

Using People with Disabilities to perform Accessibility and Section 508 Compliance Testing is a Best Practice

By Debra Ruh

What are “Best Practices” when it comes to conducting accessibility tests? I believe the gold standard of accessibility testing is to use People with Disabilities. Does that mean I should ask a friend, who is blind, to test my software application? Not necessarily. Should they not be fully knowledgeable in the use of screen-reading technology or happen to be using an older version of screen-reading technology, it could result in a faulty evaluation. That is certainly not a best practice. In addition, my friend may not be familiar with accessibility standards such as Section 508 and 255, or they may not be a proficient PC user. It simply does not make good business sense to have “just anyone” who happens to be a person with a disability test applications for accessibility.

Should I purchase screen reading technology and test the product myself? No. Assistive technology (AT) is sophisticated and takes time to master. I once had problems taking a video-conference class. An associate of mine, who happened to be a screen-reader user, was having the same problem. We contacted technical support. The support person was baffled that my associate did not have a monitor! One should not invest money in AT unless they are prepared to exert the time and effort needed to become proficient using the technology.

Adhering to sets of standards and testing methodologies is critical to assuring successful accessibility testing outcomes. We recently tested an online course for a government agency. They told us that the course had failed a Section 508 compliance test. We asked to see a copy of the test results. No one could provide one to us. All they were told was that the course failed the test. This led us to do a quick analysis. We created a test plan and several test cases. Two of our professional accessibility evaluators did the work. One tester was blind and used JAWS screen-reading technology. The other individual has both cognitive and upper body mobility disabilities. He used Dragon Naturally Speaking, a speech recognition program, and a track ball to test the product.

Each analyst followed the test case carefully as they reviewed each section of the course. The results were compiled into a report. The course passed! While our evaluators did identify several usability issues, they were successful in taking the course. We presented our results to the agency. As I am sure you can imagine, our positive results caused confusion. Once again, we asked our customer for the report generated by the previous testers. We wanted to know how the testing had been conducted and what AT had been used to test the course. Was there a test plan? None of that information was provided to our customer. All they were told was that their course failed.

Is it necessary to use a person with disabilities to test every phase of production? Should they test every page of a website, every line of code in a software application? No, I am not saying that. Accessibility or Section 508 Compliance* should be part of the development process. It should be part of the process just like Usability should be part of a solid development plan. When you create a software application and then test it for Accessibility and Section 508 Compliance, it is going to be a lot more expensive to correct the problems. Include Accessibility and/or Section 508 Compliance into the entire process and test at all milestones. There are many ways to test your product at milestones and not all of these must include people with disabilities. The developers should know how to test their product for accessibility and compliance.

There are many Accessibility and Section 508 Compliance testing tools in the market place, and if you understand how to use these tools and have the most current version of these tools, they can provide good feedback during the development process. However, these tools can also give you false positives and false negatives, so you have to really understand the benefits and constraints of these tools. To be sure, test with a person that has a disability that knows the standards, knows Assistive Technology and understands the technology of the product you are developing.

*Note there are other compliance laws that speak to Accessibility and making Web and IT Accessible for People with Disabilities, but for this article, I am going to focus on Section 508 Compliance and the broader term, Accessibility.

The Gold, Silver and Bronze Standards of Accessibility Testing Standards

Perform solid testing at each milestone and follow the Gold Standards of Testing when ever possible. In our book, if you can't measure it, you can't manage it. By measuring accessibility and Section 508 Compliance, you can know that your investment is working; you can tell what areas need more work, and you can improve the process. Create Accessibility and Section 508 Compliance metrics that make sense to your business and follow the standards.

In designing a standardized test environment, you should organize the computer hardware, software, and test platform configurations and test activities that you set up, into three categories: Gold, Silver, and Bronze. Keep in mind that some projects may include all three testing standards.

Gold Standard – Guaranteed to Work
Silver Standard – Should Work
Bronze Standard – May Work

The Gold Category

The Gold category is the Best Practice of Accessibility Testing. The Gold category includes hardware, web and/or software products that will be thoroughly tested and “guaranteed to work.” In this category, the Accessibility Testing is part of the process. This category always includes solid testing by skilled testers with disabilities using assistive technology as part of their test platform. Test Cases will be created that will include testers with all applicable disabilities. Different versions of Assistive Technology (AT) will be added to the Test Cases. Accessibility and Section 508 Compliance tools may be used during the process to help assure Accessibility and standards compliance. The developer will also perform internal testing at all milestones in the development process for Accessibility and Section 508 Compliance throughout the development process.

This might entail repeating presentation test cases for each of the different platforms and/or distributing functional test cases evenly among the various combinations of hardware and software. Any significant defects, or defects found and reported by the testing team, would typically be fixed in the next development cycle. Adding more products to the Gold category will increase the number of test cases that must be executed and will increase the cost or potentially reduce the quality of testing for each product. A reduction in the quality of testing will, consequently, increase the probability that a serious defect might slip through and not be discovered until the end, when it becomes a costly remediation problem.

The Silver Category

The Silver category includes hardware and software products that undergo less rigorous testing. In this category, the Accessibility Testing is still part of the process. This category always includes spot testing (prioritized by areas of risk) by testers with disabilities. Test Cases will be created for those areas that will be tested, and the tests will include testers with all applicable disabilities. Different versions of Assistive Technology (AT) will be added to the Test Cases. Accessibility and Section 508 Compliance tools may be used during the process to help assure Accessibility and compliance. The developer will make spot checks (prioritized by areas of risk) for Accessibility and Section 508 Compliance throughout the development process.

Since the items listed in this category typically represent a smaller proportion of your audience, they are assigned a limited number of test cases. These items “should work,” but a few defects may slip through your testing as certain

combinations of older hardware and software may not be compatible with your product or solution. Some of these defects may be worth fixing in future development cycles, while others may not.

The Bronze Category

The Bronze category includes the hardware and software products that will not be tested. Items listed in this category “may work” but few people (if anyone) will typically care if they don’t work. Defects that are only specific to Bronze category products typically may not be fixed. However, the company’s customer support group should still log any incidents that your customers report. This log may serve as a knowledge base of “work around” that could be built and maintained. For the Bronze category, the developer spot checks for Accessibility and Section 508 Compliance throughout the development process. Accessibility and Section 508 Compliance tools may be used during the process. This test will have more risk that the application is not accessible and Section 508 Compliant and the results will be much less reliable.

Debra Ruh is the Founder and President of TecAccess. TecAccess is a SBA 8(a), SDB Certified and Small Woman Owned Company that specializes in E&IT Accessibility and Section 508 – Section 255 compliance solutions. The majority of the TecAccess’ associates are persons with disabilities (90%). For more information, please contact us at (804) 749-8646 or druh@tecaccess.net or visit our website at www.TecAccess.Net