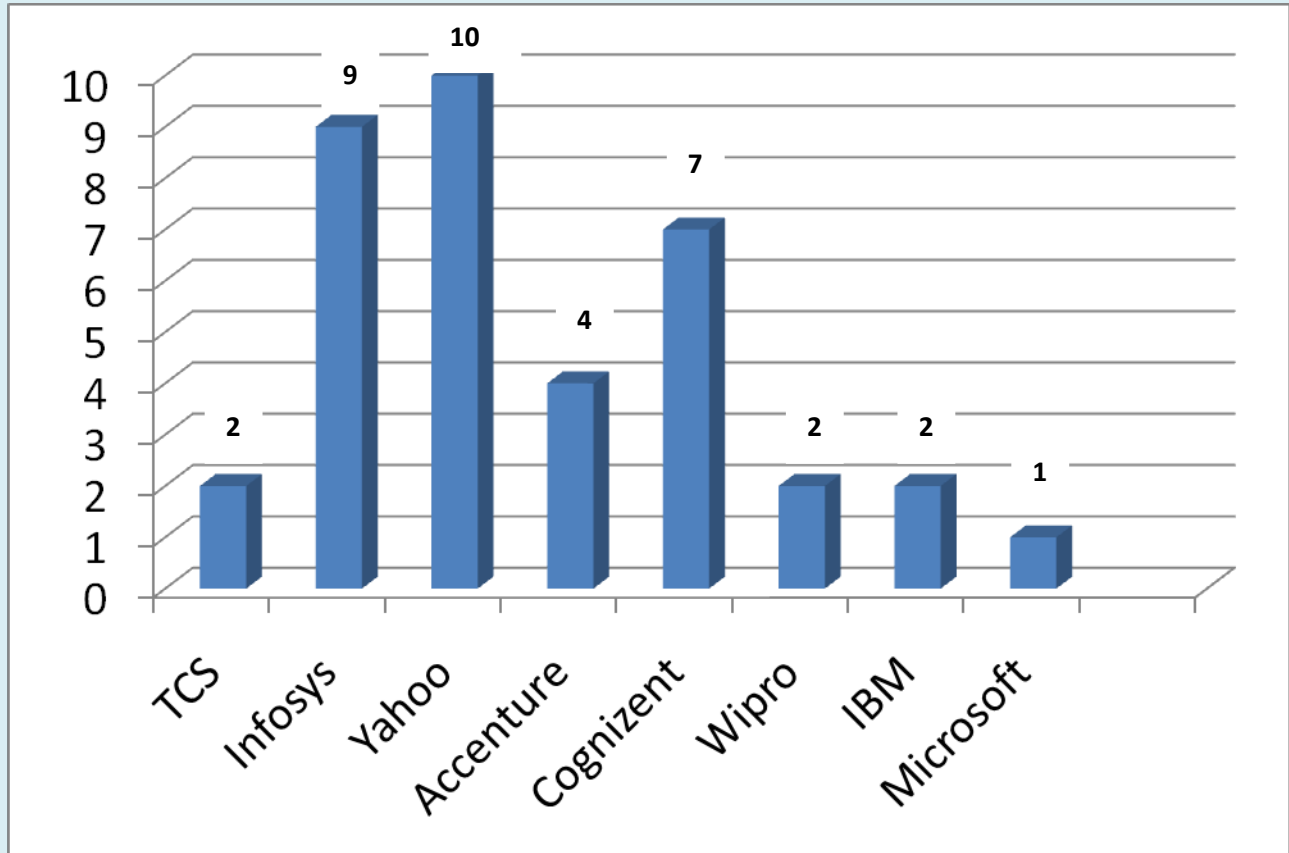


Coordinator

The workshop was excellently coordinated by Mr. Srinivasu Chakravarthula, Accessibility Manager, Yahoo! India.



Major Participation from Industries



Testimonials

“The event was quite good with good speakers with different sessions and with very good concepts.”

By shushi Dhara

Servolet InfoTech

“The presentation was good showcasing the history of W3C and the present scenario.”

By Anupriya Gupta

Infosys

“This session is very useful for me .Specially to the WAI-ARIA is excellent and the guidelines for Indian Government is good and the hole session is very useful for me.”

By logesh Ravi chandran

NEB cons.

“. It is globalized, and it is very useful for me. I feel lucky to attend the programme which is going to change my life style.”

By vinoth dayaraj

Nebcors Institute of Management

“Good enough .Some part of the session was very useful.”

By Shalini

Servolet InfoTech

“Many thanks for the well organized W3C India Workshop at Bangalore. It has been good learning for me.”

By Gopal T V

Anna University

Session Summary

Session 1:

W3C and Web accessibility Initiative



Adoption of W3C WCAG 2.0

By Shilpi Kapoor, Managing Director, Barrier Break Technologies

W3C's Web Content Accessibility Guidelines (WCAG) 2.0 covers a wide range of recommendations for making Web content more accessible. As compared to WCAG 1.0, WCAG 2.0 is a more comprehensive list of guidelines that has considerations for both backward and future technologies.

she discussed about the adoption of WCAG 2.0 and the adaption of the same into the Indian Context. The gaps and problems that exist that need to be addressed ,so that WCAG 2.0 can be implemented effectively in the Indian Scenario. The presentation has covered testing and the importance of testing with people with disabilities to ensure that the websites are compliant.



WAI-ARIA

by Victor Tsaran , Sr. Accessibility Program Manager, Yahoo!

He talked about the WAI-ARIA, the Accessible Rich Internet Applications Suite, defines a way to make Web content and Web applications more accessible to people with disabilities. It especially helps with dynamic content and advanced user interface controls developed with Ajax, HTML, JavaScript, and related technologies. WAI-ARIA addresses these accessibility challenges, for example, by defining new ways for functionality to be provided to assistive technology. With WAI-ARIA, developers can make advanced Web applications accessible and usable to people with disabilities.



Challenges Multilingual Web Access

By Ms. Swaran Lata, Country Manger, W3C India

She talked about the importance of web accessibility in India and the targeted peoples who will get benefitted by this initiative.

She discussed about the use of web accessibility in India and challenges associated with respect to Indian languages. As multilingual web is an approach towards making web more accessible by everyone and especially in the context of its accessibility in all 22 national recognized language of India.



Indianizing Web Content Accessibility

Dr. T V Gopal, Professor, College of Engineering Anna University

His presentation has focused on the following three points of the W3C : Universal Access – Voice Browser, Semantic Web – Taking Advantage of the Relationships amongst Indian Languages. The author has practical experience in the Indo-Aryan Family of Languages derived from Sanskrit. This approach is also good for Internationalization. Trust.

A Voice Browser based on “Psychoacoustics” that explores the interrelationships amongst language, speech, cognition and occultism [music & mantra] is mooted. Sanskrit Etymology based on the notions of “Bija” with Voice Browsers can result in remarkable improvements in the accessibility across multiple-language sites. It paves way for language independence. Pronunciation based on the “Siksha and Formal Musical Swaras” fosters Trust.



Multimodal Interface

N S Sreekanth , C-DAC Bangalore

He gave the brief introduction on Multimodal Interface and focused the Problems with Current Interface Technology. He talked about the current experiments takes place at C-DAC.1)PoC for Multimodal Interaction,2)Speech and Gesture Driven Input,3)Architecture,4)How to build using Existing Open source solutions.

Session 2:

Emerging Technology and web accessibility Implication



Language Technology to enable Accessibility

A G Ramakrishnan , Professor, Department of Electrical Engineering, IISc Bangalore.

He talked about the Current Machine Translation technologies must be made use of for accessing English content of Govt. websites through other Indian languages and Current TTS technologies must be made use of, for accessing Indian language as well as translated content to be accessible as speech. He told about the current work at MILE , IISc Bangalore. He discussed about the Automated Book Reader, Mosaicing of Camera Captured document images, Contour based Color Clustering for Robust Binarization of Colored Text and binarization of colored text.



Accessible PDF documents

By Mamta Tandel, Head – Accessible Development, BarrierBreak Technologies

The advantages of presenting content in the form of Portable Document Format (PDF) document are many as compared to other file formats. Apart from being cross-platform and extensible, PDF documents maintain the look and feel of the document, offer content security and can also be made accessible. The process of making PDF documents accessible is tricky but certainly achievable if certain basic factors such as document structure, styles, use of standard elements (tables, list, images etc) are taken care of. Scanned PDF documents can also be made accessible but involves lot of effort.



Accessible Flash for All

Vivek Gaikwad, Cognizant Bangalore

Flash is the most widely used technology to create multimedia elements like e-learning, games, presentations, interactive quizzes, eye catching advertisements. It is used widely, as it is appealing with its rich look and feel. But, while making it engaging and interactive, developers and designers forget the difficulties people with disabilities face to go through it. The reason we still see major chunk of flash over the web inaccessible, is the awareness about flash and accessibility is not spread across the developer community. Flash can definitely be made accessible with the support adobe has provided. We can create accessible flash content by following few best practices.

Session 3:

Business and Strategic perspective of Web Accessibility



By Kenny Kesar, Wipro India

He talked about the importance of web accessibility in web applications and web services. He presented some work done by Wipro in the field of web accessibility.



Spoken Web

By Anupam Jain, IBM India

Spoken Web is an initiative to create a web for the under-privileged population providing information through mobile or landline phones. Designed and developed by IBM Research Laboratory, India, Spoken Web tries to get past the issues of literacy and affordability by introducing VoiceSites that can be accessed by any phone and can understand the local language. It has immense applicability in the accessibility space where people can talk in different languages, blind can access information without the need of a computer and physical mobility is significantly reduced since the information can be accessed from any phone.

Session 4:

Technology Development for Multilingual Accessibility in India



TTS for visually challenged in Indian Languages

By Ram Ramachandran, Nuance India

He talked about the technology and W3C standards in speech. He discussed about advantages of Pre-recorded prompts used by majority of speech-enabled services. He talked about the Prompting Problem in Text-to-speech tuning. He discussed about a PromptSculptor which is a GUI-based toolkit for tuning TTS prompts.



Multilingual Web Accessibility: Some Insights from Cross-lingual Information Retrieval

By Kalika Bali, Microsoft Research Labs India

The rapidly changing demographics of the internet population and the plethora of multilingual content on the web has attracted the attention of the Information Retrieval community to develop methodologies for cross-lingual information accessing. She presented some work done at Microsoft Research Labs India on building a Hindi-English Cross-lingual Information Retrieval (CLIR) System with a query likelihood based document ranking and its evaluation against the FIRE2008 datasets. Lack of resources is still a major reason for relatively less number of efforts in CLIR system development.

Organizers

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Dr. Somnath Chandra	Deputy Country Manager ,W3C India
Srinivasu Chakravarthula	Yahoo! R & D
Prashant Verma	W3C India
Prashant Tyagi	W3C India
Raghu Arora	W3C India
Swati Arora	W3C India

Outcome of the Workshop

- Creating awareness towards implementation of W3C WCAG 2.0 Guidelines for implementation of accessible web.
- Focus on development of associated technology like TTS, ASR, Voice Browser and other assistive technologies in Indian Languages.
- Development of validation tool for designing of accessible Web pages.
- Evolution of National Recommendations on web accessibility in Indian Languages for consideration by W3C.

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