

One World, One Web ... But Great Diversity

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ABSTRACT

The mantra “One World, One Web” has a strong appeal to Web developers. They think of it as a design philosophy based on use of internationally agreed open standards for providing universal access to networked resources and services available on the World Wide Web. But does the available evidence show that practices match this philosophy? How would such an approach work in a Web 2.0 environment in which users may be authors of content?

This paper reviews the limitations of the dependence on a single WAI model and WCAG 1.0 guidelines. It describes a holistic approach to Web accessibility that has been discussed previously. There are additional complexities of accessibility in a Web 2.0 environment, in which not only can readers be creators of Web resources in a variety of formats, but also content can be surfaced in a variety of ways, addressed in this paper. The authors describe how the holistic model, initially developed to support the development of accessible e-learning in a Web 2.0 context, is well-suited for a Web 2.0 environment.

The paper provides a case study to illustrate how this holistic approach can be applied in the development of Web resources for users with learning difficulties. The paper concludes by arguing that future work to enhance the accessibility of Web services should focus on the development and commissioning processes rather than continue the current narrow emphasis on the compliance with universal accessibility guidelines of the digital resources themselves, independently of the context of their use.

Finally, the paper refers to two new developments that support the wider focus, providing for individual user-centred accessibility with descriptions of resources and components enabling adaptation of resources to individual needs and preferences.

Categories and Subject Descriptors

H.5.2 [User Interfaces – Evaluation/methodology]; K.4.2 [Social Issues – Assistive technologies for persons with disabilities]

General Terms

Measurement, Documentation, Human Factors, Standardization, Verification.

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Keywords

Web accessibility, people with disabilities, WAI, WCAG, guidelines, methodologies, AccessforAll, metadata

1. THE WAI MODEL

The World Wide Web Consortium (W3C) has a leading role in promoting accessibility of the Web for disabled people. The W3C's Web Accessibility Initiative (WAI) has successfully raised awareness of the importance of Web accessibility and developed a model which can help organisations develop accessible Web resources. WAI promotes a model of accessibility based on the premise that full conformance with each of three components of the guidelines will achieve the stated goal of universal Web accessibility [1]. Of particular relevance to Web page authors is the Web Content Accessibility Guidelines (WCAG) [26].

In the WAI model, WCAG guidelines are coupled with accessibility guidelines for browsing and access technologies (the User Agent Accessibility Guidelines, UAAG [28] and for tools to support creation of Web content (Authoring Tools Accessibility Guidelines, ATAG [27], complemented by the activities of the Education and Outreach Working Group (EOWG) [30] and the Protocol and Formats Working Group (PFGW) [29]. This approach acknowledges that in addition to providers of Web content, developers of authoring tools and of browsers, media players and access technologies also have responsibility towards the provision of accessible Web content.

2. LIMITATIONS OF WAI'S APPROACH

2.1 Shortcomings of the WAI Model

WAI is widely acknowledged as successful in promoting the benefits of accessibility of Web resources and in ensuring that the guidelines, in particular WCAG guidelines, have a high visibility. However, the model of Web accessibility developed by WAI has been criticised for its limited scope. The model relies on conformance with each of the three sets of guidelines – WCAG for content, ATAG for the tools used to create the content, and UAAG for the tools used to access that content. Web authors have control over how well they conform with WCAG, and to a lesser extent ATAG, but they have no control over users' access facilities or practices. This leaves an awkward situation whereby users may not benefit from the accessibility features promised by a WCAG conformant Web page, due to their choice of browsing or assistive technology. Some users have no real choice as their abilities or facilities are restricted.

2.2 Shortcomings of WCAG

Shortcomings of version 1.0 of WCAG have been documented elsewhere [15]. In theory, these shortcomings should be of limited impact given that work has for several years been ongoing on WCAG 2.0, the replacement for WCAG 1.0, since 2001. WCAG

