2018 Update on W3C/WAI Accessibility Conformance Testing (ACT) for WCAG

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Abstract

Coinciding with the first ICT Accessibility Testing Symposium in 2016, W3C launched work on WCAG Accessibility Conformance Testing (ACT). This new work was announced during that symposium and received positive feedback. By 2017, it was at the stage of consensus building to align many different approaches and perspectives. We held a panel with active debate among the participants, which highlighted some of the present issues. Meanwhile the group addressed the severe issues, and in the coming weeks, the group expects to enter "Candidate Recommendation" stage of the W3C development process. This means the work is ready for implementation testing and early adoption. At this year's ICT Accessibility Testing Symposium we will demonstrate the first set of internationally harmonized ACT Rules, along with implementations of these rules. We will show how these ACT Rules work in automated tools and manual methodologies, and the benefits they provide throughout the testing process.

Background

Evaluating the conformance of web content – including dynamic web and mobile applications – to the W3C/WAI Web Content Accessibility Guidelines (WCAG)[(1)]can be a non-trivial task. In particular, some WCAG Success Criteria are broad and need to be broken-down systematically for evaluation, or they require qualitative analysis within the specific context of the web content being evaluated. Thus, varying interpretations are manifested in the evaluation tools and testing methodologies, with often conflicting results. That is, the same web content might be deemed to have 'passed' accessibility requirements by one method, yet 'failed' by another. This contributes to confusion within the field. In some cases, it also leads to loss of business opportunities and legal disputes, which is not supportive to the cause of accessibility. It is thus critical to pursue a common understanding of WCAG, as well as to harmonize the different interpretations in the context of accessibility conformance testing and evaluation practices.

For many years, researchers, tool developers, and individual experts have attempted to address this issue. Several initiatives and research projects have been undertaken in Europe, the United States, and elsewhere. These resulted in a number of different testing approaches, each with their own collection of advantages and disadvantages. However, until recently these activities did not seem to get a lot of traction among different stakeholders. Yet with the growing uptake of web accessibility standards, there is an increased need for common testing approaches within the

field. In fact, some organizations requested that the W3C Web Accessibility Initiative (WAI) undertake standardization activity in this area, to provide a vendor-neutral, authoritative, and openly available interpretation of WCAG for conformance testing.

Previous Work

Work on tool-supported web accessibility evaluation started soon after publication of WCAG 1.0 in 1999. Early attempts to this included the meanwhile obsoleted "Techniques for Accessibility Evaluation and Repair Tools"[2], which flowed into the "Techniques for WCAG 2.0"[3]. In 2005 the European Commission funded three research projects to develop the "Unified Web Evaluation Methodology"[4]. This also contributed to the development of "WCAG 2.0 Test Samples"[5], to help benchmark the accuracy of web accessibility evaluation tools.

Numerous developments have also taken place outside of the W3C. This includes the test rules development of the "Open Ajax Alliance"[6], "aXe"[7], and many more, some of which may not be publicly available. Thus, a goal of this new effort is to build on and merge these activities rather than to create another separate approach. The central role of the W3C as the leading body in web accessibility standardization is critical to this purpose.

Current Work

More recently work started in the W3C Community Group "Automated WCAG Monitoring (auto-WCAG)"[8]. Community groups are pre-standardization fora with no formal standing in W3C status. Anyone can join such groups and they serve as important vehicles to collect input from the community and incubate new work. Despite its name, the work of this community group is not limited to automated testing only, but also explores semi-automated and manual testing. The work of this group, including a list of testing procedures, is publicly available[9].

Based on this initial work, representatives of W3C member organizations proposed the creation of a task force as part of the W3C Accessibility Guidelines Working Group (AGWG), which is responsible for the development and maintenance of WCAG. The purpose of this new "WCAG Accessibility Conformance Testing (ACT) Task Force"[10] is to standardize a format for testing procedures, to facilitate the development of a consistent set of testing procedures that aligns with WCAG. The development of the actual testing procedures, called ACT Rules, will continue to take place in the auto-WCAG community group, to facilitate participation and contribution by the broadest audience possible.

Presentation

This presentation will introduce the latest on WCAG Accessibility Conformance Testing (ACT):

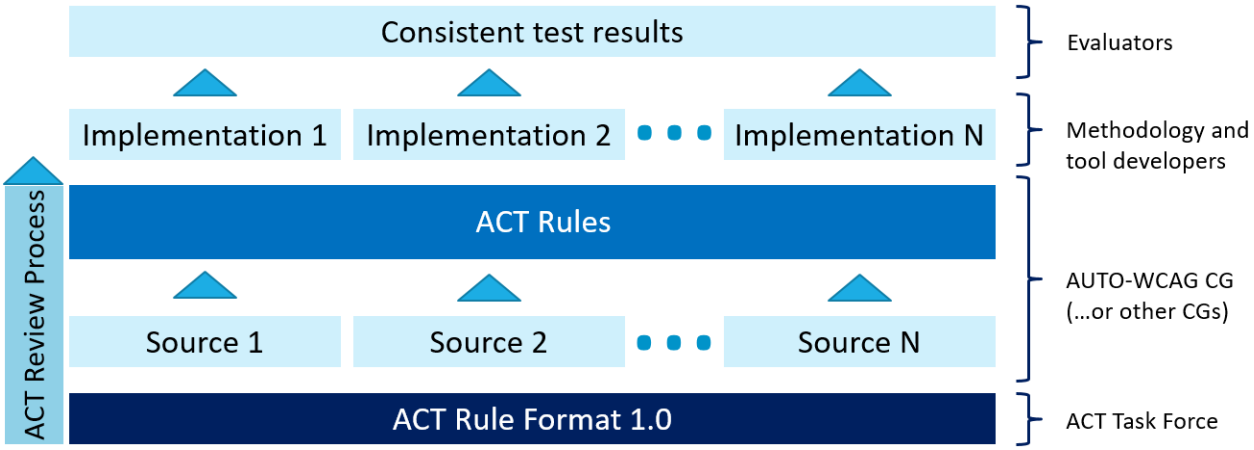

Figure 4: Components of WCAG Accessibility Conformance Testing (ACT)

Specifically, this presentation will:

1. Introduce the ACT Rule Format 1.0 specification from W3C[11]
2. Show ACT Rules developed according to this W3C standard[12]
3. Demonstrate open source implementations of the ACT Rules:
    a. Deque aXe Core[13]
    b. Siteimprove: (to be announced before the event)
    c. Difi Indicators (Norwegian government agency)[14]

Developers of automated testing tools and manual evaluation methodologies will learn how to adopt and use these internationally harmonized ACT Rules, as well as how to contribute to the current set of ACT Rules. Users of automated testing tools and manual methodologies will learn about the benefits of such internationally harmonized ACT Rules, and how to look for them and request them in the tools and methodologies that they are using.

Reference URLs

1. https://www.w3.org/WAI/intro/wcag
2. https://www.w3.org/TR/AERT
3. https://www.w3.org/TR/WCAG20-TECHS/
4. http://www.wabcluster.org/
5. https://www.w3.org/WAI/ER/tests/
6. http://www.openajax.org/
7. https://www.deque.com/products/axe/
8. https://www.w3.org/community/auto-wcag/
9. https://auto-wcag.github.io/auto-wcag/
10. https://www.w3.org/WAI/GL/task-forces/conformance-testing/
11. https://www.w3.org/TR/act-rules-format/
12. https://w3c.github.io/wcag-act-rules/
13. https://www.axe-core.org/
14. https://github.com/TilsynForUniversellUtforming/Indikatorar-for-WCAG-2.0

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