

Migration Plan from UWEM 1.2 to UWEM 2.0

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1 Executive summary

This document presents the migration approach for the UWEM designed by the WAB Cluster, to tackle the challenges provoked by the incorporation of WCAG 2.0 in the methodology, while maintaining the testing framework for WCAG 1.0. This document responds to a formal request from the European Commission's e-Inclusion Unit and the evaluators of the cluster work.

The document is organized as follows. Section 2 presents a brief introduction. Section 3 lists the core issues identified in the migration process. And, finally, Section 4 presents the approach selected.

2 Introduction

The migration plan outlines the issues to address for migrating UWEM 1, based on WCAG 1.0, to UWEM 2.0, which is intended to give users a choice between conformance evaluation for WCAG 1.0 or WCAG 2.0.

UWEM 1 is an evaluation methodology based on WCAG 1.0. It contains tests that check conformance with checkpoints in WCAG 1.0 (priorities 1 and 2) and its tests are an essential component of the methodology. UWEM 2.0 was intended to be an evaluation methodology for WCAG 2.0, but that document is still a W3C Working Draft at the time of writing, whereas a stable recommendation would be necessary as the basis for an evaluation methodology.

UWEM 2.0 wants to be flexible enough to give users a choice between the current test section of UWEM 1 (for evaluating conformance to WCAG 1.0) a similar set of tests for WCAG 2.0. The document "Techniques for WCAG 2.0"¹ would be the most likely candidate for the latter choice because that document contains test procedures like those of UWEM 1.

However, "Techniques for WCAG 2.0" is not meant to become a W3C Recommendation and is meant to be updated after WCAG 2.0 becomes a W3C Recommendation. This means that there are two potential dependencies in UWEM 2.0: on WCAG 2.0 on the one hand (because it needs to not reach W3C Recommendation status before UWEM 2.0 can be developed) and on "Techniques for WCAG 2.0" because that document is meant to evolve even after WCAG 2.0 reaches W3C Recommendation status. It is therefore desirable to minimize the dependence of UWEM 2.0 on the state of WCAG 2.0. The approach proposed in this document describes how this dependence can be minimized.

¹ "Techniques for WCAG 2.0: Techniques and Failures for Web Content Accessibility Guidelines 2.0 – W3C Working Draft 17 May 2007" <http://www.w3.org/TR/2007/WD-WCAG20-TECHS-20070517/>

3 Issues that need to be addressed

There are very significant differences between WCAG 1.0 and WCAG 2.0 that need to be taken into account when migrating from the former to the latter:

1. WCAG 1.0 has an implicit baseline (HTML 4 or a well-supported successor) while WCAG 2.0 defines a baseline concept that allows for other or new technologies and innovation, provided that the technologies are "accessibility supported". Similarly, UWEM 1 has tests for HTML, CSS and "other technologies" that are embedded in HTML pages (JavaScript, applets), but UWEM 2.0 needs to take into account a greater diversity in technologies.
2. WCAG 2.0 has an accompanying document, "Techniques for WCAG 2.0", that contains test procedures for techniques and failures. However, "Techniques for WCAG 2.0" will not become a W3C Recommendation (to allow quicker updates that address the innovation mentioned above). If UWEM 2.0 wants to reference the test procedures in "Techniques for WCAG 2.0", it needs to address the evolution of that document.
3. There is a subtle but important difference between WCAG 1.0's "priorities", which are reflected in the UWEM 1 conformance claim, and WCAG 2.0's "levels". This needs to be addressed in UWEM 2.0's conformance claim.
4. WCAG 1.0 assumes largely unproblematic concepts of "Web site" and "Web page", while WCAG 2.0 tries to address the ambiguity of these concepts ("set of Web units" and "Web unit" in the Working Draft of 24 April 2006; "set of Web pages" and "Web page" in the Working Draft of 17 May 2007). UWEM needs to address how these concepts relate to the concepts used in UWEM 1, namely "resources list", "resource" and "HTTP resource". It is desirable that UWEM concepts are aligned with those of WCAG 2.0 and EARL 1.0.

4 The “Suitcase Approach”

4.1 Introduction

The “suitcase approach” is an informal name for the new structure of UWEM. The approach is designed to allow for WCAG 1.0 to be replaced with WCAG 2.0 with minimal changes to the rest of the document. The following steps and issues need to be covered:

1. Decoupling the tests from the rest of the document called the “UWEM Core”. References from the Core to the tests are still needed, but they must not depend on the body of tests that is plugged into it. All references to WCAG 1.0 and its “priorities” also need to be checked.
2. The Core document needs to be neutral with respect to the selected tests.
3. For UWEM 2.0, the UWEM 1's tests will be replaced with a reference to WCAG 2.0 and “Techniques for WCAG 2.0,” or to the old (improved) tests for WCAG 1.0 from UWEM 1.
4. Address missing failures in “Techniques for WCAG 2.0”: not every success criterion has a “failure”, but failures are necessary for detecting accessibility barriers in Web content (because none of the techniques are normative).
5. Would it be possible to fit other (non-WCAG) guidelines into UWEM tests, provided that they have tests with test procedures? What conditions would those guidelines need to fulfil? Such conditions must be described, which would then become an “adapter” or “interface” for other test collections.
6. How can UWEM be updated to accommodate for new technologies? In other words: how can UWEM deal with variety in baselines?
7. If flexibility is increased to cater for more technologies, what are the effects on the comparability of evaluation results?

When these steps and issues have been covered, UWEM can act as a “suitcase” for different collections of tests: UWEM 1's Tests, Techniques for WCAG 2.0, and possibly other test collections that fulfil certain criteria.

4.2 Impact of decoupling the tests' section

Decoupling the current tests' section from the "UWEM Core" requires changes, especially where the core sections refer to them. Below is a preliminary overview of changes. The titles refer to the sections in UWEM 1.2.

4.2.1 Section 1: Executive Summary

See item 1 in the above list.

4.2.2 Section 2: Introduction

Subsection 2.3 may need to be changed to address WCAG 2.0 "baselines" (April 2006) or "accessibility supported" technologies (May 2007)².

4.2.3 Section 3: Evaluation Procedures

Information concerning automatability needs to be revised, because UWEM 1's section 5 states if a test is fully automatable, but the "Techniques for WCAG 2.0" does not.

The figure in section 3 could be updated to illustrate the suitcase approach.

4.2.4 Section 4: Scope and sampling of resources

The concept "set of Web pages" in WCAG 2.0 (May 2007 Working Draft) seems very similar to the concept of "resources list" in UWEM 1. However, it is necessary to check if the concepts of "resource" and "HTTP resource" in UWEM dovetail with the concept of "Web page" in WCAG 2.0. If these concepts should conflict, references from UWEM to WCAG 2.0 and "Techniques from WCAG 2.0" may not be reliable.

Unrelated to the migration plan is the issue of vagueness in the sampling of resources. Sampling needs to be based on experience with actual data. This should also be useful for the elaboration of the manual sample size.

4.2.5 Section 5: Reporting of evaluation results

The following issues relate to reporting and aggregation:

² <http://www.w3.org/TR/2007/WD-WCAG20-20070517/#accessibility-supporteddef>

1. When tests are decoupled from the UWEM Core, aggregation and comparison of test results is only possible for the subset of tests that each evaluation has in common.
2. Should/can aggregation of test results be done separately for each individual technology? This would circumvent the problem arising from the fact that evaluations from web sites with different baselines cannot be compared in a straightforward way.
3. The Evaluation and Report Language (EARL) is independent of the collection of tests that is used in an evaluation, so there is no impact from the migration to WCAG 2.0.
4. Investigate whether it is worthwhile to have scorecards for each technique (technique or failure).

Unrelated to the migration, it may be good to add that RDF should be used for the resources list (as described in section 13).

Subsection on conformance claims needs to be revised to address the following issues:

1. WCAG 1.0 uses "priorities" whereas WCAG 2.0 uses "levels".
2. WCAG 2.0 requires explicit "baselines" whereas WCAG 1.0 and other known guidelines do not.
3. Tests in UWEM 1 state whether they are fully automatable or not, whereas Techniques for WCAG 2.0 and other known guidelines do not.
4. In conformance claims for WCAG 2.0, UWEM 2.0 must require that references to "Techniques for WCAG 2.0" are always dated references (with dated URLs such as <http://www.w3.org/TR/2006/WD-WCAG20-TECHS-20060427/> instead of <http://www.w3.org/TR/WCAG20-TECHS/>).

Subsection on tool conformance needs to be revised to address the following issues (not all related to migration):

1. Requirements with regard to scope and sampling need to be added.
2. Requirements with regard to reporting (format of reports) need to be added.
3. Address the reference to "fully automatable tests", which works for UWEM 1 but not for WCAG 2.0 or other known guidelines.

4. Consider whether a test suite should be used to verify the functionality of the implementation.

4.2.6 Section 6: Glossary

1. Check the impact of decoupling tests on the glossary and update if necessary. It might be necessary to maintain two glossaries: one for the "UWEM Core" document and one for the tests.
2. Cross-check with the glossary of WCAG 2.0 and indicate mapping.
3. Find out whether guidelines for standardisation make a distinction between a glossary and a definition list.

4.2.7 Appendix B: Template for Expert Evaluation

This template needs to become more generic, and require the evaluator to fill in the specific details, such as the set of tests used in the evaluation.