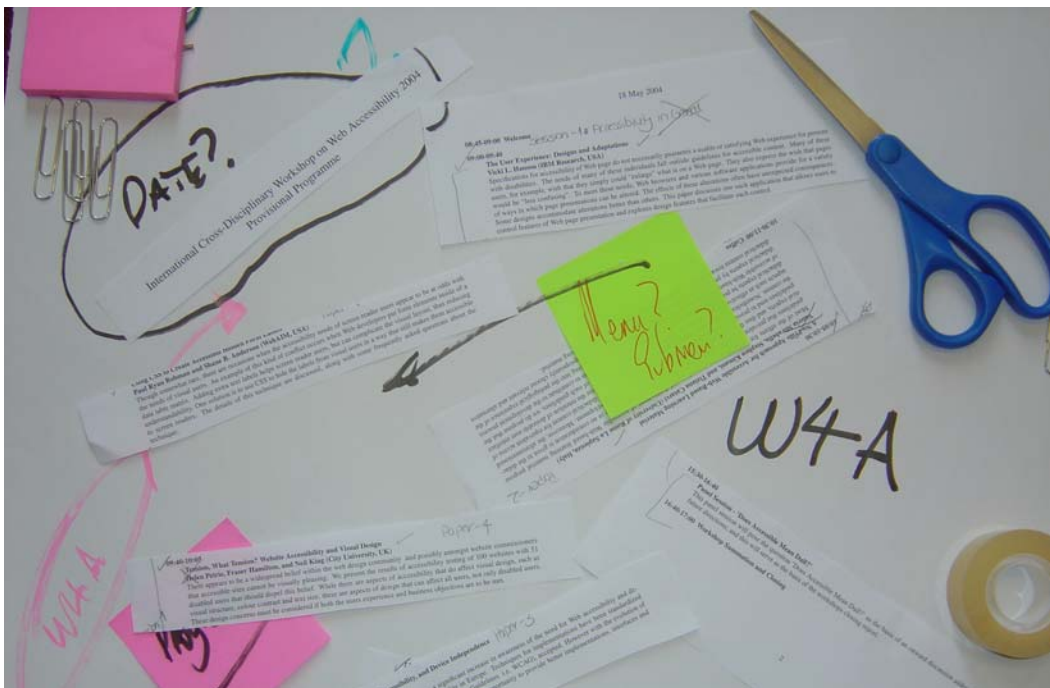


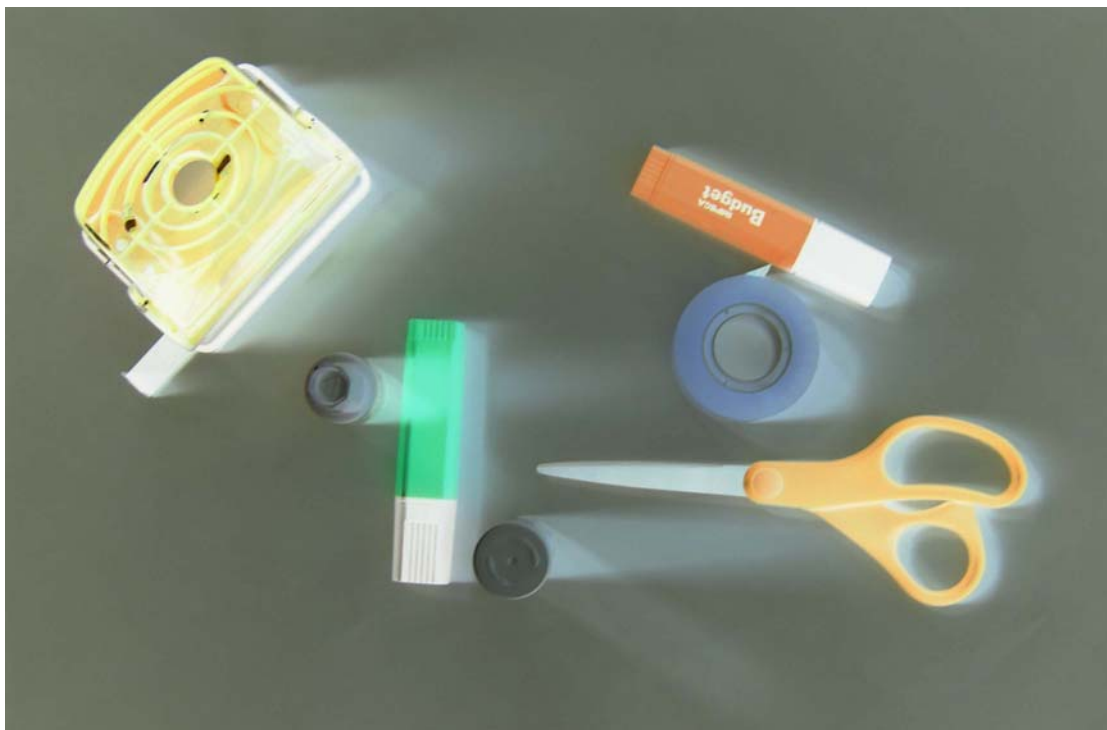
# Proceedings of the International Cross-Disciplinary Workshop on Web Accessibility 2004 W4A



May 18, 2004  
at the World Wide Web Conference (WWW2004)  
New York City, USA



Proceedings of the  
International Cross-Disciplinary  
Workshop on Web Accessibility 2004  
W4A



May 18, 2004  
at the World Wide Web Conference (WWW2004)  
New York City, USA



**The Association for Computing Machinery  
1515 Broadway  
New York New York 10036**

Copyright 2004 by the Association for Computing Machinery, Inc.(ACM). Permission to make digital or hard copies of portions of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyright for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Request permission to republish from: Publications Dept. ACM, Inc. Fax +1 (212) 869- 0481 or <permissions@acm.org>.

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, +1-978-750-8400,+1-978-750-4470 (fax).

**Notice to Past Authors of ACM-Published Articles**

ACM intends to create a complete electronic archive of all articles and/or other material previously published by ACM. If you have written a work that was previously published by ACM in any journal or conference proceedings prior to 1978, or any SIG Newsletter at any time, and you do NOT want this work to appear in the ACM Digital Library, please inform permissions@acm.org, stating the title of the work, the author(s), and where and when published.

**ACM ISBN: 1-58113-903-9**





# Forward

Layout and structure are key to good visual design. They are the conduit for both the content and the graphics. They are also very important for disabled (e.g. dyslexic users) people and specifically visually impaired users, as they need to be quickly and easily interacted with. This workshop aims to address layout, structure, and presentation from the viewpoint of accessibility and good visual design; where these are in opposition, the workshop aims to facilitate discussion between interested parties so that a solution (or at least the beginnings of a solution) can be formulated. We support inclusive design however how can this be the case if users have differing needs? The organizers also assert that no one should be hindered when interacting with layout. Will making layout accessible hinder sighted or 'conventional' users?

Conventional workshops on accessibility tend to be single disciplinary in nature. However, we are concerned that this focus on a single participant group prevents the cross-pollination of ideas, needs, and technologies from other related but separate fields. This workshop is decidedly cross disciplinary in nature and brings together users, accessibility experts, graphic designers, and technologists from academia and industry to discuss how accessibility can be supported. We also encourage the participation of users and other interested parties as an additional balance to the discussion. Our aim is to focus on accessibility by encouraging participation from many disciplines. Views often bridge academia, commerce, and industry and arguments encompass a range of beliefs across the design-accessibility spectrum.

Many people contributed to the success of the program. We would like to thank the programme committee for their exceptional work and dedication in the review process. We would also like to thank the authors for their excellent work and delegates for their participation. It's our sincere hope that the W4A will continue to provide an excellent forum for researchers and practitioners of the accessibility and design communities to exchange ideas and to help grow this community together. We hope you all find this workshop useful, memorable, and above all, good fun!

**Simon Harper**  
**Yeliz Yesilada**  
**Carole Goble**

May 2004



## Workshop Chairs

The International Cross-Disciplinary Workshop on Web Accessibility 2004 (W4A) was organised as a workshop within the Thirteenth International World Wide Web Conference (WWW2004). It was held on the 18<sup>th</sup> May 2004 in New York City, USA.

**Simon Harper**

simon.harper@man.ac.uk

**Yeliz Yesilada**

yesilady@cs.man.ac.uk

**Carole Goble**

carole@cs.man.ac.uk

Information Management Group,  
Department of Computer Science,  
University of Manchester,  
Kilburn Building,  
Oxford Road,  
MANCHESTER,  
M13 9PL,  
UK.



# Workshop Programme Committee

Chieko Asakawa (*IBM, Japan*)

Helen Ashman (*University of Nottingham, UK*)

Tiziana Catarci (*University of Roma "La Sapienza", Italy*)

David Duce (*Oxford Brookes University, UK*)

Alistair Edwards (*University of York, UK*)

Alfred S. Gilman (*Trace Center, USA*)

Joachim Klaus (*Universität Karlsruhe, Germany*)

Marja-Ritta Koivunen (*W3C / Annotea, USA*)

David Lowe (*University of Technology Sydney, Australia*)

Gustavo H. Rossi (*Universidad Nacional de La Plata, Argentina*)

Constantine Stephanidis (*ICS-FORTH, Greece*)

Robert Stevens (*University of Manchester, UK*)

Jim Thatcher (*jimthatcher.com, USA*)

Jutta Treviranus (*University of Toronto, Canada*)



# Workshop Sponsors



## **ACM SIGCAPH**

The ACM's Special Interest Group on Computers and the Physically Handicapped, SIGCAPH, promotes the professional interests of computing professionals interested in the research and development of computing and information technology to help people. The SIG membership (from both academia and industry) focuses on the application of technology to all kinds of disabilities, including but not limited to: sensory (hearing and vision); motor (orthopedic); cognitive (learning, speech, mental); and emotional personnel with physical disabilities and the application of computing and information technology in solving relevant disability problems. The SIG also strives to educate the public to support careers for the disabled.

Founded in 1947, the Association for Computing Machinery (ACM) is a major force in advancing the skills of information technology professionals and students worldwide. Today, their 75,000 members and the public turn to the ACM for the industry's leading Portal to Computing Literature, authoritative publications and pioneering conferences, providing leadership for the 21st century.

## **IBM Research**

### **IBM RESEARCH**

IBM Research Labs work in all areas of information technology, from physics and cognitive science to leading-edge application research. They invent innovative materials and structures and use them to create exciting machine designs and architectures. Creating tools and technologies that will enable the continued evolution of computing and computing services over the network. Their work across many disciplines is often done in concert with colleagues in academic and government research centers, as well as "in the marketplace" with customers who provide them with challenging research problems.



### **Macromedia**

Macromedia is motivated by the belief that great experiences build great businesses. Their software empowers millions of business users, developers, and designers to create and deliver effective, compelling, and memorable experiences—on the Internet, on fixed media, on wireless, and on digital devices.



### **Adobe**

Proceedings created with Adobe Acrobat Professional 6.0 which is a part of the Adobe Creative Suite.



# Table of Contents

<b>Session 1: Accessibility</b>	
<b>The User Experience: Designs and Adaptations</b>	<b>1</b>
V. L. Hanson ( <i>IBM Research, USA</i> )	
<b>Tension, What Tension? Website Accessibility and Visual Design</b>	<b>13</b>
H. Petrie, F. Hamilton, and N. King ( <i>City University, UK</i> )	
<b>A No Frills Approach for Accessible Web Based Learning Material</b>	<b>19</b>
V. Mirabella, S. Kimani, and T. Catarci ( <i>University of Rome La Sapienza, Italy</i> )	
<b>Session 2: Design</b>	
<b>Accessibility and Design: A Failure of the Imagination</b>	<b>29</b>
B. Regan ( <i>Macromedia Inc., USA</i> )	
<b>Using CSS to Create Accessible Hidden Form Labels</b>	<b>39</b>
P. R. Bohman and S. B. Anderson ( <i>WebAIM, USA</i> )	
<b>Proving the Validity and Accessibility of Dynamic Web Pages</b>	<b>45</b>
R. G. Stone and J. Dhiensa ( <i>Loughborough University, UK</i> )	
<b>Session 3: Guidelines</b>	
<b>Web Accessibility Highlights and Trends</b>	<b>51</b>
J. Brewer ( <i>WAI W3C, USA</i> )	
<b>Designing Search Engine User Interfaces for the Visually Impaired</b>	<b>57</b>
B. Leporini, P. Andronico, and M. Buzzi ( <i>National Research Council, Italy</i> )	
<b>The Semantic Web, Web Accessibility, and Device Independence</b>	<b>67</b>
L. Seeman ( <i>UB Access, Israel</i> )	



# Table of Contents

<b>Session 1: Accessibility</b>	
<b>The User Experience: Designs and Adaptations</b>	<b>1</b>
V. L. Hanson ( <i>IBM Research, USA</i> )	
<b>Tension, What Tension? Website Accessibility and Visual Design</b>	<b>13</b>
H. Petrie, F. Hamilton, and N. King ( <i>City University, UK</i> )	
<b>A No Frills Approach for Accessible Web Based Learning Material</b>	<b>19</b>
V. Mirabella, S. Kimani, and T. Catarci ( <i>University of Rome La Sapienza, Italy</i> )	
<b>Session 2: Design</b>	
<b>Accessibility and Design: A Failure of the Imagination</b>	<b>29</b>
B. Regan ( <i>Macromedia Inc., USA</i> )	
<b>Using CSS to Create Accessible Hidden Form Labels</b>	<b>39</b>
P. R. Bohman and S. B. Anderson ( <i>WebAIM, USA</i> )	
<b>Proving the Validity and Accessibility of Dynamic Web Pages</b>	<b>45</b>
R. G. Stone and J. Dhiensa ( <i>Loughborough University, UK</i> )	
<b>Session 3: Guidelines</b>	
<b>Web Accessibility Highlights and Trends</b>	<b>51</b>
J. Brewer ( <i>WAI W3C, USA</i> )	
<b>Designing Search Engine User Interfaces for the Visually Impaired</b>	<b>57</b>
B. Leporini, P. Andronico, and M. Buzzi ( <i>National Research Council, Italy</i> )	
<b>The Semantic Web, Web Accessibility, and Device Independence</b>	<b>67</b>
L. Seeman ( <i>UB Access, Israel</i> )	