

Accessibility Inspection

JustAudioBooks.com

<http://www.justaudiobooks.com>

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December 2011

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Executive Summary

An accessibility inspection was conducted of the web site Justaboutbooks.com. The inspection focused on identifying any and all accessibility issues, in relation to the current Web Content Accessibility Guidelines Level AA (WCAG).

The most significant usability issues identified in this evaluation include:

- **The lack of key navigational functionality.** Justaudiobooks.com is missing critical navigation functionality that allows users to move through the site in a meaningful way. By omitting these elements, disabled users will have difficulty completing tasks and orientating themselves within the site.
- **The use of graphical navigation elements.** By using graphical images to represent links, the site eliminates key functionality for visually disabled users.
- **The lack of instructions for filtering the results of a search.** Without any direction for using search filters, disabled users will find this module overly complicated.
- **Missing or incorrect alternative text and title attributes for many page elements.** The omission of alternative text for elements prohibits visually disabled users from understanding the context of key elements and could result in confusion over the intended meaning of an important element.
- **Inadequate tab index functionality and the lack of device independence.** The site is not navigable when only using one user device. Users with mobility issues may experience difficulty selecting or viewing elements on a page.
- **Insufficient contrast in the implementation of text color.** The site fails contrast ratio requirements and could be inaccessible to a colorblind or visually impaired user.

While these issues are among the most pressing accessibility concerns for the Justaboutbooks.com website, a number of additional accessibility issues that also deserve attention are detailed in the analysis along with recommended solutions.

Terminology & Conventions Used

Several technical terms are repeatedly used in this document. To offer context, these terms have been defined below.

Navigation: Elements within the site that allow the user to move from page to page or from content section to content section.

Global Navigation: Navigation elements that remain constant across the entire site. These elements typically link to major sections of the website and are positioned in a consistent and easily accessible location on the page.

Local Navigation: Navigation elements that expand to provide more specific paths to relevant content as a user drills further down in to a website. These links are typical grouped vertically to one side of a web page.

Site Map: A page that provides a list of all pages on the site laid out in a hierarchical order.

Screen Reader: A third-party program typically used by persons with low or no visibility that converts written text, navigation elements, and images in to audible speech.

Web Browser/Browser: A program that allows a users to view web pages. (i.e. Firefox, Internet Explorer, Google Chrome.)

HTML: Hypertext Markup Language. Code that is readable by a web browser.

CSS: Cascading Style Sheet. Code that tells a web browser how to display HTML code.

Tag/Element: Parts of an HTML document. (i.e. headers, paragraphs, lists, divs.)

Attributes: Parts of HTML code that add additional information about an element.

Alt/Alternative text attribute: An attribute that provides context for an HTML element.

Title Tag: An element in the HTML code that provides a name for the web page.

Title attribute: An attribute that provides context for an element within the body of an HTML document.

Tab Index: An assigned order for what elements are highlighted or focused on when the tab key is pressed.

Breadcrumbs: Text links that provide navigational clues to where the user is currently located on a website.

Priority Levels

The issues identified in this evaluation are grouped into three levels of priority:

High Priority: These issues are likely to impact a large number of users significantly. They should be resolved as quickly as resources allow.

Medium Priority: Issues at this priority level are also likely to affect a large number of users but generally are less disruptive to the user experience, relative to the high priority issues. If resources are available to address these issues, they should be addressed.

Low Priority: Low priority issues typically impact a small subset of the overall user base, although they may impact a larger group. Regardless of the number of users affected, these issues carry only a minor negative impact. Low priority issues are generally easy to resolve. There is less time pressure to fix low priority issues, compared to medium priority issues and especially high priority issues.

Accessibility Guidelines

NOTE: This accessibility inspection report is based on the JustAudioBooks.com website as of 11/21/2011. The site has been modified since this inspection was conducted and some coding issues noted in this report have been addressed.

Simplicity & Clarity

Simplicity refers to a layout that is easy to understand and follow and adheres to the rules of visual perception. The simple layout should place visual focus on important areas and not contain excessive graphics or distracting elements.

Practices to Continue

- **Continue to group sections of content and links into logical areas.** The site does an adequate job of visually separating content sections and should continue to separate these sections using borders and white space.

Suggested Changes

High Priority

- **Break up text into shorter sections with sub-titles.** The main text content is one continuous block. This makes it difficult for a user to locate the pertinent information inside the block and forces the user to scan through large amounts of irrelevant text. All users want to be able to skim for their desired content, but this task is made more difficult for disabled users who are not able to discern the section's length or tab through subheadings to get a sense of the section's content. The addition of subheadings within the text would allow users to hone in on the pertinent information by skimming the subheadings.

Supporting Visual & Non-Visual Navigation

Providing easy to understand navigational elements are critical to the accessibility of a website. These elements should be accessible to all users regardless of browser settings or level of disability. Accepted web standards for navigation should be adhered to at all times.

Practices to Continue

- **The “Back” button is enabled.** The browser’s back button works in every instance tested with the site. This allows the user to always be able to return to a known location.
- **Underline links.** While some areas of the site do not follow this web standard, other sections do an adequate job of applying this rule. The underlining of text links should be implemented to the rest of the sections on the site.

Suggested Changes

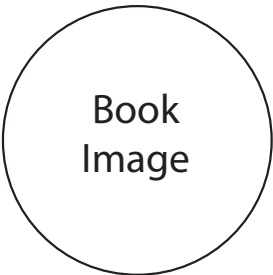
High Priority

- **Add breadcrumb links.** The site currently does not provide breadcrumb navigation on sub-pages. Many users with disabilities commonly use this navigation to orientate themselves on a website. The addition of breadcrumbs will also help orientate non-disabled users that enter the site on a sub-page.
- **Add key navigational elements to the entire website.** The site is currently missing crucial navigation elements, most notably a global navigation bar and a site map. All users expect to find these two elements on any web page they visit. By failing to include these conventional elements, the site is difficult to explore and users are forced to learn the navigational pathways. These elements are crucial for users with disabilities to navigate. A consistent global navigation area should be added to the top portion of each page, along with a link to a current site map outlining the paths to drill down into the site.

In addition to the lack of global navigation, the only method for returning to the home page is by clicking on the logo at the top of the screen. While the logo image has an alt text attribute of “Home”, users, especially those with visual disabilities, may miss this and become confused as to why the site offers no perceived navigational path back to the home page.

- **Add title text options to the company logo.** The company's logo image disappears when images are turned off. The lack of a supporting title attribute for this image will result in screen readers missing the name of the company. Screen reader users could become confused as to what website they are on. Including proper title text ensures that the company's name is present, regardless of the user's browser settings or methods.
- **Organize author list by last name.** In the "Top Author Pages" section the authors are listed alphabetically by their first name. Search results filters are based on the first letter of the author's first name. This is an unexpected way to organize names and leads to confusion. A user typically expects to view an alphabetical list sorted by last name. Author information should be re-organized by the author's last name and the author search results should be filterable by last name as well.
- **Reorganize the layout and tab index order of the main content section on an individual book page.** The tabbing order in the main content section follows an illogical order and skips important product information such as 'Customer Rating', 'Audio Length', 'Release Date', and 'Format'. Currently the tabbing order for this section focuses on purchase buttons before the product information. The tab index should be reordered to focus on the key product information first and then to purchase options.

As mentioned above, the graphical purchase buttons should be recoded and relocated directly below the key book information. The book summary can then be relocated to the right of this information. For example, in figure 1 shown below, the tab index sequence is organized in to one column.



Book Title

Author

Download for \$\$\$

Rent for \$\$\$

Buy for \$\$\$

Click for Audio Sample

Customer Rating: 4 out of 5

Narrator

Audio Length

Release Date

Format

Download from Audible.com

Rent from SimplyAudioBooks

Buy from Amazon

Book Summary:

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio.

Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delectus, ut aut reiciendis voluptatibus maiores alias consequatur aut perferendis doloribus asperiores repellat.

Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit quo minus id quod maxime placeat facere possimus, omnis voluptas assumenda est, omnis dolor repellendus. Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et voluptates repudiandae sint et molestiae non recusandae.

Fig 1: Reorganized Main Content Area – Individual Book Page

Medium Priority

- **Provide suggestions to unsuccessful searches on the search results page.** While the search bar provides keyword suggestions in a drop down menu while the user is entering a search term, the search results page provides no helpful suggestions for an unsuccessful search. Visually disabled persons may miss the suggested drop down options altogether and be forced to attempt a second search. Adding this information will support non-disabled user as well.

Proper Text Markup & Phrasing

Proper text structure is key to ensuring that content is accessible to users. This is especially true when providing content to disabled users. Unclear labels, reading levels that are too advanced, and text that contains a lack of context all contribute to disabled users having difficulty accessing and understanding content on a web site.

Suggested Changes

High Priority

- **Improve the Search Results filter module.** The search results page provides limited information regarding the scope of filtered search results. Currently, search results can be filtered using the 'Fine Tune Results...' menu on the left hand side of the screen. The scope of the search is indicated by bolding the active search filters. Without instruction on how to use the search filters, a visually impaired user could have extreme difficulty understanding what is happening when a filter option is active. While the removal of filter options that contain no results may be intuitive for a visual user, the disappearance of these options may provide extreme difficulty to a visually impaired user that relies on the memory of spatial relationships between elements. Alt attributes should be added to the filter option label to help the user understand how the results are being filtered.

The lack of text outlining the scope of the results will also lead to further confusion. A simple solution would be to provide an outline of how the results are being sorted at the top of the sorted search result main section. For example: "Results filtered by fantasy + author: C + 5 stars".

Medium Priority

- **Use simpler language for text content.** The reading level for most text is above a 7th or 8th grade reading level, the generally accepted web standard. For example:
 - Home page introductory text is at an 11th grade level.
 - 'Specialty Category' page text ranges from 11th to 15th grade level.
 - Sample book summary text ranges from 9th to 14th grade level.
 - A sample author page text ranges from 14th to 15th grade level.

The reading level of the summaries for the three teen books evaluated was almost 4 to 10 grades above the actual book's reading level. This disconnect between the book and its summary misinforms the user and adds unnecessary complexity. This complexity creates difficulties for both visually disabled users listening to a screen reader and users with lower cognitive levels reading the text. The content should be rewritten and simplified in order to be understood by a broader audience. For further information on the readability analysis see Appendix 2.

- **Add acronym tags to abbreviated text.** 'FAQ' link at the bottom of the page is missing an <acronym> tag. Adding <acronym> tags clarify that a term is an abbreviation, and should be read as such by the screen reader. This allows the user to properly understand the meaning of the term.

Proper Structural Markup

Properly coded HTML and CSS markup is critical to insure that adaptive technologies are able to parse content within a document. Code that is invalid or semantically incorrect may be misinterpreted by screen readers or displayed incorrectly when browser presets are disabled.

Suggested Changes

High Priority

- **Add key elements to tables.** Tables on the home page are missing `<thead>` and `<tbody>` HTML tags, as well as a summary. These elements are extremely helpful to disabled persons that may have a difficult time understanding the layout of a data table. These tags also assist screen readers in parsing out table information. Adding these elements to tables will better enable the disabled user to understand the content within the table.
- **Correct invalid alt attributes on the 'Best Selling Authors' page.** 'Best Selling Authors' page images have alt attribute descriptions that are invalid. Also, when images are turned off, the alt attribute text is too compact to be understandable. This also leads to difficulty when attempting to hover over a specific link. Correcting the layout of these elements will assist in the readability of the alt attribute.
- **Provide a correct `<title>` tag in the HTML document header.** Currently the title of the tab displays "Audio Books" not "Just Audio Books". Normally tabs include the whole name of the website or company. A visitor using a screen reader will be left wondering if they have reached the correct website. Also, title tags for sub pages should be written in a way that best provides easy identification of the page content. For example, a search results page title should be: "Search Results - Justaudiobooks.com".
- **Add missing table description tags to the tables on the 'Best Selling' and 'New Releases' pages.** These pages contain tables that are missing Summary, `<thead>`, and `<tbody>` tags. These three tags greatly increase the accessibility of tables and add context to the information presented and assist with screen readers' ability to identify the context of a table column or row.
- **Use correct HTML coding to indicate text that has been struck.** The site uses a strike-through styling to indicate when the price of a book has been reduced. The strike-through is currently coded in a way the screen readers do not process. A `<strike>` tag should be used in the code to

indicate struck text. This will correctly inform screen reader users of the current price.

- **Add missing alt text attributes to images on the ‘Search Results’ page.** Alt text attributes are missing from many of the images on the page. This forces a screen reader to read the entire link connected to the image. A more critical issue related to missing alt text attributes is the disappearance of the purchase buttons. The inclusion of alt text attributes is also required for proper page validation. By including alt text attributes the purchase buttons will remain visible when images are turned off. Screen readers will also be able to recognize the buttons as links.

Medium Priority

- **Provide empty alt text attributes for images that are strictly aesthetic elements or eliminate these elements altogether.** Many elements on the site have the confusing alt text attribute “bubble- [*****]”. Some examples are the three purchase option graphical buttons and the rounded styling graphic above many content areas. Screen readers will read the unnecessary “bubble-[*****]” text attribute to the user causing confusion as to what these titles mean. The alt text attribute information for the buttons should be rewritten to provide more information as to the button’s purpose. The rounded styling graphics should be removed altogether and the desired effect should be completed instead with CSS styling. This will eliminate unnecessary information from being read to the user, and provide necessary information.
- **Correct HTML coding on the home page.** The mark up for the “What everybody else is reading” area has <div> tags embedded in <p> tags. Not only is this invalid markup, screen readers may be unable to parse this section. With corrected coding the screen reader will be able to properly inform the user of the web site’s content.
- **Correct alt attribute errors in the ‘Customer Rating’ graphic.** When images are blocked, the customer rating section displays a confusing list of numbers. This is the result of attaching the same alt text attribute to each of the 5 rating boxes. A solution to this would be to present the rating in text form rather than graphically.
- **Correct invalid comments in the HTML code.** HTML comments are formatted incorrectly and may interfere with a screen reader’s ability to parse the document. Reformatted comments should follow this example: <!-- comment -->. This correction will insure that a screen reader moves through the document in a meaningful way for the user.

- **Correct invalid HTML markup on the ‘Search Results’ page.** The main search results area code contains invalid markup, specifically <div> tags within <p> tags. This prevents the page from validating and may interfere with a screen reader’s ability to parse the document correctly. This issue was discovered on several pages on the site, which suggests a site-wide review is advisable.
- **Correct invalid HTML markup for image tags on the ‘Search Results’ page.** Several image elements within the page were found to have unclosed tags. Not only is this markup invalid, it may prevent the browser from displaying images correctly and could interfere with a screen reader’s ability to parse the document.

Low Priority

- **Add missing alt text attributes on author pages.** The image of the author is missing an alt text attribute forcing screen readers to read the name of the file. A proper alt attribute should be added to add context of what the image contains.

Providing Content & Context

Many disabled users experience the web in a non-visual way and therefor may be unaware of visual clues on how to interpret content. By providing proper content and context, a web site can insure that the information presented is understandable regardless of a user's physical needs.

Suggested Changes

High Priority

- **Provide title attributes for links.** The site provides limited HTML title attributes for links and pictures. Titles give important clues to users as to what a link or button does or what a picture represents. These title attributes should use an action tone, such as "View more authors" or "Purchase a CD", to express the link's functionality.

Low Priority

- **Include long description attributes where appropriate.** Currently the site contains no long descriptions of images. Adding <longdesc> to complex images provides context and helps visually impaired users understand what an image contains. Long descriptions could be added to describe what visual elements are present on the cover of a book or to describe an author's appearance. Long descriptions are also useful to provide an overview of a chart or graph. With this addition, visually disabled persons are still able to experience visual elements.

Device Independence

Many disabled users are unable to fully interact with a web site using a specific device such as a mouse or keyboard. Other users access the web with devices designed to assist them with their specific disability. To ensure that these users can access all functionality and content, a web site should never disable access to content for a specific device.

Suggested Changes

High Priority

- **Improve tabbing functionality and correct applied focus issues.** The site has an inconsistent and inadequate method of applying focus to tabbed elements. To assist users with mobility and dexterity issues, the site should provide a clear visual indicator of the current focus. Currently, older browser versions have difficulty determining what elements require focus. In addition, some blank elements on the site receive focus. These problems could lead to difficulty navigating through the click-able elements of the site. A tab index order should be applied to the click-able elements to insure that users using older browsers can still access navigational elements.

Incorrectly coded elements are also present on the site leading to critical focus issues, most notably, the 'Audio Book Reviews' login buttons. Focus for this area seems to be applied to the entire row of buttons rather than individual ones. The Facebook login button is missing focus altogether. A user tabbing through the site would be unable to select Facebook login using a keyboard alone. This discrepancy in available features could be fixed by correcting the focus problems.

- **Design the site to be completely accessible by using only a mouse or only a keyboard.** To assist users with mobility and dexterity issues, the site should be completely accessible using only a keyboard or only a mouse. Currently, while using a screen reader, key informational elements such as the length of an audio book is only accessible by mousing over this information. By not applying a tab index position for these elements, visually disabled users using only a keyboard will be unaware that this information exists on the site.

Graceful Degradation

Custom presets are often used by disabled users to allow easier access to content and functionality. A web site that removes these elements, for example CSS styling or displayed images, greatly reduces the accessibility of the site.

Suggested Changes

High Priority

- **Eliminate graphically implemented purchase option links.** When images are disabled, the Download (download-aud.png), Rent CD (rentcds-sab.png), and Buy CD (buy-cds-button.png) buttons disappear and all purchasing functionality is disabled. In addition, the instructions provided in the purchase options graphic (detail-buy-options-banner.png) are also removed. To a visually impaired individual, the site provides no way to complete a purchase from this page. These links should be re-coded as buttons with proper alt text and title attributes attached so that all users can access all functionality.
- **Include a 'Skip to content' link on every page.** When CSS styles are disabled, the local navigation lists are rendered before the main content of the page. This forces visually disabled users to scroll or tab through every link to reach the desired content. Screen readers are also forced to read all search functionality and local navigation before the main content section. By adding a 'Skip to content' link, the speed and ease of page navigation is greatly increased by passing over redundant content.

Low Priority

- **Correct HTML bolding code.** The markup uses the tag to indicate to the browser that text is to be displayed in bold. This is a depreciated tag. The proper tag is . Screen readers and future browser version may have difficulty parsing depreciated tags.

Allowing User Control

A web site should never take away the user's control of the site's interface. Since disabled users experience content in a wide variety of ways, it is crucial to allow them to make changes to how a site presents its content.

Practices to continue

- **Continue to allow content to be scaled using the browser view tools.** The site's spatial relationships remain consistent when the site is scaled to a larger viewing format. Images and content margins do not overlap and allow for easy reading.

Suggested Changes

High Priority

- **Inform the user when a link will take them to a new website or open a new window.** Examples of new windows opening are the links in "Elsewhere In The Audio Book Universe..." section. Each of these links take the user to a new window for a new website, without notice. Without providing a warning that a new window will open, users can be confused as to what has just occurred, especially if they are not able to see the new window open. The site should either ask the user whether they would like to leave the site, or provide notice of the action in a title attribute for the link.

For the transaction links that take the user to another website, without notice, another solution would be to import all third-party checkout functionality into the Justaudiobooks.com website. This would not only help keep disabled users orientated as to where they are in the check out process, but reduce the anxiety of being forced to an 'unknown' site and asked to enter credit card and other personal information.

Medium Priority

- **Include utility buttons to allow the user to scale text.** As mentioned above, the site allows the user to scale the web page using the browser tools. However, many users will expect to find utility tool buttons on the web page itself that allow text to be increased or decreased. Adding this functionality will allow for greater user control over how text is presented.

Respecting the User

Many disabled users feel disrespected when they perceive that a web site is ignoring their special needs. Often times these users leave the site and do not return. These negative reactions are greatly reduced when a web site attempts to address key issues that inhibit disabled users. An open dialogue with your disabled users could also be established to determine what specific issues affect them the most.

Suggested Changes

High Priority

- **Eliminate use of orange and pale gray text.** Text with insufficient contrast against the background is difficult for low vision or colorblind users to read. A contrast ratio of at least 4.5:1 is currently required to satisfy WCAG (Web Content Accessibility Guidelines) level AA criteria. The “Bestselling Audiobooks for the month” page has gray and orange text on a light gray background that only provides a 4.4:1 and 3.5:1 contrast ratio. (See Appendix 1 for specific examples in the website.) The use of darker colors for the text would provide greater contrast and improve readability for all users.
- **Use underlining to indicate links.** The site uses red text, within a body of gray text, to demarcate a link. The use of color to convey information does not allow colorblind or low vision users access to that information. If the link text had a non-color based treatment, such as the convention of underlining links within text, then these readers could recognize the links.

For example, on the home page main content header, the links ‘Download Audio Book’, ‘Rent Books on CD’, and ‘Buy Audio Books on CD’ have insufficient styling to indicate that they are links. It is not apparent that they are clickable until they are hovered over. By applying proper link styling, all users will have an easier time identifying the functionality of these links. (See Appendix 1 for specific examples in the website.)

- **Add a rating field to the “Audio Book Reviews” section.** On a book page an “average customer rating” is noted, however, there is not a place for the user to enter their rating of the book. This break in expectations is confusing for all users, but especially to a visually disabled user who may assume they have missed this field and try to search for it. Additionally, some users may become suspicious of the rating results, reducing the site’s credibility.

- **Provide a page containing an Accessibility Statement for the web site.** The site currently offers no information what accessibility elements have been implemented in to the design. A page should be added detailing how the site accommodates disabled users. This page should be accessible from a utility navigation link found on every page.

Medium Priority

- **Include the author's name in the alt text attributes for book images.** The homepage lists the book title, image of book cover and beginning of book summary for many of the current popular books. In general, the author's name is shown on the book cover. But, the screen reader only reads the title of the book at the book cover image. By including the author's name in the image's alt text attribute the screen reader can provide this information to the user.
- **Relocate the compatibility warning in the graphic on the home page.** The graphic in the main body section on the home page (buy-rent-download-banner.jpg) has very small text that is not readable and is not included in an alt text attribute for the image. Enlarging the low-resolution image distorts the text and does little to improve the readability. More importantly, this text contains critical information for the user and should be relocated to the main content area of an individual book page, not within a graphic. Having important content in the site's text, rather than in a graphic improves the accessibility of the web page.
- **Provide the number of results generated from a search and offer the option to view all results.** After executing a search the user is not informed of the number of search results and the site does not offer the option to view all results. This potentially forces the user to navigate through several pages of results to find the desired content. A person with visual or mobility disabilities has an increased difficulty navigating websites. By informing the user of how many results and offering the ability to view them on one page, the site could eliminate the need to repeat unnecessary and complicated navigational steps.

Other Observations

The following observations are not directly related to user accessibility. However, addressing them will solve important user interface issues.

Suggested Changes

- **Change the wording of the search refinement module.** The label 'Fine Tune Results...' on the search results page is confusing. Users would benefit from changing this label to a more conventional term, such as 'Filter Search Results' or 'Search Filters Options'.
- **Provide navigation to important pages.** A Google search currently links the user to the logo-linked home page, justaudiobooks.com or another page <http://justaudiobooks.com/download-audiobooks.aspx>, entitled "How the Audio Book Download Service Works". There is no apparent navigation to reach the "How the Audio Book Download Service Works". The logo linked home page, and other pages where the user may want more information, should provide a link to this important page. Users should not be required to hunt for relevant information.
- **Include filters on author pages.** If you select an author's name from the 'Top Author Pages' there are no filters available. Allowing users to further sort through a list of an author's books is helpful and minimizes user frustration.
- **Include comments.** Each book page has an 'Audio Book Review' section at the bottom of the page. After extensive exploration no books appear to have any existing comments, including the one created during this inspection process. If this option is made available it should function as expected, otherwise the site's credibility is negatively impacted.

Appendix 1: Examination of Colorblind & Text Contrast

Colorblind

Used <http://colorfilter.wickline.org/> to perform colorblind contrast checks.

- On the Homepage, using gray scale checks little contrast was found in the “rent cd” text in the image (which is a clickable image).
- A colorblind test of the main website pages found that all orange text does not provide sufficient contrast for colorblind users.

Text Contrast

Used <http://webaim.org/resources/contrastchecker/> to examine all text contrast.

To meet the WCAG level AA criteria the visual presentation of text is required to have a contrast ratio of at least 4.5:1. An exception is large-scale text for which the minimum ratio is 3:1. “Large scale text is defined as “roughly equivalent to 1.2 and 1.5em or to 120% or 150% of the default size for body text”.¹ Also, text that is part of a logo is not required to have a minimum contrast.

Text Contrast Results, by page:

Homepage

- Gray text on white, 11px text; contrast ratio: 5.2: 1, PASS (but fail for WCAG AAA)
- Difficult to read text in 9 pt. with large line height (24px); difficult following one line to the next.
- Orange header; contrast ratio: 4.2: 1, FAIL
- Black text on green background; contrast ratio: 14.4: 1, PASS
- Large white text on green background; ratio:???, PASS (but fail for WCAG AAA)

¹ From <http://www.w3.org/TR/UNDERSTANDING-WCAG20/visual-audio-contrast-contrast.html>

- Black text on light gray background; contrast ratio: 10.4: 1, PASS
- “Downloads ...” text inside graphic appears as 9px text; contrast ratio: 5.2: 1, PASS (but fail for WCAG AAA). But, text is very small rendering it difficult to read.

Search Page (Ex. “Bestselling Audio books for the month”)

- Gray text on light gray background; contrast ratio: 4.4: 1, FAIL
- Orange text on light gray background; contrast ratio: 3.5: 1, FAIL
- Orange text on white background; contrast ratio: 4.2: 1, FAIL
- Gray text on white background (“listen to audio”); contrast ratio: 2.6:1, FAIL
- Gray text on white background (book info.); contrast ratio: 5.2: 1, PASS (Fail for WCAG AAA)
- Orange text links on gray background; contrast ratio: 3.4: 1, FAIL

Single book page

- Orange text on white background (“price”); contrast ratio: 3.5: 1, FAIL
- Gray text on white background; contrast ratio: 5.1:1, PASS (Fail for WCAG AAA)

Author page

- Gray text on light gray background (author info.); contrast ratio: 4.4: 1, FAIL

Reference

Color	Hexadecimal color code
Orange text	dc4919 & dd4614
Gray text	7e667e
Light gray text (listen to audio sample)	a0a0a0
Gray text (left column)	333333
Black text (left column)	000000

Light green background	c5d881
Light gray background	e9e9e9

Appendix 2: Examination of Readability Level

Used www.read-able.com/ to perform readability checks. Checks included only narrative text and exclude any listings. Based on samples taken on 11/20/2011 from the website.

Homepage

- Text on homepage is readable at an 11th grade level.

Reading grade level	Reading age level
9 th	14-15 yr. olds
10 th	15-16 yr. olds
11 th	16-17 yr. olds
12 th	17-18 yr. olds
13 th	18-19 yr. olds
14 th	19-20 yr. olds
15 th	20-21 yr. olds

Search result page

- Text from “Specialty Category: bestselling audiobooks this month” page is readable at a 14th grade level of 14.
- Text from “Specialty Category: bestsellers (all time)” page is readable at a 15th grade level.
- Text from “Specialty Category: new releases” page is readable at an 11th grade level.
- Text from “Top Genres: History” page is readable at a 14th grade level.
- Text from “Top Genres: Fiction” page is readable at a 14th grade level.

Book page

Book Summaries

Five books’ summaries were sampled and their reading level is noted below.

- Silhouette in Scarlet: The Third Vicky Bliss Mystery summary is readable at a 10th grade level.
- Hunger Games summary is readable at a 9th grade level.
- Breaking Dawn: Twilight summary is readable at a 14th grade level.

- Where the Mountain Meets the Moon (Unabridged) summary is readable at an 11th grade level.
- Blood and Gold summary is readable at a 14th grade level.

Book Grade Level Equivalent

Three of the books were teen books. For the three teen books, their grade level equivalent was obtained from Scholastic.com.

- Hunger Games book is at grade level equivalent 5.3.
- Breaking Dawn: Twilight book is at grade level equivalent 4.3.
- Where the Mountain Meets the Moon (Unabridged) book is at grade level equivalent 5.4.

Author page

- “Top Author Pages: Orson Scott Card” page is readable at a 15th grade level.
- “Top Author Pages: Terry Brooks” page is readable at a 15th grade level.
- “Top Author Pages: Janet Evanovich” page is readable at a 14th grade level.