

Beyond Compliance: Bringing the Human Aspect to Accessibility Evaluation

Submission for Usability Professionals' Association 2002 Conference

Requested Time: 90 minutes

Format: Presentation

Topic Category: Issues and strategies for experienced usability professionals

Project Focus: Web

Audience: Intermediate/Advanced

Keywords: Combining Methods, Accessibility, Perception of quality/user satisfaction

Presentation Style: Two presenters, lecture and discussion format

Learning Objectives

- Understand the experiential aspects of design relating to users with disabilities
- Gain exposure to the primary standards and guidelines for accessibility
- Learn the differences between accessibility compliance and an accessible experience
- Explore methods of adapting standard usability techniques to effectively address accessibility evaluation
- Learn how to combine methodologies to accommodate accessibility evaluation goals

Abstract

Accessibility's emergence has left many usability practitioners feeling as if accessibility compliance is merely a checklist. This is not so. Methodologies in the experienced practitioner's toolbox can be easily adapted to bring the human aspect back to accessibility evaluation. Through shared experiences and case study examples, find how standard techniques can be modified to provide superior accessibility evaluations.

Description

Accessibility, in truth, is an extension of usability – ensuring that people can complete tasks effectively and efficiently according to their needs and environment. The specific needs of users with disabilities may differ, but the underlying philosophies and principles remain unchanged.

Many organizations, both public and private, realize this as well. In most companies we work with, accessibility initiatives are owned by the usability or human factors team, although they may be initiated or sponsored at an executive level. Unfortunately, it is too common a case that accessibility is not treated as a human design issues, but focuses on compliance to various sets of standards and guidelines. By incorporating a foundational knowledge of user-centered design techniques, experienced usability practitioners are uniquely positioned to assist organizations in taking the next steps in accessible design.

Usability specialists possess a set of skills that can be broadly and effectively applied to accessibility. After working on many different usability and accessibility projects over the past few years, we have observed some unsettling patterns:

A tendency from organizations to treat accessibility as a compliance rather than people issue. This is understandable, given the focus of Section 508. In short, "If we can check off every paragraph of Section 508, we're accessible." Technically, this may be true, but what does it mean for people who are actually using the site to complete tasks – true usability.

A tendency from developers to be interested only in what needs to be programmed. "Give me 5 programming rules I need to follow," is a common battle-cry. How can we as usability practitioners combat this?

A tendency of usability practitioners to see accessibility as a completely different field, with a steep learning curve and too much investment required to become proficient.

The bottom line is that many organizations are trying to develop accessibility solutions without actually interacting with the target user base – a pervasive issue that proven user-centered design techniques can mitigate.

Returning to basic concepts of user-centered design, such as conceptual modeling and task-based evaluation, can help overcome some of these issues. The conceptual model for people using assistive technologies may be much more linear – an entire page is not scanned and processed at once for key elements.

Fortunately, experienced usability practitioners have seen this before. In the earlier world of user interface design standards (pre-Web, in the GUI world, such as Windows), it was often necessary to combat a mentality that wanted to treat usability as “checking off” a list of standards. Of course, a design can meet standards and be unusable. A design can be visually appealing and be unusable. The parallel in the accessibility realm is that a design can comply with the W3C Web Content Accessibility Guidelines (WCAG) or Section 508 and be unusable. A page can work with a screen reader or speaking browser and be unusable. The solution is often the same: taking a big-picture look at the user’s mental model, their view of the world.

We have identified three levels of accessibility evaluation. Experienced usability professionals are uniquely positioned to help organizations reach the third level.

Tool-based testing – using accessibility tools such as CAST Bobby, W3C HTML and CSS validators, WAVE, software-specific accessibility plug-ins like those in Macromedia Dreamweaver and Adobe Acrobat. The advantages of these tools are that they can catch particular coding errors, and find problems quickly. The drawback is that they cannot handle the sometimes grey areas of interpreting accessibility principles.

Checklist-style testing – reviewing and evaluating pages against an established set of standards and guidelines, such as Section 508 or WCAG. These resources are excellent for ensuring that pages are compatible with assistive technologies and that the technological needs of people with disabilities are being considered. Unfortunately, many accessibility standards are vague, and practitioners are too inexperienced to interpret and apply them confidently.

Accessibility-oriented user experience evaluation – Incorporating user-centered design techniques with an accessibility “twist”. These evaluations typically include points 1 and 2, but turn to the human and experiential aspects of users with disabilities. In many cases, issues that are Priority 3 (lowest priority) in WCAG, present the greatest issues for users of assistive technology. For example, the inability to “skip over” navigation bars can present a significant obstacle for users of assistive technology.

In the first few years of accessibility consulting, our primary focus was on the second level. Our first experience in moving to the third level came in a project evaluating the VISA 2002 Paralympics web site, which combined checklist-style accessibility review with modified field study and heuristic evaluation approaches. We anticipate that this presentation will help usability practitioners think about how they can apply their skills to move their organization’s accessibility maturity to level 3, hopefully generating more examples of level 3 accessibility work for others to learn from.

Incorporating a user experience with actual target users was natural for us, as we often recommend combining heuristic evaluation with a usability study, even a small one. By combining techniques, the two can balance each other in areas where one is weak, and can work in collaboration for particularly key recommendations. In the case of the VISA Paralympics web site accessibility evaluation, combining accessibility reviews and field evaluations of users with disabilities seemed analogous. In the end the combination produced the same benefits as in more standard usability evaluations.

In moving to level 3, understanding what skills and techniques may be effectively applied to accessibility evaluation is critical. What skills do usability professionals already possess?

- Field studies/contextual inquiry

- Usability testing
- Conceptual modeling
- Walkthrough techniques

What do experienced usability specialists need to add to their toolkits to be effective in accessibility evaluations?

- Build on user-centered evaluation techniques. Learn how to modify for accessibility situations while keeping the technique integrity intact.
- Learn specific issues associated with working with people with disabilities
- Understand the nature of the Web “experience” based upon individual sensory modalities
- Understand the interaction with different types of assistive technologies
- Learn technical aspects of accessibility

Note: This is optional. From our experience with VISA in the field evaluations, technical knowledge was not necessary to conduct the study; however, we usually incorporate technical recommendations into our checklist reviews (i.e. How to fix a coding issue).

Lessons Learned

As experienced usability professionals who are increasingly asked to provide accessibility-inclusive solutions, we need to:

- Vigorously step up efforts to include existing usability evaluation techniques, such as usability testing and field studies, in accessibility evaluations.
- Become unafraid to leverage our existing knowledge in usability and user-centered design and apply it to accessibility issues.
- Create true usability for people with disabilities, promoting a collection of data about the user experience with assistive technologies – not just the “checklist” approach.
- Bring ourselves and our client organizations to an understanding of the issues beyond compliance – the human and experiential aspects of accessibility.

Proposed Schedule

Topic	Time (minutes)	Elapsed (minutes)
Introduction	5	5
Issues with accessibility evaluation	15	20
Why incorporate usability techniques to humanize accessibility	10	30
Levels of accessibility evaluation	10	40
How to combine and modify techniques	15	55
VISA case study examples	10	65
Lessons learned	5	70
Q&A	20	90

