

D2.3 Report on raising public participation and awareness

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1 Executive Summary

The key objectives of Deliverable 2.3 were twofold. Firstly, the project partners wanted to make sure the project results can be based on public participation. Secondly by raising awareness within different communities of people with disabilities in Europe, a better understanding of the methods needed for benchmarking tools and, in the future, also guidelines is created.

The information is presented as follows: public participation has helped to focus the work on methods needed for guideline development as well as for corresponding tool development. Different communities have been addressed to spread the concepts around benchmarking and to involve them in the developments: people with disabilities, public authorities and policy makers. Activities carried out within WAI Working Groups and other standardisation bodies are described.

Scientific results are presented to the scientific community. In particular, we aimed at conferences focused on technology for people with special needs and general HCI conferences. The complete listing of these publications can be found in D2.2 and in the project Web site.¹ Here an overview of the various developments is provided.

¹<http://bentoweb.org/pubs>

2 Raising public participation

Raising public participation and awareness of accessibility to ICT services in general and benchmarking different approaches in particular is an important issue for BenToWeb. It is also important to disseminate the 'how-to' knowledge. Our approach is manifold and involved: surveys involving disabled people and people who aim, at a professional level, at accessible web sites, participation in standardization processes, collaboration with policy makers, and workshops to a more wider audience, as well as panels addressing public authorities.

2.1 Surveys

Under the scope of WP3, BenToWeb carried out a survey for those who design Web sites and for those who commission Web sites, to investigate the current understanding of accessibility issues and the requirements of older and disabled Web users, the effectiveness of current accessibility tools, and the requirements for new accessibility tools or improvements to tools. We tried to channel this survey with established international organisations like the International Webmasters Association (IWA²).

Analysis of the input has been carefully done. It has led to the refinement of the specification of the dependencies of user-based, manual and automatic testing for organizing the evaluation process.

Within WP4, BenToWeb has created survey-based techniques to involve a diversity of disabled people and a methodology for remote web-mediated large scale user evaluation which addresses benchmarking issues. The methodology involves developing test cases at a very fine granularity to present to remote users. An evaluation of the accessibility techniques for the new version of the Web Content Accessibility Guidelines was undertaken with more than 163 users (with a variety of disabilities, using a variety of browsers, assistive technologies) who completed and judged up to now more than 2368 individual evaluations of web page fragments.

Involvement of users has helped to identify those test cases, which needed to be revised in order to ensure user's failure or success is determined by a particular accessibility feature.

²<http://iwanet.org/>

2.2 Standardization Processes

Involvement in standardization activities are somehow intrinsic to most of the members of the BenToWeb consortium. This becomes obvious as many of the institutions involved in the project are members of EDeAN, or are even themselves National Contact Centres. Furthermore, many of them were members of the IDCnet project³ and/or are universities educating future generations about these issues. Other project members are user organisations that have outreach and education as an important part of their mission.

BenToWeb actively coordinates its activities with several WAI working groups.⁴ A coordination call was held on the 25th January 2005 for the whole WAB cluster, and since then several activities have started. In particular, the main focus of BenToWeb was related to these WGs:

- Evaluation and Repair Tools Working Group (ERT WG⁵).
- Web Content Accessibility Guidelines Working Group (WCAG WG⁶).
- Education and Outreach Working Group (EO WG⁷).

As a consequence of the work within WAI the new *Test Samples Development Task Force* was created which involves several members of BenToWeb consortium. Appropriate versions of the Test Case Description Language (TCDL) developed within BenToWeb were modified to fit the needs of the WAI community.

At the W3C MultiGroups Meeting (Jan 2007) BenToWeb also supported the first face-to-face meeting of the *Mobile Web Initiative Test Suites Working Group*. After the meeting, the Test Samples Development Task Force kept track of developments in the working group and both groups hope that they can build a common test sample submission framework.

2.3 Workshops and Panels

BenToWeb has also participated in the *CEN Workshop* on a “European certification scheme concerning the delivery of a Quality Mark for Web Content Accessibility.”⁸

³ <http://www.idcnet.info/>

⁴ <http://www.w3.org/WAI/>. More details on WAI activities can be found in the confidential management reports.

⁵ <http://www.w3.org/WAI/ER/>

⁶ <http://www.w3.org/WAI/GL/>

⁷ <http://www.w3.org/WAI/EO/>

⁸ <http://www.cenorm.be/cenorm/businessdomains/businessdomains/iss/activity/ws-wac.asp>

At ICCHP, in July 2006 a *keynote panel "Web Accessibility: Still an Exception?"* was organized by Helen Petrie and Gerhard Weber and involved the following participants:

- Judy Brewer, Director of the Web Accessibility Initiative (WAI) at the World Wide Web Consortium (W3C)
- Dominique Burger, Association Braillet, INSERM UPMC, France; Co-ordinator of the EU-funded Project SupportEAM
- Inmaculada Placencia-Porrero, EC, DG INFSO, eInclusion, Deputy Head of Unit
- Mike Paciello, The Paciello Group, USA
- Mikael Snaprud, Associate Professor, Agder University College, Co-ordinator of EU-funded Project EAIO

Discussion covered the following topics: introduction, observing and assessing accessibility, transition from WCAG 1.0 to WCAG 2.0, experts and certification, as well as education and training. At about 200 people out of the scientific community were present.

The *WAB Exploratory workshop* took place in December 2006 in Brussels. This exploratory workshop allowed projects and initiatives to discuss coherence of the various approaches and possible interoperability issues, to allow comparison of the future data collected. For the European Commission, the results of this exploratory workshop were a valuable input to the EU i2010 e-Inclusion initiative, in particular for inclusive e-Government. The starting EC mandate to European Standardisation Organisations to support public procurement of accessible ICT goods & services will also be concerned with some aspects of this.

The workshop was intended for Government agencies and companies working for these agencies who are preparing tools for benchmarking quality and accessibility of websites, in order to exchange ideas and optimise efforts.

3 Raising Awareness

Public awareness on accessibility guidelines and the need for benchmarking tools and methods is growing due to the legislation adopted in many EU countries. For example, in Germany only federal institutions are bound to adhere to the accessibility guidelines, but more and more large organisations focus on the accessibility of their portals. For example, Quelle,⁹ a large retailer has turned its catalogues into a more accessible version, and Postbank,¹⁰ a major bank, has made its Web banking more accessible. The annual Biene Award¹¹ is gaining more and more public acknowledgement and sees growing number of participants. “Multimedia Transfer¹²”, a prize for transfer of academic results has also created a category for accessible multimedia software. BenToWeb has helped to promote these activities by disseminating quality criteria on newer technologies to the different juries.

One of our objectives for raising public awareness on benchmarking tools and methods is to outreach the scientific community. At a basic level, this involves the community of the WAB cluster, at an more extended level we target scientists who are experts in the field of HCI for disabled, and beyond this, some publications are targeting the general scientific audience.

3.1 WAB Cluster

BenToWeb is part of the Web Accessibility Benchmarking (WAB) cluster. The cluster tries to become a common playground where the three member projects (BenToWeb, EIAO and Support-EAM) joined efforts towards a common Web accessibility evaluation methodology.

From the awareness standpoint, BenToWeb aims to use its partners' networks to extend the outreach of the activities of the cluster. The support of BenToWeb to the cluster goes further, as its coordinator is providing infrastructure to cluster activities by facilitating access to a collaborative online software (BSCW), mailing-lists and conferencing facilities to all cluster members.

The Unified Web Evaluation Methodology (UWEM) is an outcome of the WAB Cluster.

⁹ <http://www.quelle.de/>

¹⁰ <http://www.postbank.de/>

¹¹ <http://www.biene-award.de/>

¹² <http://www.rz.uni-karlsruhe.de/mmt/>

3.2 Conferences in the field of HCI and Disabilities

Among the list of conferences visited, we can highlight contributions to the following:

- 3rd International Conference on Universal Access in Human-Computer Interaction¹³, 22–27 July 2005, Las Vegas, Nevada, USA (UAHCI 2005, see trip report on BenToWeb special thematic session).
- Interact 2005, Rome, Italy (Workshop).
- 10th International Conference on Computers Helping People with Special Needs,¹⁴ July 2006, Linz, Austria (ICCHP 2006, see trip report on pre-conference talk on BenToWeb, three special thematic sessions on web accessibility and panel discussion).
- International Cross-Disciplinary Conference on Web Accessibility (W4A), 7-8 May 2007, Banff, Canada.
- 4th International Conference on Universal Access in Human-Computer Interaction, 22–27 July 2007, Beijing, China (UAHCI 2007, see tip report on special thematic session on WAB Cluster).

At *UAHCI 2005* the session on “Automatic and Manual Evaluation of Web Site Accessibility” discussed the diversity of limitations in applying different evaluation techniques. Since the DRC study has applied large-scale user testing in 2004, for the first time, this session has shown a number of unique results when analysing accessibility issues of museum sites, governmental sites and portal sites with many different users. In essence the set of accessibility problems is larger than those of single web pages, if complete web sites are being studied by users with special needs.

At *Interact 2005*, the accessibility of geographical applications has been discussed with experts who were interested in developing a framework around places and their consideration in user interfaces. It has become clear that accessibility of assistive devices built into mobile phones needs to be developed considerably before their evaluation can be attempted. Moreover, without better data about the environment, evaluation and benchmarking cannot be undertaken yet.

¹³ <http://hcie2005.engr.wisc.edu/>

¹⁴ <http://www.icchp.org/>

The concept of merging multiple approaches for evaluating accessibility has been discussed by many authors at *ICCHP 2006* in three sessions under the same topic "Automatic and Manual Evaluation of Web Site Accessibility". Members of BenToWeb have reported on central ideas such as TCDL, the test case editor Parsifal and the user testing and administration tool Amfortas. Other authors have have proposed a walk-through method for manual testing only. An environment for handling guidelines in a more abstract but still editable way was proposed but its coverage of more advanced topics such as dynamic content was not made clear. Instead of individual test cases, a sample but complete web site was proposed which tries to incorporate all accessibility issues. Both as an education and a benchmarking tool this idea has been considered by BenToWeb. However, on a more closer look the diversity of users and accessibility issues is not well reflected by this approach. In contrast, user agent-based evaluation proposed at *ICCHP 2006* (and *ICCHP 2004*) can take user's exact behaviour into account. However, the level of achievements has still been basic over the course of several years as only some keyboard input can be evaluated and contrasted with mouse-based input.

The issue of authoring accessible contents by taking the diversity of user needs into account has been covered for the first time at *UAHCI 2005*, but contribution by BenToWeb partners to *W4A 2007* have raised the need for accessible interaction techniques when applying web-based authoring tools in particular. Current guidelines address accessible interaction techniques in a manner which needs to be further focussed. Some requirements are considered as presentation issue, some as issues of input devices and their management in the user interface.

UAHCI 2007 took place in Beijing and visitors of this session on "Automatic and Manual Evaluation of Web Site Accessibility" had visitors from Asia and America. The presentations of the outcomes of WAB cluster projects have been discussed intensively. Especially the merge of large-scale evaluation approaches as applied in EAIO and approaches needed for interactive web-based systems created a fruitful discussion and will help to stimulate future research.

3.3 General HCI Audience

Up to now in two areas the results of BenToWeb have been presented to the general HCI audience. The following mainstream conferences have included publications reporting about results of project BenToWeb:

- 8th Conference on Natural Language Processing KONVENS, 4-7 October 2006, Konstanz, Germany

- 16th International World Wide Web Conference WWW2007, May 8-12, Banff, Canada (see trip report on tutorial on evaluating web accessibility)
- CHI Conference 2006. Conference series on human factors in computing systems organised by ACM.¹⁵

The novel approach for measurement of simplicity of language based on semantic features has been presented successfully at KONVENS. Future publications will report on the application of these findings within the context of tools for testing accessibility.

For a long time accessibility issues have been seen as a subset of usability issues. BenToWeb partners have compared the application of WCAG1.0 and general usability guidelines and found the two sets have only a joint subset, but there are unique problems related to accessibility (See Fig. 1).

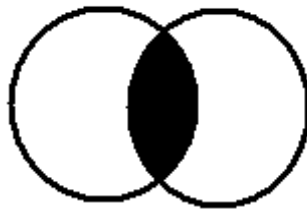


Figure 1: Relationship of accessibility and usability.

Future publications are planned for CHI 2008 and journals which include TOCHI, TACCESS and UAIS. While the results of user testing help to define the test suite for WCAG, remote user testing of test cases and its accompanying machine readable test case descriptions can be applied in many different areas in order to define requirements.

¹⁵ <http://www.acm.org/sigchi/>

4 Conclusions

The deliverable has presented a complete overview of the activities of the BenToWeb project to raise public participation and awareness. As it has been shown, both aspects were carefully planned, provided helpful feedback to the project team and reflect the planned activities of the Technical Annex.