

## **A Social History of Web Accessibility in the United States: Aggregated Interview Responses from Accessibility Professionals**

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As part of the research for my PhD dissertation, *Access Ability: Policies, Practices, and Representations of Disability Online*, completed at University of Wisconsin – Madison, I conducted roughly hour-long interviews with web accessibility professionals. Some participants chose to maintain confidentiality of their identities and data, others were willing to be quoted and even identified. To accommodate the diversity of confidentiality preferences, I've assembled an aggregate retelling of the interviewees' responses to those seven questions that were asked of all participants. Responses to questions specific to any individual's experience are not included, nor are responses that would provide identifying details.

The interview population consisted of ten accessibility professionals, eight of whom were men, and two of whom were women. All but one of these interviews were conducted over the telephone; the final interview was conducted via email. I spoke with three people involved in the production of WCAG 1.0, five involved in the writing of WCAG 2.0, one involved in the original 508 standards, and four involved with TEITAC and the Refresh of Section 508. Obviously, several interview participants were active in more than one process. Although, again, there is overlap among these roles, my sample included four representatives of industry, one representative of a disability advocacy non-profit organization, two employees of the U.S. government, and three academics.

### ***I. How would you describe your career path?***

Many accessibility professionals, especially those later involved in the World Wide Web Consortium's accessibility efforts, reported starting in computer science, engineering, or a related field, then encountering an individual with a disability and becoming interested in finding technological solutions to communication barriers. These encounters were usually the first introduction to the notion of accessibility for people with disabilities. A number of these professionals then pursued graduate education, moving into academia or launching careers as consultants or authors. Others fell into the field during their graduate education due to the focus of a specific research program or advisor.

Others, however, came to accessibility through professional channels and not through formal education. Working in computing, these individuals were often focused on mathematical or usability development at the beginnings of their careers. Several interviewees began working on assistive computing technology in the 1980s or early 1990s, and several interviewees mentioned that the emergence of the graphical interface posed particular challenges, as did the World Wide Web. Others, working for corporations in the 1990s and early 2000s, shifted from general web-related careers to specific accessibility assignments such as Section 508 implementation.

Finally, a smaller number of interviewed accessibility professionals were, themselves, people with disabilities for whom personal experiences provided an introduction to this area. Often employed by non-profit advocacy organizations, these individuals transitioned into accessibility policy formation through various meetings, committees, and policies that required stakeholder input.

A small number of interviewees first began working with accessibility standards or practices in the 1990s, before Section 508 or the W3C policies were in progress. Whether through the creation of corporate standards, the collection of various standards at the University of Wisconsin – Madison’s Trace Center for Research and Development, the writing of how-to books, or through advising on state and federal policies, these interviewees had early experience, making them de facto experts in accessible web development and leading them to take prominent roles in subsequent developments.

## ***II. Who is the audience for accessibility policies like the World Wide Web Consortium’s Web Content Accessibility Guidelines (1.0, 1999; 2.0, 2008) or the standards for Section 508 of the Rehabilitation Act of 1973 (released in 2001, with revisions under review)?***

The question of audience – whether intended or actual – was a difficult one for most accessibility professionals to answer, as the policies must address multiple audiences. However, there were clear differences in how audience was discussed in the voluntary context of WCAG versus in the legal context of Section 508.

For WCAG 1.0 and 2.0, interviewees found that audience “was one of the hardest things about any of the work.” As there were many voices involved in policy creation, coming to consensus could be difficult. Furthermore, they recalled that trying to address multiple disabilities in one document sometimes resulted in unclear standards or unsatisfactory compromises. Similarly, trying to write documents that were written in “plain language” for amateurs or people with disabilities, clear enough to be “testable,” and “specific enough” for a technical audience of web developers was difficult if not impossible. In the second round of policy development, in particular, standards had “to address both audiences, the content developers and the application developers.”

At some point, those involved in WCAG 1.0 realized that it might have legal implications, and during the development of WCAG 2.0 it was known that these voluntary standards could become the basis for legal codes around the world. Thus, government policymakers were an audience for the standards.

In the Section 508 processes, audience was somewhat more defined, as procurement officials within the government were required to acquire accessible hardware and software, and needed guidance to do so. Initially, such guidance was provided by (DOUG' S GROUP). The Section 508 standards were designed to provide a baseline for making accessible decisions. The need to update these standards to something less focused on HTML was evident in the early 2000s, as technological categories became increasingly blurred. Similarly, the increasing role of technology in routine government work made accessibility for federal employees with disabilities a growing concern. Thus, one individual involved with Section 508 said the audience:

“would be users, it would be federal government, ... procurement officials who make the decisions on procurement, ... federal employees who use technology, such as people with disabilities, people who are blind, people who are deaf, people who are hard of hearing, people who have mobility impairment. This is also true for members of the public. ... Similarly, manufacturers who would be responding to a request for procurement would have to reference these standards.”

Particularly in discussions of more recent policies, interviewees expressed support for having different resources for different audiences. While some people would need to read the full policy documents, “some people will be able to get away with just knowing a few things.” Attempts to make documents at different levels of technological specificity, or to translate WCAG 2.0's POUR (perceivable, operable, understandable, robust) principles for particular audiences have generally been supported by policy professionals, though they also see the value of complex documentation.

On a related note, the policy processes themselves were conducted by mixed groups, which most interviewees found offered important balance to the process. Industry, government, and advocacy representatives would generally each have their own concerns: primarily, what was reasonable to implement? How could a standard be enforced? And what would be the end result for users with disabilities? However, nearly all interviewees described policy processes such as the Section 508 TEITAC committee as ultimately collegial, saying that “there was very good representation between industry, and advocacy, and government agencies that was on the committee.” As another interviewee recalled, “That's not to say that there weren't moments of disagreement and there weren't cases where people weren't just going to see eye to eye, but I think people came to accommodation, and they were able to compromise on the issues. So...it was a very good experience.”

### **III. How did Web 2.0 figure into the formation of policies in the 2000s?**

The rise of Web 2.0, or user-generated content, was a motivating factor behind the revision of WCAG, according to interviewees. However, it was understood as just one of many changes that would require more flexible, forward-looking standards than the HTML-focused WCAG 1.0 (1999). In particular, rich internet applications (made accessible through ARIA) that dynamically produce content and dialogue boxes were a major concern.

Additionally, Web 2.0 presented a challenge in that the web *content* guidelines were largely focused on user experience, and not on the software platforms or authoring tools used to create content (those would be covered in the W3C User Agent Accessibility Guidelines and Authoring Tool Accessibility Guidelines, which are currently in progress). Thus, as software-like functions moved into browsers and cloud services, WCAG 2.0 and the Section 508 process attempted to deal with them as best they could without overstepping their mandates.

User-generated content was also a difficult issue, as it touched on the audience concerns discussed above, and requiring users to implement accessibility on something like YouTube videos might not be practical. However, some interviewees mentioned a moral responsibility of services like YouTube or Facebook to provide users with the tools to encourage accessible user-generated content.

Generally, interviewees were satisfied that WCAG 2.0 would be able to grow with dynamic and user-created innovations in web media. One participant remarked that “But, you know, I think that the WCAG 2 standard definitely can grow, it established enough of a baseline that technology can grow around it.” Unlike the quickly out of date WCAG 1.0, there was a general sense that WCAG 2 might be easily adapted moving forward without requiring a total overhaul. In fact, another participant joked that the words “WCAG 3” were not allowed to be said in his/her presence. Others were encouraged by the fact that some people outside of policy organizations were reinterpreting standards for specific audiences, using plain language, checklists, or other easy to use formats.

Several interviewees felt that the general profile of web accessibility was on the rise, with the passage of 2010’s 21<sup>st</sup> Century Communication and Video Accessibility Act and innovations like the iPhone. However, that raised profile did not necessarily lead directly to accessible technologies, as “it’s becoming more complicated, and it’s also becoming more interactive... and so the challenge for accessibility is, we’re trying to attack a moving target that keeps running away from us as soon as we catch up.”

#### ***IV. What is usability, user-centered design, or universal design? How do these ideas relate to web accessibility?***

Attitudes towards usability, or universal- or user-centered design varied. Many interviewees pointed to how sites could be technically accessible, but still be practically unusable by people with disabilities. One interviewee, with a background in web development, described usability and accessibility in terms of a Venn diagram, with significant overlap. Additionally, many interviewees emphasized the individual nature of accessibility and usability, and often brought up user testing as a necessary check.

Some interviewees, especially those involved in standards-compliant development and policymaking, were more optimistic about the connections between accessibility and usability or universal design. One stated that accessibility “pertains to more than just disability. It could be temporary for a fully enabled person, perhaps a broken mouse or casts on both hands. Also, web accessibility should provide access to not only users of assistive technology, but older technologies.”

Usability was particularly important in that it provided a language for some interviewees to talk about efficiency and pleasure in the user experience; accessibility may make something possible, but these people found it just as important that access by people with disabilities be understood as roughly equivalent to the normative experience in terms of time, effort, and reward. One interviewee described frustration that usability seemed to be more popular and well-funded, when accessibility measures struggled, despite the alliances between the two. Another interviewee discussed usability and accessibility as being part of the same continuum, as a site that was unusable to someone was inaccessible.

Universal design, though favored by some professionals as a useful way of approaching access, was equally rejected by others, who found it to obscure the inevitable differences in access. Those who avoided universal design language were particularly likely to come from government, where enforcement required that standards be straightforward and not ideal. Thus, “508 is not going to be universal access for everyone. It’s going to be trying to provide a minimum floor for as many people as possible.” The legal components of accessibility, in general, meant that many interviewees drew distinctions between what was required for people with disabilities and the “good design practices” of usability or universal design; one commented that there are no rules against designing poor interfaces for sighted users, but there are requirements for serving blind users.

## ***V. What is the relationship between accessibility and other web standards?***

Some interviewees, especially those involved in the W3C policies, considered accessibility to have a very close relationship to other web standards (many of which are also produced by the W3C). They would argue that standards are a first step towards accessibility, as standards-compliant code was generally more accessible and more easily made accessible. One interviewee stated that:

“I just think accessible design is really good design, and it’s going to make your code better, more flexible, it’s going to make your search engine optimization results better, it’s – you get so many benefits from accessibility. But the accessibility and standards really go hand in hand.”

Similarly, one web developer described the value of web standards in terms of “developers, browser vendors, and assistive technology vendors [being] on the same page, [having] the same goals and specifications to make it happen.” Standards were seen as a starting point, from which accessible development was both easier and more likely to develop. Finally, several individuals with experience in W3C accessibility processes referred me to the W3C Authoring Tool Accessibility Guidelines (ATAG 2.0 was in Last Call as of April 2012) and User Agent Accessibility Guidelines (UAAG was released as a Working Draft in October 2012), both of which are lesser-known accessibility standards aimed at improving the accessibility of the web by producing recommendations for authoring tools (such as web development software) and user agents (such as web browsers), respectively.

Paradoxically, a number of interviewees revealed that they, or others in the field, saw web standards as valuable, but opposed the formation of legally binding accessibility standards. This viewpoint appears to have emerged from “standardistas” who felt that the web worked best through open governance and voluntary measures, and feared that legal incursion in the name of people with disabilities would result in the formation of worse standards. Certainly the tension between ideal and enforceable recommendations, seen in the differences between WCAG and Section 508 processes, is once again relevant here.

## ***VI. Define disability***

Though many interviewees offered definitions of disability, several demurred or challenged the notion of disability as particularly meaningful to accessibility. Definitions were also often hesitant, as interviewees thought their way through an answer. Sample definitions include:

“A physical or mental condition which challenges an individual in every day life.”

“A disability is something that affects your ability to participate in what everybody else can participate in.”

“I would look to the definition [in the ADA] where they talk about it as a limitation on a major life activity.”

“Some difference in ability from what is perceived to be the norm, that causes there to be some change in a person’s life.”

## **VII. Define accessibility**

Definitions of accessibility among professionals could be roughly divided into those that focused on adaptation, those focused on equity, and those that focused on compliance.

### *Adaptation:*

“The adaptation of mainstream technology so that assistive technology will work with it.”

“The ability of a product to provide comparable user experience to those with or without a disability.”

“It is the ability of a single individual to do a single task at a point in time. There is no such thing as something “being accessible” – you have to say accessible to who, doing what, and when.”

### *Equity:*

“It’s an effort related to ensuring equivalent access to information and interfaces for all users regardless of their individual abilities.”

“If you have a disability, whatever you have to use allows you to accomplish the same task as everybody else in as efficient a manner as everyone else can accomplish it.”

“Accessibility is making equivalent possibilities for a user with a disability.”

“The ability for someone who has a disability to be able to access something and perform all the functions.”

### *Compliance:*

“I would say that the topic answer to that is conformance with the standards, and with functional performance criteria.”

“The 508 language has always kind of ducked the question because we say accessible means conformant to the standards... operationally, that’s the [definition] I go with.”

“When we talk about accessibility, we typically mean that it meets an accessible standard.”