THE CENTRE FOR INTERNET AND SOCIETY
NATIONAL WORKSHOP ON WEB ACCESSIBILITY
5 -7 JUNE 2009

The second National Workshop on Web Accessibility for web developers was held at the CIS office in Bangalore, 5-7 June 2009. Although this was intended to be more a city-based workshop, we still got participants from other states such as Kerala, Maharashtra, Tamil Nadu and Andhra Pradesh[1]. There were in all 15 participants predominantly from the web development and web designing backgrounds, college students and even a person from the academic field and 3 trainers[2]. There were also some who had already prior knowledge of accessibility and this helped to raise the level of issues which were being discussed from a basic level to a more advanced level. Overall, the workshop was extremely well received and many of the participants expressed their willingness to participate in more such workshops in the future.

The workshop was structured differently from the last one--the sessions were more practical-oriented and the trainers stressed a lot on group work[3]. There were sessions on understanding disability, WCAG 2.0 principles and group exercises of designing accessible pages. This workshop featured some additional topics such as Flash accessibility, accessibility in documents and role play exercises for problem solving for different disabilities. For instance, in one of the sessions, the participants were asked to prepare a caption for a one minute video. One of the participants, already working on accessibility, demonstrated Orca for Linux.

Specific Outcomes
1. The participants understood the importance of creating accessible web pages and learnt about various techniques, tools and resources for accessibility.
2. All the presentations and lectures were video documented.
3. The participants filled up feed back forms and action points[4] to be undertaken after the workshop. CIS distributed T-Shirts and certificates to all the participants.

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[1] List of participants is given as Annexure A

[2] List of trainers is given as Annexure B
[3] Complete Session-wise schedule is given as Annexure C
[4] Annexure D contains participant feedback

Annexure A

List of participants

Sl. No.	Organisation	Participants	email
1	Egovmon	Anand B Pillai	abpillai@gmail.com
2	NITK , Surathkal	Ashish G Bhat	ashish.g.bhat@gmail.com
3	NIT Trichy	S.R.Balasundaram	blsundar@nitt.edu
5	JustOnDemand Technologies Pvt Ltd	R Pooran Prasad	pooran@gmail.com
9	3i Infotech	Sarika Digvijay Desai	sarika.bagwe@3i-infotech.com
10	e-Cosmos India Pvt. Ltd.	Shoan Motwani	shoanm@gmail.com
13	Mahiti Infotech Pvt Ltd	Sunil Nallode	nallode@mahiti.org
15	Mphasis	Prathap Ramachandran	prathapchandran@gmail.com
16	MphasiS	Giridhar Anantha	giriart@gmail.com
17	GEBC	Poornima B Jayaraj	poornima.b.j@hp.com
18	Dr. Mahalingam College of Engineering and Technology	Sree Aurovindh .V	sreeaurovindh@gmail.com
19	HP	Tenzin Wangmo	Tenzin.wangmo@hp.com
20	Environment Support Group	Anjali Vaidya	anjali.p.vaidya@gmail.com
22	Paxaal Inc	Jayesh	jayesh@paxaal.com
23	Paxaal Inc	Vijesh	paxaal@paxaal.com

Annexure B

Trainers:

1. Rahul Gonsalves

Rahul has been building accessible websites since 2005 (sample work at http://rahulgonsalves.com/projects/). He has been actively involved in promoting web and accessibility standards. He spoke at the first international accessibility and technology conference in India, Techshare 2008, where he made a case for accessibility and conducted a workshop on retrofitting accessibility to existing websites, a concern for most large institutions with an existing online presence (slides available at http://www.barrierbreak.com/events-conference/techshare_presentations2008.php#track3).

In September 2008, he presented a paper examining ways in which people with various impairments - both physical and mental – engage with online content, and demonstrated practical ways in which authors can make online content accessible at the National Conference on ICT for Differently Abled People. He is a supporter of the push for having a national policy for governing electronic accessibility in India.

2. Dinesh Kaushal

Dinesh has been involved in the area of accessibility, specifically product development throughout his career. He started with developing SAFA (Screen Access for All), which is the first Indian language screen reader. He worked independently on this for a year, during which time he got a good understanding of the complete software development life cycle. SAFA was envisioned to facilitate reading and writing in Indian languages at affordable cost, with a view to enabling better jobs and education for persons with blindness and low vision. SAFA is a unique software as it has to interact with other applications to get information and present this information to the users in the format convenient for them. SAFA is currently being used by blind persons in their jobs, for their studies, and even for their exams and is available in 11 Indian languages for which text to speech synthesizers are available. His subsequent work involved leading a team to develop a Daisy book player. Daisy books are xml based marked-up digital books which provide efficient access to the information for persons with blindness. His responsibilities were team coordination, software requirement specification, design specification, and monitoring testing. He is presently working with Code Factory as Lead Developer (Braille) for screen readers for the windows mobile platform. This software enables persons with blindness to get access to mobile phones and PDAs, making it possible to access information at par with their sighted colleagues. His role is to provide this information via Braille displays. The Braille display allows blind persons to read SMS, work with contacts and documents, navigate with the help of GPS, etc using electronic Braille. This product is available for more than 20 languages and is available all over the world.

3. Dr. Ajay Kolhatkar

Dr. Ajay Kolhatkar co-leads the web usability and accessibility research at the Web 2.0 Research Labs at SETLabs. Presently he manages the evangelization of Web Accessibility Assessment and Remediation product called Infosys iProwe developed by their lab. Ajay has a PhD in

technology marketing from IIT Bombay. His research there focused on Consumer's Acceptance of Technology Based Services. The key research problem was modeling the attitude-behaviour linkage for technology acceptance and the critical role played by personality factors and situational factors. The context for the study was Automated Teller Machines. Presently his research interests include usability of self-service channels; technology adoption; consumer behaviour in technology interfaces etc. An electrical engineer from the College of Engineering, Pune and an MBA in Marketing from Symbiosis Institute, Pune, Ajay has over 16 years of industry experience. He can be contacted at Ajay_Kolhatkar@infosys.com.

Annexure C

WORKSHOP SESSIONS

Day 1
09:00-10:00: Introduction of participants, trainers and organizers

10:00-11:30: Session 1
• Understanding disability;
• Working with disabilities -- The need for an accessible web
This session will familiarise the participants with different types of disabilities and the work-arounds, in terms of assistive technologies or simple modifications which will enable them to work effectively using computers.

11:30-11:45: Tea Break

11:45-13:00: Session 2 - Building an Accessible Website
• Laying Accessible Foundations
• Table-less layouts
• Well-structured markup
• Valid code

3:00-14:00: Lunch

14:00-15:30: Session 3--Group exercise
Participants will have to identify and use semantic markup to describe different parts of a given layout. They will then have to write basic HTML/CSS code to present the website and validate it using online/desktop tools.

15:30-15:45: Tea break

15:45-17:15: Session 4 - Building an Accessible Website
Participants will have a chance to use a variety of assistive technologies (screen readers/braille displays) and there will be an exercise followed be a group discussion. Sequential Access/Role play will be conducted which will help them understand some of the problems related to electronic accessibility.

17:15-17:30: Summary and winding up

Day 2
09:15-11:00: Session 5 - Building an Accessible Website
• Removing Barriers
• Principle 1 - Perception
• Non-text content
• Audio/Visual content
• Adaptability
• Contrast

11:00-11:15: Tea break

11:15-13:00: Session 6 - Principle 2 - Operable
• Keyboard Access
• Enough Time
• Seizures
• Navigable

13:00-14:00: Lunch

14:00-15:30: Group Exercise
• Participants will be given online tools to evaluate colour contrast. They will have to evaluate and correct a layout for adequate contrast.
• Participants will have to prepare a transcript of a one-minute film.

15:30-15:45: Tea break

15:45:16:15: Session 7 - Accessibility in documents

16:15-17:30: Session 8 - Principle 3 - Understandable, and Principle 4 - Robust
• Natural Language
• Predictable
• Input Assistance
• Compatible
Winding up, feedback and clarification

Day 3
09:15 -9:45: Flash accessibility

9:45-11:15: Group Exercise - Putting it all together
Participants will complete building the website(s)

11:15-11:30: Tea Break

11:30-12:45: Accessibility testing
Group Exercise - Testing + Validating using automated testing tools as well as manual testing
• The website that has been built will be validated to HTML, CSS and WCAG standards.
• All errors identified will have to be corrected in a participatory fashion.

12:45-13:00: Wrapping up
Action points -- The road ahead

13:15- 14:00: Lunch

Annexure D

Action Points of the Participants

Rakesh Ambati--The conversations in this workshop were a starting point for discussing issues like flash, documents etc with regard to accessibility and it would be useful to work out some best practices. I haven't done much work on Web Accessibility, but might start working on it now after this workshop.

Sunil--In programming, accessibility is beyond just screen readers; even search engines, browsers etc read it. I learnt about Document accessibility, making fonts, non design things etc.

Poornima--Got some idea about web accessibility. I would like to teach this to others. First I have to learn web designing and then teach it to others. I hope to use this knowledge when I work on developing the web site for Enable India.

Sree Aurobind--We have a college group called the open source University meet up (osum.sun.com)- I am trying to have a separate portal for my college and this seminar has helped me to figure out how to lay out the portal. Knowledge of laying forms has been greatly enhanced. Would like to attend more workshops.

Ashish--NIT
I am also a part of the student group OSOM. I would like to collaborate and make sites for the college. I knew nothing about web accessibility and found it all very very fascinating. I have been using unstructured CMS and depending on visibility and superficial front end development for my work. This seminar is wonderful because I am looking at structures etc.

Sarika--I intend to try and make applications for the web site accessible. Until now, we only had information from the internet. But learning from experts has given me a lot of clarity. I realize I have been gravely wrong in many things. I will be going back and mapping out all that I have done and try to repair it. I will also have a meeting and share with my colleagues what I have learnt here and identify areas for improvement. I would be happy to contribute or help in any manner possible for such workshops in the future.

Tenzin--I want to learn something basic first. Although I have got a fair idea of what to look for while creating web sites, I have to first learn basics of web designing to be able to implement all that I have learnt here. Since I don't know web designing I wasn't able to understand a lot of what was taught here. I have documented stuff, so I want to learn the basics and then go on to web accessibility.

Balasundaram--It was a wonderful experience; I felt like a student, despite being a teacher in this field for twenty years. I am teaching web technologies; I got a lot of inputs about basic things which I feel I have left out while teaching my students.

Anjali--I learned a lot. These are things I have never thought about.
Prathap--Accessibility is not a term I haven't thought about, but I have never got an opportunity to work on this. I am unsure as to how I will implement these things, but I want to go back and think about this.

Shoan--My work involves building health care applications for the US market. My purpose in attending this workshop was to understand how to build more health care applications which are accessible. This workshop has helped me to start the thought process of how to go about building them- there still a lot to be learnt.

Participant Feedback

1. **Please rate the following on a scale of 1 to 4**
(Scale: 1- Poor, 2 – Okay, 3 – Good, 4 – Excellent)

Criteria	A	B	C	D	E	F	G	H	I	J	K
Overall workshop	3	2	4	3	4	4	4	4	4	3	4
Accommodation	NA	NA	NA	4	NA	NA	NA	NA	4	3	4
Food	4	3	4	4	4	4	4	4	NA	4	4
Trainers	3	2	4	3	4	4	4	4	4	4	4
Lab Facilities	4	3	4	3	4	4	4	4	3	3	4
Wiki and Handouts	NA	2	3	3	2	4	3	3	3	3	3
Travel Arrangements	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA

2. **Did the training meet your expectations? If not please tell us what was missing.**

A: Yes, it met my expectations.

B: The training was at an introductory-newbie level. For people who have already worked on accessibility and accessibility tools, there was not a lot to learn from the training I felt that WCAG 2.0 presentation focused too much on captions and thing that. A lot of time was spent in discussing and working out captions, which should have been spent in discussing other things. There were not good discussions on how WCAG 2.0 mainly differs from WCAG 1.0. For a site developer the workshop had a lot to learn, but for an accessibility tool developer, not very much. I also felt the trainer(s) were ok on their own knowledge in Web accessibility, but they were not experts in the field aware of all aspects of web accessibility and latest research in the field. Also, the average interest and awareness level from the audience on actual technical points on web accessibility seemed to be quite low. Most people were interested in specific parts which had some direct application in their line of work, but not in the bigger picture.

C: Yes, certainly the training met my expectations. It gave me an insight how to build the site better and I'll surely pass on this information to my friends and peers. The trainers were extremely helpful and have a great depth knowledge in this field. Excellent workshop indeed.

D: Yes, the training is a good chance to meet people who are working and interested in accessibility.

E: Yes. It was great to learn about the accessibility from the professionals.

F: Yes, it's been wonderful. For me I had no knowledge about Web Accessibility. However, today I know where I stand which is beyond expectation. I m really honored to attend this session. Learning things which really made me to set my new path in learning web accessibility.

G: The trainers were really good and with good control over the subject. The improvement areas I would like to suggest, it could have been better if some more material provided. (Example: For Document accessibility it would have been good if there was a live presentation like a ready document with the accessibility added)

H: Certainly, it was highly useful.

I: It did.

J: The training met my expectations and perhaps forged my skill further. Perhaps more examples on accessibility perhaps how to go around or some examples on the best practices would be great to have.

K: Yes. Great trainers.

3. **Which three sessions did you like the most and why?**

A: I enjoyed the session on captioning films – interesting and informative.

   a. I appreciated the session on forms, since my knowledge of forms was quite basic before that.

   b. I also appreciated the session on formatting with css in an accessible manner, since once again I was able to fill in some gaps in my knowledge.

B: since I attended only one session- no comments

C: The form exercise and validation: it was an excellent validation exercise with a hands on experience Demonstration Given by Dinesh on Screen Reader
   a. The guideline identification and doing some amount of group work on the selected guideline provided an insight.
   b. Every ppt presented by Dinesh was very inspiring.

D: Introduction to WAGC 2.0, Group work and Lunch

E: Web Content Accessibility Guidelines

F: 5th June – I came to know about the topics which I need to know before learning on Web Acessibility. Rahul and Dinesh given me a lot of information, which was very new to me. 6th June – Today Again informative. Learned more than 5th June. 7th June – Today I can say that I know what I need to learn more to be trainer in future.

G: As its new learning for me I felt all the sessions are very informative and good learning for me. The session on Accessibility for documents which I liked most. Apart from gaining knowledge on accessibility I learnt lot other things, like HTML tags etc.

H: All sessions were new to me. I could appreciate the content delivered.

I: WCAG, Building accessible web forms, Creating Accessible Documents

J:
1. Explanation of Web accessibility standards & guidelines. Some off-line tips from the trainers.

2. Flash & Document accessibility

3. Tasks & activities given to us from the trainers (off the record, Tea Breaks too)

K: The session on accessibility rules, as trainee gets to learn how to create html tags which is a huge learning. Transcription on a short video which are some of the learning.

4. **Which three trainers did you like the most and why?**

A: Since there were three trainers total, I'm not sure how to answer this – however, it really helped bring home the message to me to have one visually impaired trainer. That was a perspective I hadn't really been exposed to before.

B: I attended only one session on Saturday, so my answer does not give any insight. However I felt Rahul Gonsalvez had a lot of relevant experience in web design and was quite knowledgeable on the accessibility front too.

C: Rahul : his in-depth knowledge; Dinesh: He is inspiring; Ajay : His presentability.

D: I think all the trainer were really patient in explaining the technical details and answer our sometimes off-topic questions.

E: Dinesh, Rahul, Ajay

F: Rahul – Very Good, gave us a lot of example, which helped me to understand better.
Dinesh – I admire him. I am honored to learn many many informative things from him. He shared live example, which made me to think practically more.
Ajay – Provided us more on theory part, which made me to keep a tab on things which generally web designer don't keep in mind.

G: I would like to put Ajay on top as he took sessions on Accessibility on documentation. Learnt lot of things from Rahul and Dinesh regarding accessibility, both of them has vast knowledge on the subject.

H: Every trainer is unique in some aspect.

I: Dinesh – Well versed the WCAG specification and knowledgeable in defects in websites with regards to accessibility. Rahul_- Knowledgeable in the latest accessible web techniques. His tips on creating accessible websites were invaluable. Good presenter. Ajay – Good presenter. Knowledgeable in the WCAG Guidelines.

J:
Rahul – For his Cool to head & nice answers.

Dinesh – For his feedbacks.

Ajay – For his sensible jokes while his presentation.

K:
Rahul-very polite & proving us all the knowledge where ever we are lacking on
Dinesh who has all the capabilities to answer or provides various options on any scenarios.
Ajay is on the whole added more information which would be helpful.

5. **If you could change the order or content of some sessions, what would you remove/add/modify and why?**

A: I found the hands-on sessions most effective, overall – more understandable than simply stating guidelines, and so on. More of the hands-on approach might have been helpful.

B: N.A

C: No, it was just perfect

D: More real world scenarios. Select a badly designed web page and point out the mistakes. W3C documents are very dull. Should avoid using a lot of excerpts from these wherever possible.

E: I would prefer if some more real life examples would get demonstrated. It would be great if we can get some documents on checklist or standards.

F: I can say I am a kid in the world of WEB, so I would really not comment on this. But I would say I am really happy to be part of this workshop.

G: I would not change the order of the session, but it would be very good if we had some live examples as mentioned earlier.

H: Lab session could be increased. On the whole, it was organised very well. Would like to have future association with CIS-India and web accessibility related forum.

I: The workshop did not need any changes.

J: Some good examples for each accessibility guidelines; Some best practices to follow to build an accessible site.

K: Add more basic knowledge on HTML & CSS.

Annexure E

Expenses for workshop

Event Organisation	Amount in rupees
T-Shirts, Banners, Certificates	8,006
Laptops	32,760
Food	22,023
Trainers	22,500
Video	12,000
Gifts	1,385
Cakes	415
Chairs	225
Flowers	450
Water Bottles	340
Head Phones	693
Tea, Coffee, & Snacks	1,052
Total	101849