

“Accessibility 2.0: Participation, Policy, and ‘You,’” Chapter 3 from a dissertation entitled *Disability Online: Policies, Practices, and Representations of the Embodied Use of New Media*

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“Broadcast yourself!” This invitation, which appears as a tagline on video-sharing site YouTube, was just one of many such enjoinders on the web during the first decade of the twenty-first century. It highlighted the possibilities of “Web 2.0”¹, in which users with no technical expertise could online create content by filling out forms, and companies like YouTube would take care of producing the code, hosting the content on their servers, and creating a URL that could be shared. All YouTube required was that “you” use a camera or phone to record digital video, then upload that video to their servers, where it would be encoded in a Flash video player, and hosted alongside links to related videos and structures for other users to leave comments. The general second-person address suggests a unitary user that does not exist; certainly, many internet users may not have the ability to produce digital video, the know-how to utilize the form, or the interest in sharing their cats’ habits with the world. And, of course, users with disabilities may not be able to see, hear, or cognitively understand the videos available for viewing, let alone broadcast themselves. Between 2004 and 2010, as discourses and experiences of the web became increasingly driven by these kinds of user-generated content, policies and practices of accessibility had to adjust as well.

Flash, for instance, had powered countless sites for major corporations and start-ups alike during the dot-com boom of the late 1990s, but it was a disaster in terms of accessibility. It incorporated animation or video in concert with audio and dynamic interface features such as menus and buttons, and lacked structures to add captions, communicate with screenreaders, or

control the interface in alternate ways. To address the lack of accessibility in such formats, WCAG 1.0 had suggested that web developers use “W3C technologies” - essentially, HTML - whenever possible. The guidelines were widely interpreted as calling for text-only, or minimally-designed pages, and were thus largely ignored. But, however onerous this process appeared to developers, it was at least as damaging to industrial morale. Flash, Ajax, Microsoft Silverlight, ePub, and a variety of other web content technologies and formats were rapidly increasing in popularity through the late 1990s and early 2000s. Though they initially offered little in the way of accessibility options, it appeared that the companies behind such technologies would not be able to advocate for their use regardless of improved accessibility features if the standards remained static in their recommendation against these alternative formats. Developers seeking to comply with WCAG 1.0, which had been partially adapted into laws in Canada, France, and New Zealand as well as influencing Section 508, seemed likely to continue to avoid these technologies in order to achieve compliance. Thus, the motivation to innovate and to incorporate accessibility into these products was potentially reduced.

Additionally, such blanket recommendations made on the basis of technological artifacts as known in the late 1990s had the effect of potentially limiting consumer interest in these formats and their offerings. Companies that become known for their lack of accessibility, whether via accessibility standards or simply word of mouth, often struggle to gain customers even after improving their products, as many people with disabilities become accustomed to shaping their technology and web use around the products and sites that they know will be usable.² Therefore, because WCAG 1.0 and Section 508 indicated that some technologies were preferable to others for the purposes of accessibility, they also potentially dissuaded people with disabilities from seeking out and trying non-preferred technologies down the road.

Flash, in particular, underwent a major make-over in the early 2000s. No longer sought out simply for its animation capabilities as exploited in splash pages, Flash refigured itself as a multimedia container. Its scripting capabilities were dramatically increased, allowing developers to essentially write code to execute within the Flash window. This proved useful for more advanced site designs, for dynamic applications that drew on user input to change the display or behavior, and ultimately for an explosion in browser-based video games that were written entirely in Flash. Simultaneously, Flash became a favored container for video content, a status cemented when it was adopted by YouTube. As Flash's capabilities expanded, so did its accessibility. Dreamweaver MX and Flash MX, released in 2002, were the first to offer accessibility features. An accessibility menu was added, which could prompt content creators to add descriptions of video, or labels to interactive controls, in addition to testing for color contrast and other fairly simply determined accessibility features. Certainly, there was no guarantee that Flash content was always accessible; the content creators who used Flash to develop their games and play their videos had to choose accessibility. However, it was no longer impossible, and the stagnancy of guidelines written during this technology's infancy seemed like they could slow its future growth.

Thus, the challenge for accessibility advocates in the early part of the twenty-first century was to find a way to update the guidelines and standards written in the late 1990s to be less reflective of that technological moment and less focused on HTML, more adaptable to new and changing technologies, and more easily testable and verifiable. Additionally, accessibility had a new industrial and cultural framework to contend with, as the web industry and everyday users began to reformulate what the web could be following the dot-com crash. Dot-com start-ups that had flourished soon floundered, exorbitant stock prices plummeted, many designers and

developers were out of work, and the boundless enthusiasm and faith in the transformational possibilities of the Web were eroded. Following the end of the dot-com bubble, the web industry and American culture were forced to recalibrate their expectations regarding the web's uses and effects. Initially, industry responded by turning to usability and the opinions of web "standardistas," streamlining their sites in order to cater to user needs and fulfill web standards and best practices. This moment, however, was a conservative reaction to the exuberance of the previous years, and was soon followed by investment in Web 2.0. As more and more people blogged, Flickr'd, and joined Friendster, then MySpace, then Facebook and Twitter, Web 2.0 began to be seen by scholars as fostering a "participatory culture"³ of "produsage"⁴ and "collective intelligence."⁵ ushering in new cultural practices and reducing traditional hierarchies by breaking down barriers to entry and allowing individuals to express themselves, reach a broad audience, and collaborate more easily than ever before.

This chapter examines the second round of accessibility policy development in relation to discourses of Web 2.0 and participation, which permeated American culture between 2004 and 2010. Where the first round of policy development exhibited concerns about their uncertain *audience*, this round of policy work demonstrated a generalized concern with the increasingly blurred boundaries between on- and off-line content and document types, and the ever expanding notion of the *author* in a context of broader participation. Additionally, the processes themselves had matured, and there was greater awareness that W3C guidelines and legal standards would affect one another and that divergences could cause problems for the technology and web industries, as well as for those people with disabilities who would ultimately use the online media produced in accordance with these strictures. Though the policy and discursive contexts

are not identical, together they fostered a shift toward more flexible and varied implementations of accessibility in support of emerging popular online media technologies.

[excised: literature review of Web 2.0 and participatory culture]

WCAG 2.0 - Principles for Accessibility

Following the release of WCAG 1.0 in 1999 and its adaptation in the Section 508 guidelines that went into effect in 2001, the WCAG working group soon found itself revisiting the topic of web accessibility guidelines. Difficulties in implementation, the tight focus on HTML and other W3C technologies, and the rise of scripting technologies such as AJAX meant that WCAG 1.0 “was almost out of date by the time it was published.”⁶ Soon, Web 2.0 services and related applications would further blur the distinctions between web content, client applications, and desktop publishing, as well as between web developers or computer scientists and more casual authors of online content. Furthermore, seeing the guidelines taken up into legally-binding policies around the world led the working group to increasingly focus on testability, in order to make policy integration less difficult and foster harmonization of standards globally. All of these factors contributed to sometimes contentious debates about the guidelines’ direction, and the maturation of W3C processes and the groups’ emphasis on consensus meant that these debates were thoroughly explored. As a result, the WCAG 2.0 process lasted from roughly 2001 until its release as a W3C recommendation on December 11, 2008.

Concerning new technologies, including Web 2.0 sites, web-based applications, and dynamically scripted content that is written upon request, the WCAG 2.0 process was faced with

the difficulty of finding a balance between the needs of people with disabilities, the changing capabilities of new technologies, and the diversity of expertise among authors of web content. In short, there was a clear need for flexibility; reaching that point, however, was difficult. The working group included people who were creating Web 2.0 technologies, as well as assistive technology companies, disability advocates, and industry representatives from companies such as Adobe, Apple, and Google. While this diversity of perspective was clearly productive in bringing to the fore a wide range of concerns, it also meant that there were clashes in expertise and interests, which resulted in very different ideas about the working group process and about what WCAG 2.0 should and should not do.

First, an overview of W3C guideline process, which at times became controversial. The W3C process involves a high degree of openness, with email archives, multiple versions of documents, explanatory documents, and contact information made generally available to the public. The public email list, however, is not the working group. Additional content is available to W3C members; it is a membership organization, with a variety of international companies, non-profit organizations and other entities contributing. Generally, any member can ask to be represented on a working group, and their representative will be put on that group. The groups may also ask others, often participants in the public email listservs, to become “invited experts,” filling out the working group with their expertise. The chairs of working groups are chosen by the W3C; Gregg Vanderheiden was asked to stay as a chair between WCAG 1.0 and 2.0 in order to provide consistency.⁷ Those people listed as editors on final documents are similarly recruited, often because they are reliable participants and believed to have the time and funding to take on the quantity of work involved in writing the document.

From the outside, then, this open process appeared far more opaque in terms of positions of power and influence. Several invited experts on the WCAG working group during the WCAG 2.0 process felt that their official inclusion happened quite slowly, and that their earlier participation via the email list may not have been as important to the central working group as they had assumed. Joe Clark, accessibility consultant and invited expert, further felt that the selection of chairs and editors was a kind of musical chairs, as the same handful of people emerged in central positions over and over again.⁸ Additionally, the involvement of diverse stakeholders resulted in some distrust, as in the case of industry representatives whose perspectives necessarily represented the interests of their employers, and could be seen as potentially working against the group's mission in order to preserve their interests. Similarly, Clark objected to possible guidelines recommending that content be written in plain and simple language to aid people with cognitive disabilities. He “was the only professional writer on this group. I am not going to have them dictate to me how I can write. I refuse.”⁹ Clark saw this conflict in terms of creative personnel, content creators, versus a more technocratic, academic, and industrial approach that dominated the committee. This recommendation was ultimately dropped, in part in response to such criticisms, as being as aggressive as possible regarding the nature of *content* rather than its *form* resulted in a variety of pushback from writers, designers, and others.

In disagreements over the degree to which content could be controlled through guidelines, different models of web authorship were brought into relief. In the 1990s, online authorship often entailed at least a basic familiarity with HTML or other coding languages; these authors were equally considered as web developers. Over time, with what-you-see-is-what-you-get (WYSIWYG) software and automated content creation such as that seen in Web 2.0 sites in

which users simply fill out a form, the need for such knowledge decreased. These “producers”¹⁰ often were not deeply technologically literate. Therefore, where WCAG 1.0 exhibited confusion regarding its audience, it displayed a confidence that it was addressing a technologically literate group of authors/developers. This may have led to a technocratic or overly specific approach to the guidelines, with little concern for the visual, creative, and cultural forms that were emerging online. Or, as Clark says, many technocratic participants perhaps “needed to get out more” on the web itself.¹¹ In distinguishing the ways that content needed to be manipulated in the interest of accessibility, the importance of content itself could be overlooked. Writing WCAG 2.0, authors were understood to be anyone creating web content, but that group had expanded exponentially with Web 2.0 services and other simplified forms of content creation. No longer targeting only developers coding by hand, or the companies who made authoring tools (such as Macromedia/Adobe’s Dreamweaver), the new guidelines had to address the companies running online sites that allowed authoring via a form (such as blogging and social networking services), and potentially reach out to the individual authors using such authoring tools. Certainly, targeting those at the ends, creating content without specialized knowledge was the most difficult task, as they likely had little familiarity with code, let alone web standards or accessibility.

For Clark, however, the WCAG working group process and its draft documents became too objectionable to ignore. In 2005, his status as an invited expert was not renewed; Clark maintains he is the only W3C invited expert to have been fired, due to his vocal disagreement with the group. He remained on the public email list, raising objections and sending in comments on draft documents, and he further went public with his critiques. “To Hell With WCAG 2.0” was published in 2006 on *A List Apart*, a blog dedicated to expert-level, standards-compliant web development that was widely read among a highly influential, expert audience. Clark’s article

decried the process as creating a “climate of fear” and privileging corporate and non-disabled voices over those of other stakeholders. Additionally, he called the Working Draft of WCAG 2.0 “nearly impossible for a working standards-compliant developer to understand. WCAG 2 backtracks on basics of responsible web development that are well accepted by standardistas. WCAG 2 is not enough of an improvement and was not worth the wait.”¹²

The “standardistas” referenced in Clark’s article were those developers who worked to comply with existing web standards in their work. Additionally, many standardistas, such as Jeffrey Zeldman, advocated in books, articles, and online publications for the full implementation of standard web languages and syntax. Apart from accessibility standards, there are W3C standards for writing correct HTML (currently, HTML 5), CSS, Ajax, XML, and others. For Clark, and many others involved in WCAG 2.0, accessibility was understood to *build upon* existing standards; existing standards formed a baseline, many portions of which already complied with accessibility recommendations, and upon which other features could be added. Sites developed in accordance with standards were generally more robust, more flexible, easier to maintain, and were certainly examples of best practice in web development. However, standardistas were “almost an oppositional voice”¹³ within web development, as they were outnumbered by web developers who did not take the time to understand and implement standards, and who built websites with invalid code, relying upon browsers to automatically correct it. In some ways, the formation of web accessibility standards offered an opportunity to advocate for standards more broadly; accessibility was often taken up due to legal or organizational policies, whereas code validity did not have such official backing in many environments. WCAG 1.0 contained a second-level recommendation that sites use valid code, thus ensuring that sites seeking accessibility would also produce standards-compliant sites. Yet

by 2006, it had been decided that, despite rounds of debate, WCAG 2.0 would not require validity at any level. Accessibility had ceased to be a tool to promote web standards, even as other web standards incorporated practices needed for accessibility (as in the case of the HTML 4 guidelines).

The final critique in “To Hell with WCAG 2.0” was aimed at the open process of WCAG and its attempts to entirely rewrite accessibility standards, both of which could be equally understood as the strengths of the WCAG 2.0 process. Clark concluded with a call for the “WCAG Samaurai” to write their own standards for accessibility, in a closed process, wresting control over the direction of development away from a failed standard and a failed process.¹⁴ The response from the WCAG working group was not to publicly defend their work, but to incorporate Clark’s critiques as additional data points to be worked out through an open, consensus-drive process. Ultimately, “To Hell with WCAG 2.0” would strongly influence the final version of WCAG 2.0.

The WCAG working group had decided fairly early in the WCAG 2.0 process to operate via consensus, rather than through voting or similar mechanisms. The guidelines were not understood to be simply written by the editors, but by editors holding a “pen for the group.”¹⁵ In fact, the prioritization of consensus within this working group was such that in its re-chartering in 2005, under a point about voting procedures, the new charter stated that “the primary means of decision making in the WCAG is consensus.”¹⁶ Careful consensus-building both in the group and outside of it resulted in a full-consensus standard, without any of the typical formal objections laying out opposition to the final document. Vanderheiden, who was one of the co-chairs throughout WCAG 2.0, argues that the importance of consensus lies in its inclusiveness; whereas votes would always result in losing sides, “if we could work together and always try to find

common ground, then when we got to an issue later, the other way, people were much more willing to try to find common ground.”¹⁷ However, such an approach required participants to act in good faith, advocating not just for those provisions that they *wanted*, but accepting those elements that they could “live with.” For instance, in a long debate over whether WCAG 2.0 should have two or three levels of compliance, some participants wanted to have two levels, in which items at levels 1 and 2 were combined, where others wanted to combine items at levels 2 and 3. Following debate, the outcome was to have three levels, simply because neither side could live with the other’s proposed structure, but everyone could live with three levels.¹⁸ This discussion, like many of the debates already discussed, played out on email lists that were publicly available through the W3C website, resulting in a remarkably public display of disagreements and concessions.

A very similar process played out once WCAG 2.0 had been released as a Last Call Working Draft in 2006, when public comments were invited; each comment was processed individually, possible solutions to issues were discussed by the full group, and the commenters were contacted with proposed resolutions to their issues, at which point they could object and the process began again. The criticisms from “To Hell with WCAG 2.0” were taken into this process, along with other public comments. Clark’s critiques were broken down into individual problems, debated, and resolved by the group, and he was contacted with these proposed resolutions.

Clark’s eventual satisfaction with WCAG 2.0 is perhaps the strongest indicator of the value of this open, consensus-driven process. Though no representative of the W3C or WCAG working group ever responded directly to his article, by taking it into the process “they fixed everything. They fixed giant errors, they fixed small errors, they fixed terminology, they fixed everything.”¹⁹ In an email to the group, sent on the day that WCAG 2.0 became a W3C

recommendation, Clark wrote that “Without the publication of that article from a former ally you excommunicated, you would have forged right ahead with the total piece of shit you had published up to that point. But-- and I quite commend you for this-- you took the advice and fixed the standard.”²⁰ Though not a part of official processes, and despite whatever personal disagreements and in-group politics existed, the effect of Clark’s article in combination with the working group’s structures resulted in a stronger standard. Former participant Yvette Hoitink, an accessibility consultant from the Netherlands, also noted the improvement as “the current guidelines are so much easier to understand than the version of early 2006.”²¹

Despite general satisfaction with WCAG 2.0, code validity was not adopted as a guideline at any level. Reluctance to incorporate validity stemmed from knowledge of the political context for web accessibility guidelines. Unlike other standards, WCAG 1.0 had become the basis for laws in a number of countries, and thus an awareness of policy implications colored the entire WCAG 2.0 process. Bluntly put, many participants supported standards-compliant development as a best practice, but were unwilling to support it becoming a law. Particularly with the knowledge that US Section 508 would be revisited, and that other nations and international bodies were looking to revise accessibility measures, the WCAG working group was aware that there would need to be harmonization with other standards; WCAG 2.0 was not simply a best practice in web development, as HTML 5 would be upon its release, but was a preliminary step in the legal implementation of people with disabilities’ rights to access online materials. Harmonization entails the dovetailing of international standards into a unified set of recommendations, and it greatly eases compliance for international hardware and software companies as well as websites with international audiences to comply with unified standards rather than to address numerous, possibly conflicting policies. This meant that generalizable

recommendations would foster international harmonization more easily than technologically specific recommendations that may or may not be applicable in a variety of contexts. The details, they reasoned, were better determined by localized regulators who were aware of contextual concerns. In other words, “what we were trying to do was to create a ruler that says, these are measures of accessibility,”²² and the particular measurements to be used could be determined by regulators.²³ This attempt to create a ruler, rather than set exact requirements, also influenced the emphasis on testability and measurement within WCAG 2.0, which resulted in the elimination of a variety of subjective standards, including requirements involving writing in plain and simple language.

Two final factors in the polishing of WCAG 2.0 were the maturation of the W3C’s process, and the increased experience and expertise of those working on the guidelines. First, an additional stage had been added to the W3C standards process. Called Candidate Recommendation, this stage was placed between Last Call Working Draft and Proposed Recommendation. In this stage, working groups are asked to provide examples of implementation, so that any potential problems can be found and addressed before the finalization of the standard. This stage, had it existed in 1999, would likely have stalled the release of WCAG 1.0, as difficulties in implementation would have been seen and addressed. It similarly slowed WCAG 2.0 slightly, as it entered Candidate Recommendation on April 30, 2008, moving to Proposed Recommendation on November 3, 2008, and becoming a W3C Recommendation on December 11, 2008. However, it allowed the group to wrestle with the more difficult provisions and make final decisions based on experiences of implementation, rather than on theories of best practice. Secondly, with experience came dissatisfaction with the technological specificity of WCAG 1.0 and its rough organization. In 2003, following a

suggestion from Gregg Vanderheiden and Ben Caldwell at the CSUN conference, the working group shifted toward a principle-based structure. Having gone through WCAG 1.0 to find commonalities in recommendations, Vanderheiden and Caldwell found that “Everybody needs to be able to see the content, everybody needs to be able to operate it, everybody needs to be able to understand it. This is not a disability thing.”²⁴ However, people with disabilities do need to use assistive technology to do such things, and thus needed content to be robust, or flexible, enough to be used with atypical hardware and software. Taken together, this became a set of four principles—Perceivable, Operable, Understandable, and Robust—that guided the organization and phrasing of the guidelines published in WCAG 2.0.

The combination of principle-based guidelines and an implementation stage, as well as the tireless building of consensus, resulted in much more comprehensible and flexible guidelines than those seen in WCAG 1.0. As an example, the guideline concerning alternate text retained its meaning but was vastly simplified in form. Alternate text, or alt text, is simply a textual description of an image that convey the image’s content. For instance, alt text of a lolcat might say something like “cat looking really surprised and unhappy, and the text says ‘DO NOT WANT!’”²⁵ In WCAG 1.0, alternate text was covered in Checkpoint 1.1 under Guideline 1; each guideline included a set of checkpoints explaining its application, and checkpoints were prioritized as Priority 1, 2, and 3.²⁶ Checkpoint 1.1 read, in part, “Provide a text equivalent for every non-text element,” and was followed by specific examples of implementation, including “Use "alt" for the IMG, INPUT, and APPLETT elements, or provide a text equivalent in the content of the OBJECT and APPLETT elements.”²⁷ Alternate text in WCAG 2.0 is placed under Principle 1, which requires that “information and user interface components must be presentable to users in ways they can perceive.”²⁸ The difference between a guideline and a principle is made

clear here, as WCAG 1.0 emphasized the desired *action* and WCAG 2.0 emphasizes the desired *result*. In WCAG 2.0, the principles are followed by more specific guidelines, then by definitions and descriptions, and linked to the “Understanding” and “How to Meet” documents that further explain how to achieve the desired results. Alternate text is covered by Guideline 1.1 here, which suggests that developers “Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.”²⁹ Though longer than its WCAG 1.0 counterpart, this statement is quite a bit clearer, explaining the needs that motivate the guideline and offering options outside of the main document to gather more information. This separation of goals from the specific ways in which they should be met resulted in a more flexible set of guidelines, which could evolve with new technologies and changing capabilities and uses of the web. It may also have had the effect of making the document more understandable by a wider audience, including policy makers and advocates, which experience had shown would be reading and acting upon WCAG guidelines.

Throughout this short history of WCAG 2.0, participatory culture and Web 2.0 are largely unspoken, yet the underlying values seem to align well. The WCAG 2.0 process involved extensive collaboration in its openness and consensus-building, and the very goal of fostering access for new audiences recalls the breaking down of barriers to content creation discussed by scholars in participatory culture or collective intelligence. Even the four principles of WCAG 2.0 (POUR) speak to the web industry’s interest in building Web 2.0 sites that can be understood and utilized by diverse users in diverse circumstances. This alignment in ontological principles has not, in itself, been sufficient to result in the widespread implementation of web accessibility, but web accessibility is improving and becoming more high-profile than it was ten or fifteen years

ago.³⁰ More importantly, these similarities and the principle-based guidelines have led to a flexibility in interpretation and implementation that may result in further increases in the future.

[excised: Section 508 historical analysis]

Flexibility in Implementation and Interpretation

The second round of accessibility policy-making did not neatly overlap with industrial notions of Web 2.0, academic theories of participatory culture, or the discourse of participation more broadly; yet, there was sympathy between these contemporaneous approaches to the web. Through attention to convergence, the implementation of collective intelligence in open processes, and the emphasis on flexibility for the future, this wave of accessibility policy demonstrated values in keeping with popular discourses and fostered its own remixing, revising, and expansion at multiple levels.

First, the processes of policy development demonstrated many ideals of participatory culture and collective intelligence, though it did not use these terms. The openness of the W3C process reflects the value of openness on the web at large, seen in open source software, open APIs, and discussions in favor of net neutrality. Even the 508 Refresh incorporates a degree of openness through public meetings and requests for comments; the internet has increased the openness of the latter process by allowing comments to be made and viewed online. The processes also valued a diversity of perspectives, and encouraged all involved to actively participate (upon penalty of exclusion, in some cases). Finally, they aimed for consensus, resulting in lengthy discussions and compromise positions. This may have fostered a kind of collective intelligence, as individuals' expertise and opinions were blended into a final (best?) set of recommendations. TEITAC even used a wiki, that classic example of collective intelligence, to organize its recommendations and track changes to language and structure over time.

A second common factor was an interest in convergence that cut across these fields. Convergence, in academic discourse, has been variously used to refer to the coming together of different forms of media technology and hardware, as well as to “the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences.”³¹ All of these processes quickened during the early twenty-first century. Devices such as the iPhone brought together the functions and cultures of the telephone and internet,³² converging hardware technology. Additionally, the coming together of different forms of data and the rise of the social web fostered a convergence in the sites and services provided by web companies. This flexibility of content was furthered by open APIs, which increasingly allowed developers to incorporate functions provided by other services, as in the case of Google Maps, which has been seemingly endlessly remixed to display apartment rentals, registered sex offenders, and jogging routes. The concern with convergence as it applied to accessibility was particularly evident in the TEITAC report, which stated that it had reorganized the standards in order to “address the convergence of features and functionality” in information and communication technology.³³ Though the web was undoubtedly changing during the late 1990s, as well, the increased awareness of and responsiveness to such changes had the important effect of shaping less technologically specific accessibility standards.

The clearest effect of attention to convergence was the production of guidelines and standards that were intentionally flexible and forward-thinking, and which as a result were more open to reinterpretation for and by a variety of audiences. The flexibility stems from the deprecation of WCAG 1.0’s technologically specific directives, in favor of WCAG 2.0 guidelines that emphasize outcomes. Specific guidance is provided in the How to Meet and Techniques documents, which are more frequently changed than the guidelines as a whole. A

similar change seems to be on the horizon for 508 standards, particularly given their attempts to harmonize with WCAG 2.0.

Such goal-oriented guidelines offer the possibility of being met in a variety of ways, creating a flexibility in implementation. Whether a major software corporation, an independent developer, or a producer, the process of creating accessible web content can now easily take many forms. This flexibility in accessibility reflects the very modularity and variability of digital media, as emphasized by Lev Manovich. Web pages are comprised of many combined elements—code, script, images, diverse file types—that add up to a larger whole without losing their individual characteristics.³⁴ They can therefore be recombined, resulting in a variability that allows for a new media object to “exist in different, potentially infinite versions.”³⁵ Such variability extends to accessibility, in which particular features or assistive technologies can create new variations of content to meet users’ needs.³⁶ By extending modularity and variability to the processes of encoding accessible web media, accessibility practices are brought further inline with the theoretical and cultural uses of such media, potentially fostering new interpretations and implementations. Such flexibility also allows for a kind of “future-resistant” accessibility policy,³⁷ in which techniques may change, but the goals remain the same. The development of WAI-ARIA, a means of making Ajax content accessible by conveying role and state information to assistive technology, can be seen as proof of this future-resistance. WCAG 2.0 guidelines can be met through use of WAI-ARIA, despite the fact that WAI-ARIA had not been finalized at the time of WCAG 2.0’s release. A new technology was thus seamlessly incorporated into techniques, without need for any change in the guidelines themselves.

Perhaps these more recent accessibility policies could even be remixed, put into new contexts and merged with other content to reach new audiences and foster new implementations.

Remixability was one of many features highlighted as a characteristic of Web 2.0,³⁸ and it is evident in any number of video mashups, API collisions, and blog posts. Remixing is the epitome of what Lawrence Lessig has called read/write creativity, in which quotations from “texts” of various media forms are brought together to express a new idea.³⁹ Examples of the remixing of web accessibility standards include Glenda Watson Hyatt’s work on BlogAccessibility.com, the Dreamwidth communities “Access Fandom,” and “You Fail at Accessibility,” and the Tumblr site “Fuck Yeah Accessibility,” each of which conveys the *content* of WCAG 2.0 in technological and cultural *forms* that may make it more relevant, palatable, or usable.

Glenda Watson Hyatt, a Canadian accessibility consultant living with cerebral palsy, has been blogging for several years at Do It Myself Blog. In 2010, she began to advocate for blog accessibility in particular on her newer blog, BlogAccessibility.com. She posted slides from talks on blog accessibility, which later developed into an e-book, titled “How POUR is Your Blog?” and a six-part online course, Blog Accessibility Mastermind, as well as regular blog posts on accessibility. These tools speak to bloggers in terms of interest in monetizing their blogs, emphasizing the untapped audience of people with disabilities. Importantly, she also understands this work as collaborative, as she is “combining her web accessibility expertise with her passion for blogging and her first-hand experience living with a disability to work with bloggers to create an accessible blogosphere.”⁴⁰ This means that her interpretations of WCAG 2.0’s POUR principles speak to the needs, interests, and knowledge levels of bloggers; complicated definitions, technical details, and similar hurdles are removed. Instead, Hyatt publishes simplified, utilitarian content that can be implemented quickly. For instance, she offers a checklist for blog posts. It asks which features a post includes (text, hyperlinks, headings,

images, video, etc.) and then provides short instructions for each item, working more as a reminder than as detailed instructions. To return to the example of alt text, under “Images,” the checklist simply reminds bloggers to “Add an alternative text (the null or empty alt text may be appropriate)” and to “Add a title (optional).”⁴¹ The simplification of accessibility, and its targeting to bloggers through a variety of tools, is a powerful reinterpretation of WCAG 2.0, but it is hardly the only one.

Dreamwidth, an online journaling platform, is similar to LiveJournal in its use for personal journaling, community building, and media fandoms. Additionally, Dreamwidth has a reputation for being unusually accessible, as well as for being committed to diversity, as seen in its Diversity Statement, which includes the statement “We think accessibility for people with disabilities is a priority, not an afterthought.”⁴² Two Dreamwidth communities that reflect the site’s commitment to accessibility, albeit in very different ways, are Access Fandom and You Fail at Accessibility. The former attempts to shape fan communities in order to make them more accessible. This includes discussion of a range of accessibility practices, from text alternatives for images and comics, to the posting of fanfic with disability themes, to attempts to increase the accessibility of fan conventions, as well as discussion of trigger warnings.⁴³ Trigger warnings, or notifications that a given piece of content might produce psychological triggers in readers with particular experiences of violence or trauma, or in people with particular mental conditions, are increasingly common in fan, feminist, and progressive online communities. They are considered a courtesy, if not a necessity, in making online spaces safe for a variety of people. It is therefore unsurprising that although trigger warnings are not a feature of accessibility policies such as Section 508 or WCAG, this community considers them crucial to creating fully accessible online communities. The values, interests, and culture of the community shape the meaning of

accessibility, combining official definitions with their own needs. You Fail at Accessibility draws on a different subset of online culture, using the “you fail at” rhetoric that is broadly popular in gaming, social bookmarking, and other communities. It describes its mission as “Chronicling accessibility failures, one asshat at a time,” again drawing on a kind of vulgar, yet playful, form of online language of critique. This community includes all kinds of accessibility fail, including online and offline examples. One online example came from a poster who highlighted that YouTube’s automatic captions were not “good enough,” finding 15 errors in a 25-second clip of *The Cosby Show*.⁴⁴ This is a fairly straightforward complaint about online accessibility, but it is one aimed at quality, not simply compliance; the video *has* captions, they are simply too terrible to be real text alternatives. You Fail at Accessibility offers a space in which to critique not just the absence of accessibility, but its poor implementations, amid a supportive community posting their own critiques.

Finally, Fuck Yeah Accessibility, which describes itself as “all things accessibility-related and anti-ableism,” combines the types of reinterpretation seen on Blog Accessibility, Access Fandom, and You Fail at Accessibility. This Tumblr provides practical advice for Tumblr users/authors, targeted to their needs and skill levels. It also draws upon the culture of Tumblr, as seen in the “Fuck Yeah” title, which proceeds everything from “candy” to “Fight Club” and more in countless permutations of Tumblr blogs. Finally, like You Fail at Accessibility, this Tumblr engages in critique of the Tumblr service’s poorly implemented accessibility features. These threads are all pulled together in one typical post, “Tumblr Accessibility Annoyance #1,” which describes how the only way to provide any textual description of an image uploaded through Tumblr’s “image” option is to use a caption, which in turn is used as both a caption and alt text. This means that screenreaders would read the same content twice, an issue which the

poster points to as something that would have become clear with any user testing. Beyond critiquing Tumblr, the poster also states that “I think I’m going to start uploading all my images (like, GPOYs and such) in text posts until tumblr gets their shit together.”⁴⁵ Here, she offers a simple solution - use the text uploader to include images in a way that the HTML can be more thoroughly controlled - and again references a fairly Tumblr-specific cultural practice through mention of “GPOYs,” or “gratuitous pictures of yourself,” which are often seen on personal Tumblrs to express mood, share fashion, and so on. This Tumblr evidences very little explicit connection to 508 standards or WCAG 2.0, but the principles are being drawn out and applied well within this specific context.

Remixes such as those seen above are possible because of the flexibility of WCAG 2.0 and its alignment with the broader cultural values of the participation discourse. This has allowed what remains a dense, technological document to be made more accessible - more usable - for a variety of audiences. Bruce Bailey, formerly of the Department of Education, now at the Access Board, and an invited expert on the WCAG working group, states that he has “been very pleased to see people... trying to repurpose it for other audiences, trying to put it into checklists, or formats [for] people who have to evaluate accessibility versus write author code.”⁴⁶ Rather than attempting to be all things to all audiences, the flexibility of recent standards has enabled them to become multiple things that address multiple audiences, potentially broadening the appeal and knowledge of accessibility more generally by adapting it to a variety of cultural contexts.

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- ¹ Tim O'Reilly, "What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software," *O'Reilly Media*, September 30, 2005, <http://oreilly.com/web2/archive/what-is-web-20.html>.
- ² Kerry Dobransky and Eszter Hargittai, "The disability divide in internet access and use," *Information, Communication & Society* 9, no. 3 (2006): 313-334, <http://search.ebscohost.com/login.aspx?direct=true&db=ufh&AN=22005580&site=ehost-live>; Stephen H. Kaye, *Computer and Internet Use Among People with Disabilities* (Disability Statistics Center, Institute for Health and Aging, University of California - San Francisco, 2000), http://dsc.ucsf.edu/view_pdf.php?pdf_id=23.
- ³ Henry Jenkins et al., *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, Building the Field of Digital Media and Learning (The John D. and Catherine T. MacArthur Foundation, 2005), <http://www.newmedialiteracies.org/files/working/NMLWhitePaper.pdf>.
- ⁴ Axel Bruns, *Blogs, Wikipedia, Second Life, and Beyond: From Production and Prodsusage* (New York, NY: Peter Lang, 2008).
- ⁵ Pierre Lévy, *Collective Intelligence: Mankind's Emerging World in Cyberspace* (Basic Books, 1999).
- ⁶ Wendy Chisholm, "Personal Interview.," Telephone, May 17, 2011.
- ⁷ Gregg Vanderheiden, "Personal Interview.," Telephone, May 14, 2011.
- ⁸ Joe Clark, "Personal Interview.," Telephone, April 18, 2011.
- ⁹ Ibid.
- ¹⁰ Bruns, *Blogs, Wikipedia, Second Life, and Beyond: From Production and Prodsusage*.
- ¹¹ Clark, "Personal Interview."
- ¹² Joe Clark, "To Hell with WCAG 2.0," *A List Apart*, May 23, 2006, <http://www.alistapart.com/articles/tohellwithwcag2>.
- ¹³ Joe Clark, "Personal Interview."
- ¹⁴ Clark, "To Hell with WCAG 2.0."
- ¹⁵ Vanderheiden, "Personal Interview."
- ¹⁶ "Web Content Accessibility Guidelines Working Group (WCAG WG) Charter," *World Wide Web Consortium: Web Accessibility Initiative*, July 7, 2010, <http://www.w3.org/2004/04/wcag-charter>.
- ¹⁷ Vanderheiden, "Personal Interview."
- ¹⁸ Ibid.
- ¹⁹ Clark, "Personal Interview."
- ²⁰ Joe Clark, "Without me, you're nothing - almost", December 11, 2008, <http://lists.w3.org/Archives/Public/w3c-wai-gl/2008OctDec/0059.html>.
- ²¹ Michael Cooper, "[Fwd: Congratz on WCAG2!]", December 12, 2008, <http://lists.w3.org/Archives/Public/w3c-wai-gl/2008OctDec/0061.html>.
- ²² Gregg Vanderheiden, "Personal Interview."
- ²³ This, of course, recalls the persistent differences between voluntary guidelines and legal

standards, and the near impossibility of writing for both audiences discussed in Chapter 1.

²⁴ Vanderheiden, "Personal Interview."

²⁵ Wendy Chisholm and Matt May, *Universal Design for Web Applications: Web Applications That Reach Everyone*, 1st ed. (O'Reilly Media, 2008).

²⁶ Mark Urban and Michael R. Burks, "Introduction to WCAG 2.0," in *Web Accessibility: Web Standards and Regulatory Compliance*, ed. Jim Thatcher et al., 1st ed. (Apress, 2006), 461.

²⁷ Wendy Chisholm, Gregg Vanderheiden, and Ian Jacobs, "Web content accessibility guidelines 1.0," *Interactions* 8, no. 4 (July 2001): 35-54.

²⁸ Ben Caldwell, Michael Cooper, Loretta Guarino Reid, et al., "Web Content Accessibility Guidelines (WCAG) 2.0," *World Wide Web Consortium*, December 11, 2008, <http://www.reelseo.com/video-accessibility-closed-captions-video-seo/>.

²⁹ Ibid.

³⁰ Curtis Chong, "Personal Interview.," Telephone, May 6, 2011.

³¹ Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006), 2.

³² Gerard Goggin, *Cell Phone Culture: Mobile Technology in Everyday Life*, New edition. (Routledge, 2006).

³³ Lev Manovich, *The Language of New Media* (Cambridge, Mass: MIT Press, 2001), 30.

³⁴ Ibid., 36.

³⁵ Elizabeth Ellcessor, "BRIDGING DISABILITY DIVIDES.," *Information, Communication & Society* 13, no. 3 (April 2010): 304,

<http://ezproxy.library.wisc.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ufh&AN=49261354&loginpage=Login.asp&site=ehost-live>.

³⁶ Gregg Vanderheiden, "Personal Interview."

³⁷ Lawrence Lessig, *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (Penguin Press HC, The, 2008), 69.

³⁸ O'Reilly, "What Is Web 2.0: Design Patterns and Business Models for the Next Generation of Software."

³⁹ Lessig, *Remix*, 69.

⁴⁰ Glenda Watson Hyatt, "About," *Blog Accessibility*, n.d., Blogaccessibility.com/about.

⁴¹ Glenda Watson Hyatt, "Accessibility Checklist for Blog Posts," *Blog Accessibility*, November 12, 2010, <http://blogaccessibility.com/accessibility-checklist-for-blog-posts/>.

⁴² "Diversity Statement," *Dreamwidth Studios*, n.d., <http://www.dreamwidth.org/legal/diversity>.

⁴³ "Access Fandom Profile," *Access Fandom*, n.d., <http://access-fandom.dreamwidth.org/profile>.

⁴⁴ jackandahat, "YouTube, bless them.," *You Fail at Accessibility*, May 7, 2011, <http://accessibility-fail.dreamwidth.org/42206.html>.

⁴⁵ paristhroughthewindow, "Tumblr Accessibility Annoyance #1," *Fuck Yeah, Accessibility*, May 10, 2011,

<http://fuckyeahaccessibility.tumblr.com/post/5361428092/tumblr-accessibility-annoyance-1>.

⁴⁶ Bruce Bailey, "Personal Interview.," Telephone, May 13, 2011.