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Accessibility of SoundCloud.com

My name is Dillon Kupferschmid, and here I will be talking about <u>SoundCloud.com</u>, which is a website that acts as a music streaming platform, much like Spotify or Pandora, so you can listen to music wherever and whenever you are doing something. This document will consist of information regarding how to fix any accessibility problems with Soundcloud, as well as other important information regarding it.

One of the first problems that comes to mind is that SoundCloud doesn't exactly translate well to mobile web browsers like Safari. When I use SoundCloud through Safari on my phone, it doesn't seem to always work efficiently. Sometimes when I select a song, it won't register and refuses to play, even though it is capable of playing on either mobile or desktop. One of the biggest features of using SoundCloud through Safari is that you can listen to music with your screen off, but when you have a playlist, it won't automatically play the next song. This leads me to always have to manually play the next song, as it gets stuck on the beginning of the song, despite being registered to play next. This is an incredibly major inconvenience, as the playlist will only work with shuffling or moving onto the next song with the screen on, essentially defeating the whole concept. I could be listening to a playlist on YouTube from my phone and it would virtually make no difference if I can't turn off the screen.

Another problem with the general interface, regardless of platform, is that the text is a bit too small. For someone like me, who has impaired vision, this makes reading some of the text off of my phone difficult. With my glasses on and the screen up close, some of the text looks like a

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blur of jumbled characters, but then when I take my glasses off, it gets a bit clearer, but then it strains my eyes to have to look at the screen so closely to see everything and usually causes me to go cross-eyed to see things clearly, which hurts my eyes. The small text is a problem if I'm trying to look for something in particular, because then I may miss it because it's hard to read. Though in theory anyone could zoom the screen in, it obscures other details on the sides, and causes everything to look too jumbled instead of easier to read, causing for just as many complications either way.

One of the last things that I thought was important was the inconsistency of some features. For example, on my phone, the shuffle button does what it's supposed to do, cycle through songs on the playlist or album that I have currently selected. The issue is that on the computer, it shuffles through any and all songs all over instead of just my chosen album. To make matters worse, you can't select to shuffle just the specific album or playlist like on the phone, serving as a huge inconvenience, as there are only a select few songs I may want to listen to. But unfortunately, the site continues to play random songs I don't want to listen to, making it frustrating to navigate as I try to return to MY playlists, and not the random ones SoundCloud plays.

There are some other small problems, such as the developer console revealing multiple errors in resource loading and the page layout being inconsistent. There are also some issues for me personally, such as when I search for a specific song, it doesn't always give me relevant results, sometimes giving me totally unrelated songs to what I want. There are also open

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comments that anyone can post, whether they are logged in or not, which is something I've never been a fan of. Among other things, there are just inconsistencies with how the information given is presented and accessed by users. The overall website structure is fine, but has many small accessibility issues that add up.

Stats of SoundCloud.com Using These 3 Tools: WAVE, A11Y, and FAE

WAVE Stats:

- 2 Errors
 - 1 X Missing alternative text
 - 1 X Empty button
- 11 Contrast Errors
 - 11 X Very low contrast
- 11 Alerts
 - 1 X Skipped heading level
 - 1 X redundant link
 - 1 X Nonscript element
 - 1 X Very small text
 - 7 X Redundant title text
- 11 Features
 - 9 X Form label

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- 2 X Language
- 25 Structural Elements
 - 1 X Heading level 1
 - 4 X Heading level 3
 - 7 X Heading level 4
 - 4 X Unordered List
 - 4 X Inline frame
 - 1 X Header
 - 1 X Navigation
 - 1 X Search
 - 1 X Main content
 - 1 X Footer
- 65 ARIA Elements
 - 24 X ARIA
 - 22 X ARIA label
 - 1 X ARIA description
 - 7 X ARIA tabindex
 - 1 X ARIA alert or live region
 - 2 X ARIA button
 - 5 X ARIA hidden

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- 3 X ARIA popup

A11Y Stats:

- 3 Contrast errors found:
 - Background Color: Orange clashes with Text Color: White
 - Background Color: White clashes with Text Color: Gray
 - Background Color: White clashes with Text Color: Blue

FAE Stats:

- 2 Violations
- 1 Warning
- 26 Manual Checks
- 10 Passed

Results from all Tests:

WAVE Report

FAE Checker

Color Contrast Accessibility Validator (You may have to type the URL again)

https://webinsight.cs.washington.edu/wa/ WebAnywhere Download Page

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Documentation of NVDA:

The program I used was NVDA and it worked like an absolute charm. When using it on this search from SoundCloud.com, it made things so much easier to listen to and comprehend, as I tend to have a bit of a problem with getting lost when I read certain things, so the narrator from NVDA was an absolute win. It was also incredibly helpful when it came to reading and hearing the small text, namely because it read all of the text for me so I could know what song was going to play next. I used the Spyro the Dragon OST as an example to test NVDA, and it made everything work well for SoundCloud. As said before, it was really helpful as it allowed me to actually be able to hear what was coming next instead of just trying to read the small text.

The Accessibility Plan

This part of the document will contain information on how to fix some of the problems with SoundCloud.com. To identify the biggest problem, the text is simply far too small. The text for all of the different songs and playlists/albums is far too small, and as a result can cause eyestrain attempting to read the text. This should be automatically the first thing resolved because of the fact that if people can't see or read the text on a website, then what's the point of visiting the site in the first place?

The steps that should be taken to resolve this issue is to either increase the zoom size of the actual web page by default, or to increase the general size of the text to better accommodate the other people like me who have a problem reading small text. After checking the size

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comparison in both a half-mast window, as well as a full window, the size should at least have a visual output similar to zooming in the page at 150-200%. Though narrator tools like NVDA have no problem making it work, there are still some discrepancies with the small text, and as such, the size of it should be increased to a much larger degree to make it legible for people who can see, but need the text to be big enough to read clearly.

Priority 1 Information

In General (Priority 1)	Yes	No	N/A
1.1 Provide a text equivalent for every non-text element (e.g., via "alt", "longdesc", or in element content). This includes: images, graphical representations of text (including symbols), image map regions, animations (e.g., animated GIFs), applets and programmatic objects, ascii art, frames, scripts, images used as list bullets, spacers, graphical buttons, sounds (played with or without user interaction), standalone audio files, audio tracks of video, and video.		×	
2.1 Ensure that all information conveyed with color is also available without color, for example from context or markup.		X	
4.1 Clearly identify changes in the natural language of a document's text and any text equivalents (e.g., captions).			
6.1 Organize documents so they may be read without style sheets. For example, when an HTML document is rendered without associated style sheets, it must still be possible to read the document.			
6.2 Ensure that equivalents for dynamic content are updated when the dynamic content changes.	1	,	
7.1 Until user agents allow users to control flickering, avoid causing the screen to flicker.	N/		
14.1 Use the clearest and simplest language appropriate for a site's content.	J		
And if you use images and image maps (Priority 1)	Yes	Νo	N/A
1.2 Provide redundant text links for each active region of a server-side image map.			
9.1 Provide client-side image maps instead of server-side image maps except where the regions cannot be defined with an available geometric shape.	J		
And if you use tables (Priority 1)	Yes	No	N/A
5.1 For data tables, identify row and column headers.			1
5.2 For data tables that have two or more logical levels of row or column headers, use markup to associate data cells and header cells.			/
And if you use frames (Priority 1)	Yes	No	N/A
12.1 Title each frame to facilitate frame identification and navigation.			$\sqrt{}$
And if you use applets and scripts (Priority 1)	Yes	No	N/A
6.3 Ensure that pages are usable when scripts, applets, or other programmatic objects are turned off or not supported. If this is not possible, provide equivalent information on an alternative accessible page.			
And if you use multimedia (Priority 1)	Yes	No	N/A
1.3 Until user agents can automatically read aloud the text equivalent of a visual track, provide an auditory description of the important information of the visual track of a multimedia presentation.	\int		
1.4 For any time-based multimedia presentation (e.g., a movie or animation), synchronize equivalent alternatives (e.g., captions or auditory descriptions of the visual track) with the presentation.	\mathcal{J}		
And if all else fails (Priority 1)	Yes	No	N/A
11.4 If, after best efforts, you cannot create an accessible page, provide a link to an alternative page that uses W3C technologies, is accessible, has equivalent information (or functionality), and is updated as often as the inaccessible (original) page.			

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- From the Priority 1 list, most of the N/A answers were given as such because they
 do not apply to the website of my choosing.
- In terms of actual issues with the website, there are two major errors that occurred and needed to be addressed here.
 - The first issue involves the problem of missing "alt" text for certain images. In order to fix this issue, alternative text must be added to the image specified in the WAVE report to fix this problem, which the image in question may be the background image for the homepage. Added alternative text is all that is needed for fixing this.
 - The second issue involves there being serious contrast issues either with or without the actual colors for styling purposes. Judging from the results between both the FAE and WAVE test, the general color contrast is quite poor in multiple ways, either between grey and white or white and orange. The way to fix this is to make color combinations that work better with each other and don't clash against themselves. One of the biggest problems is the small grey text clashing with the white background, so all of the grey text should be changed into black or something darker to be distinguishable from the white background. This will make the text easier for someone like myself to read, as I have trouble seeing certain colors and backgrounds without having problems with my vision.

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Priority 2 Information

In General (Priority 2)	Yes	No	N/A
2.2 Ensure that foreground and background color combinations provide sufficient contrast when viewed by someone having color deficits or when viewed on a black and white screen. [Priority 2 for images, Priority 3 for text].		X	
3.1 When an appropriate markup language exists, use markup rather than images to convey information.	∇		
3.2 Create documents that validate to published formal grammars.			\checkmark
3.3 Use style sheets to control layout and presentation.	abla		
3.4 Use relative rather than absolute units in markup language attribute values and style sheet property values.		,	\checkmark
3.5 Use header elements to convey document structure and use them according to specification.			
3.6 Mark up lists and list items properly.			
3.7 Mark up quotations. Do not use quotation markup for formatting effects such as indentation.			
6.5 Ensure that dynamic content is accessible or provide an alternative presentation or page.			
7.2 Until user agents allow users to control blinking, avoid causing content to blink (i.e., change presentation at a regular rate, such as turning on and off).			
7.4 Until user agents provide the ability to stop the refresh, do not create periodically auto-refreshing pages.	\Box		
7.5 Until user agents provide the ability to stop auto-redirect, do not use markup to redirect pages automatically. Instead, configure the server to perform redirects.			
10.1 Until user agents allow users to turn off spawned windows, do not cause pop-ups or other windows to appear and do not change the current window without informing the user.	\bigvee		
11.1 Use W3C technologies when they are available and appropriate for a task and use the latest versions when supported.			1
11.2 Avoid deprecated features of W3C technologies.			\mathcal{J}
12.3 Divide large blocks of information into more manageable groups where natural and appropriate.	abla		
13.1 Clearly identify the target of each link.			
13.2 Provide metadata to add semantic information to pages and sites.			
13.3 Provide information about the general layout of a site (e.g., a site map or table of contents).	abla		
13.4 Use navigation mechanisms in a consistent manner.			
And if you use tables (Priority 2)	Yes	No	N/A
5.3 Do not use tables for layout unless the table makes sense when linearized. Otherwise, if the table does not make sense, provide an alternative equivalent (which may be a linearized version).			
5.4 If a table is used for layout, do not use any structural markup for the purpose of visual formatting.			
And if you use frames (Priority 2)	Yes	No	N/A
12.2 Describe the purpose of frames and how frames relate to each other if it is not obvious by frame titles alone.			\checkmark
And if you use forms (Priority 2)	Yes	No	N/A
10.2 Until user agents support explicit associations between labels and form controls, for all form controls with implicitly associated labels, ensure that the label is properly positioned.			\checkmark
12.4 Associate labels explicitly with their controls.			\checkmark
And if you use applets and scripts (Priority 2)	Yes	No	N/A
6.4 For scripts and applets, ensure that event handlers are input device-independent.			$\sqrt{}$
7.3 Until user agents allow users to freeze moving content, avoid movement in pages.			V
8.1 Make programmatic elements such as scripts and applets directly accessible or compatible with assistive technologies [Priority 1 if functionality is important and not presented elsewhere, otherwise Priority 2.]			
9.2 Ensure that any element that has its own interface can be operated in a device-independent manner.	J		
9.3 For scripts, specify logical event handlers rather than device-dependent event handlers.			J

• For Priority 2, most of the content at the bottom was placed under N/A because it didn't apply to my chosen website.

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The only real problem that needs to be addressed is the problem with contrast in the colors between the text and background color. Like stated before, the color contrast is perhaps a little too light in certain areas to have a proper and clear readable view. The thing that needs to be done to fix this problem is to make things more dark for the text so the text can be readable. The text is currently too light, and it is causing problems with being able to read some of the text on the website.

Conclusion

In conclusion, the majority of Soundcloud.com is actually well constructed with a large amount of structural and ARIA elements. The only primary problems addressed were involving some missing alternative text on certain images and contrast with certain text elements clashing with the background. Most of the content at the bottoms of Priority 1 & 2 was irrelevant to my website's overall accessibility, so there was nothing to really concern with in those regards. The plans to fix all of the major problems have been noted above and as such could be potential suggestions for improving the site altogether. Being able to also help accessibility with mobile devices to make it work as well as it does on computers is another big step in the right direction, even though it is not top priority like the other content listed above. Overall, SoundCloud is a well-done site, but has some accessibility issues when it comes to text that is too light and too

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small, as well as an internal problem where text lacks proper identification if it doesn't load properly, which is always a simple fix. **URL Copy:** https://soundcloud.com/

Directions:

- For this project, you are to conduct a review of a selected website regarding how accessible it is. You select the site. Put the site name, your name, and a brief description of the site at the top of your document. You can use Word or Google Doc to create your document.
- Make sure you've worked through this week's materials and have an understanding of the WCAG & Section 508 guidelines
- ☑ Identify the problems with the site (from the perspective of accessibility). Then document (create a plan) what needs to be changed to make the site more accessible.
- We have spent a lot of time (and will spend more time) identifying what it means for a site to be accessible and completing labs on the topic.
- **☐** There have been/will also be a number of links to tools that can identify problems.

Create a document that addresses the following criteria:

- ☑ Site identified (URL so I can check it myself) 5 percent
- Site reviewed with multiple tools (examples: WAVE Accessibility Checker, Color Contrast Accessibility Validator, and FAE). You will find many tools throughout the course content folders, discussed in your book, and the assigned videos and even the discussion board forums. Use at least 3 tools. Results should be documented-indicate which tools you used and document the results 10 percent
- Document how easy it is to navigate the site using NVDA, WebAnywhere, JAWS or Windows Eyes 10 percent
- ☑ Identification of the biggest problem with the site (i.e., what should be resolved first) as well as a plan to resolve it 15 percent
 - All Priority 1 (see course content above) issues identified and documented, and a plan created to resolve these issues 30 percent
 - All Priority 2 issues identified and documented, and a plan created to resolve these issues 30 percent
 - **Submit the file as a PDF, below. The file name should include CMWEB 150 Project 1 and your name.**