Accessibility Inspection

LOTRO.com

http://www.lotro.com

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Executive Summary

An accessibility inspection was conducted on the Lord of the Rings Online game site (LOTRO.com). The existing home page and individual pages comprising the website were examined. The inspection focused on identifying accessibility issues, while also detailing the strengths of the current design that should be continued.

Strengths of the website include:

- **Providing content that is relevant to the subject of the website and organized in a good fashion to be easy to find.** The subject matter of the Lotro.com website is the Lord of the Rings Online computer game, and the website does a good job of providing content and news about the game.

The most significant accessibility issues identified in this inspection include:

- **Avoid using images and JavaScript functionality for navigation in order to support users who use screen readers or have images turned off.** The navigation's current design is not functional when images and JavaScript are disabled. Navigation for assistive technologies should be taken into consideration and coded appropriately. Cascading Style Sheets should be implemented to handle the function and style of navigation.

- **Notify the user when leaving the LOTRO.com domain and browsing to Turbine.com to better clarify the user's location within the navigation.** Turbine.com is the company which supports account management, installation and technical issues for the game. Turbine.com has a separate site architecture and style than LOTRO.com. Users should be notified when being transported to a new site to avoid confusion.

- **Provide alternative text for all images and image-type buttons to support users who are browsing using alternative methods.** Including alternative text allows the screen reader to present information to the user about the image.

- **Use semantic XHTML/CSS for page layout rather than tables, as tables can be difficult for alternative browsing methods such as screen readers to navigation.** By using XHTML/CSS for layout, the website content can be streamlined to be accessible for devices in a manner that is unavailable when tables are used for layout.

- **Apply the "tabindex" and "accesskey" attributes to (X) HTML tags for links, buttons and form fields to support device independence.** Supporting tabbing to page elements and access keys for forms greatly improves the user experience when not using a mouse.

Terminology and Conventions Used

Anchor links: Coded text located within a page that can be linked to. It allows users to quickly navigate within a current page.

Breadcrumbs: A display of links that shows users' current location within the website.

Fly-out menu: A menu that is hidden until a user event triggers it, causing the menu to be shown near the element that was interacted with, often to the side or bottom.

Global navigation: Persistent navigation for each page of the website, allowing users to access the main content pages of the website, which is typically located near the top or left portion of the web page.

JavaScript (JS): Scripting language that allows web site authors to create interactive web pages.

Keyboard Focus: The element currently highlighted or selected by using the tab key on the keyboard.

Link Label: The visible, clickable text in a hyperlink or graphic text.

Local Navigation: Navigation covering the section of the website currently being browsed.

Mouseover: The act of positioning the mouse cursor over an element on the page.

XHTML/CSS: Markup languages used to markup content on a website, alter its appearance and setup page layout.

Single quotes are used to indicate page names, page headers, link labels and window titles, depending on context.

Priority Levels

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

High Priority: Recommendations that fall under this designation are the most likely to affect a large number of users in a significant fashion. They should be completed as soon as resources permit to lessen the impact on users. The majority of time and resources that are scheduled for maintenance of the site should be directed towards solving these issues.

Medium Priority: The issues within this category are not as essential, although they can affect a large number of users. They are not as detrimental to overall accessibility, as compared to the High Priority items. After resolving High Priority issues, time and resources should be allocated to remedy these issues.

Low Priority: This category includes small inconsistent flaws or affects a small sub-set of the user base. They tend to have a slight negative impact to the overall user experience. Although low priority issues can be easy to correct, there is little time pressure to undertake these changes.

Accessibility Guidelines

Simplicity & Clarity

The page layout and contents should be clear, concise and easy to follow. Distracting elements such as pop-up windows and flashing ads can hinder the user's ability to reach their desired content. Unnecessary aspects of web design often unintentionally create roadblocks for users with disabilities. Simplicity & Clarity issues that pertain to other guidelines may be listed under those guidelines and therefore are not detailed here.

Practices to Continue

- **Providing useful content for the users.** The LOTRO.com site offers links for free trials and purchasing the game on the home page. From the global navigation users may also gain details on characters, quests and the game environment. Marketing and supporting the game product is the main goal of this site. The current content meets that goal well.

Suggested Changes

High Priority

- **Provide a consistent layout for pages belonging to the LOTRO.com domain for ease of browsing.** Several sections of the site transport the user to an alternate domain of Turbine.com, the game's manufacturer. Beyond the pages leading to Turbine.com, LOTRO.com supports a templated page layout except for two sections: 'Lorebook' and 'Forums'. Providing the same layout on all pages enables users to easily navigate from section to section.

- **Avoid usage of background patterns and photo effects behind page headers and text to aide in readability.** LOTRO.com uses heavy background patterns and photo effects - such as outer glow - behind important text elements for page headers or article headlines. While these design choices help with the overall feel of the site they also could hinder the readability for some users. Ensuring important text is readable should be priority over design flare.

Medium Priority

- **Change the global navigation label 'Codex' to 'Lorebook' to better reflect the contents of the category.** The 'Codex' section contains information about characters, creatures and the game environment. 'Lorebook' is a searchable database of information pertaining to all aspects of the game. The label 'Codex' is non-intuitive and hovering on the button is required to get a feel for what is contained within this category. Condensing the other subcategories under 'Codex' to 'Lorebook' would be most efficient as the content is related.

Supporting Visual & Non-Visual Navigation

Both visual and non-visual navigation should be intuitive and efficient. Implementing accessible navigation helps support users with and without visual disabilities. Avoiding the use of images as the main method of navigation assists users who may be using a screen reader. Supporting Visual & Non-Visual Navigation issues that pertain to other guidelines may be listed under those guidelines and therefore are not detailed here.

Practices to Continue

- **Maintain a slight delay before the fly-out navigation menus disappear when the user moves the cursor off of the fly-out menu area.** By offering a slight delay after the cursor leaves the area of the fly-out menu, this supports users who do not have good control of a mouse or may be using an alternative entry mechanism. It affords these users a chance to move the cursor back onto the fly-out menu before it disappears and forces them to start over.

Suggested Changes

High Priority

- **Provide consistent global navigation throughout the site for ease of browsing.** The 'Lorebook' and 'Forums' sections each have their own respective navigation menus which vary from the rest of the site. Both sections lose the left-handed global navigation. While 'Lorebook' and 'Forums' each have a need for their own extensive local navigation, the global navigation should be displayed on all pages.

- **Improve association of the subcategory fly-out menus with the corresponding global navigation button to provide effective visual indicators.** Upon hovering over the global navigation a fly-out menu appears. The fly-out menu displays subcategories for each global navigation section. The fly-out menu is square with a border and is positioned overtop the global navigation menu. Extending the border of the fly-out menu to surround the global navigation button would visually indicate which section the fly-out menu corresponds to.

- **Notify the user when leaving the LOTRO.com domain and browsing to Turbine.com to better identify the user's location while navigating.** Supplying the user with notification of why they are being transported to Turbine.com upon clicking a choice on the LOTRO.com navigation alleviates user confusion. Turbine.com is the company which supports game installation and technical issues. Turbine.com has it's own look and feel which is separate from LOTRO.com. Informing the user of any change of location is an important element in providing a positive user experience.

- **Avoid using images for navigation in order to support users who use screen readers or have images turned off.** Navigation within LOTRO.com is created via images with no alternative text, leaving screen reader users with no navigation menus. Users who have images turned off also have no navigation available and the site becomes unusable. Implementing (X) HTML in place of JavaScript and images for navigation would tremendously increase accessibility for alternative browsing methods.

- **Avoid using the same link phrase more than once if the links point to different URLS to aid users browsing via screen readers.** The 'Headlines' preview sections found on the home page contain link labels such as 'Click Here' and 'Here'. Each link should have a short, clear and unique description. Multiple links reading 'Click Here' or 'More' do not offer enough information for those users who may be reading the link out of context.

Medium Priority

- **Implement a stronger visual aide to indicate the global navigation buttons are links.** User focus tends to be drawn to the subcategory fly-out menu which appears when hovering over a global navigation button. Creating a stronger color or text change on rollover for the global navigation buttons would increase traffic to the global navigation pages. The global navigation pages display a preview of all subcategories within the section.

- **Avoid using the same colors for page elements and links to improve visual navigation indicators.** LOTRO.com consistently uses gold/yellow colored font for links, article headlines and page headers. This can create confusion for users as it is not always clear whether text is clickable or not. Choosing an alternative color for non-clickable text clarifies navigation for all users.

- **Implement a consistent link style (i.e. link underlining) to help visually support browsing and navigation.** Presently the majority of links are underlined upon hovering with a mouse. For example, the home page 'Headlines' preview section contains 'Click Here' links which are underlined on hover. Within in the same section the 'More' links do not become underlined upon hover. This inconsistency is found throughout the site. Applying uniform link styling helps provide clear and efficient navigation indicators.

- **Avoid using white text and red backgrounds on navigation menus to reduce eye strain.** The current global navigation color scheme is white text on a red patterned background. Reading on a computer monitor is not the easiest task and text colors should be chosen with this in mind. Ensuring the navigation text has enough contrast from its background aides all users, in particular those with low vision disabilities.

Proper Text Markup & Phrasing

Making content accessible by paying attention to how things are said and the markup used for that content is important for good accessibility. Proper attention to using correct markup will help when rendering the website in an alternative format.

Suggested Changes

High Priority

- **Use <H#> tags for headlines. Use <H1> for page level, <H2> for article level and lower as needed for subheadings.** Currently images are used or div tags are styled around plain text to denote headlines, and that provides no context to the text.

- **Use descriptive link labels in context rather than the words "here" or "More" to aid in understanding where a link will take the user.** By using descriptive link labels users will have a good idea where the link they are clicking will take them and help prevent errors. That aids the user in finding the information they are searching for. Since some alternative browsing methods are much slower than the standard visual browsing, user errors that take them to a new page can be a major frustration.

Medium Priority

- **Consistently include an empty "alt=" attribute to decorative images, such as layout spacers, to inform the browser or screen reader that the image has no significant importance.** Informing the browser or screen reader that a particular image doesn't contain information or content helps avoid frustration within the user experience. LOTRO.com currently implements this attribute on some decorative images and spacers.

- **Provide alternative text for all image-type buttons in forms.** By providing alternative text, it enables users who have images off or cannot view images to be able to use the form effectively still.

Proper Structural Markup

By using logical document structure, adaptive technology is aided in interpreting the document and conveying the correct context to the user.

Practices to Continue

- **Continue to use valid CSS code throughout the site.** The CSS used on the website is valid throughout most of the pages, which is a very good practice. This makes it easier for adaptive and assistive technology to render the website in an optimum manner for users with disabilities.

Suggested Changes

High Priority

- **Use a nested, unordered list (UL) for the Global Navigation menu, and use JavaScript and CSS to perform the fly-out menus. Make sure the navigation is still usable if JavaScript or CSS is turned off.** Currently the menu is populated via a JavaScript array variable, and is unusable if JavaScript is disabled.

- **Use CSS for layout rather than using tables, to ease the transition when using alternative devices to render the page.** By using CSS for layout, the site would translate to alternate formats much easier than when using a table based layout. CSS divs can be ordered within the (X)HTML document allowing important content to be read first by screen readers. Tables do not have this ability. During testing with Apple's VoiceOver screen reader the LOTRO.com home page was read to the user in the following order:
    - Masthead area left to right
    - Right-hand column (containing advertising) top to bottom
    - Left-hand navigation top to bottom
    - Middle content top to bottom
    - Footer left to right

  Supplying navigation and content prior to advertising better supports assistive technology users. 'Skip to Content' links are also recommended under the Allowing User Control guideline.

- **Ensure that all pages validate to the W3C standards for Transitional (X)HTML.** While a check of the validator shows over 200 errors for many of the pages on the site, most of the errors are minor and would take very little time to fix. If they are not fixed, these errors could cause issues with different browsers or alternative browsing methods, as many of them rely on the (X)HTML being valid.

Medium Priority

- **Use the (X)HTML Label tag for all form controls to associate form labels with the form input element.** A few of the form elements have an associated label element (like the login form in the forums section), but many form fields throughout the site do not.

- **Provide a summary for tables that hold data.** Tables on this site are primarily used for layout, but a summary should be provided for tables that hold data to allow users employing assistive technology to view the summary prior to reading the entire table. A summary also helps the user determine the scope of the table they are able to go through.

- **Utilize thead and tfoot for tables that hold data.** Using these standard (X)HTML elements in data tables greatly helps when using assistive technology to render the site.

Low Priority

- **Use a form of image replacement to implement the page headers, so that with images off or on a non-graphical user interface, the user will still be able to read the text header.** Being a graphical site by nature, it is expected that some headers may be replaced with images, but care should be taken to allow for users that cannot (or do not wish to) see the graphics.

Providing Content & Context

Many disabled users experience content in a non-visual manner, and it is important to make sure that the proper context is given for interpreting the information provided. It is also important to make sure those with disabilities are able to access the content in the first place.

Suggested Changes

High Priority

- **Provide alternative text for all content images to support users who are browsing using alternative methods.** Testing with Apple's VoiceOver screen reader found each image was read to the user as a single word – "image". Providing alternative text gives the computer something to present to the user describing the image or button. Reading alternative text gives a brief description to the user about the image and is quite helpful for users who cannot see or have images disabled.

- **Provide alternative text or audio for Flash animations that displays if Flash is not installed or unavailable.** The website makes use of a rotating header Flash movie on the home page that is completely inaccessible to users who cannot see it. Providing alternative text ensures that these users still experience that content and would also be helpful to users without disabilities who do not have Flash installed for whatever reason.

Medium Priority

- **Use the "longdesc" (X)HTML attribute within image tags for large, screenshot type of images to give a more thorough description of the image for those that cannot view the image.** While some of the visual impact is lost in a textual description, it allows users who cannot see or who have images turned off get a full view of the image being displayed.

- **Provide closed-captioning or a transcript for videos.** The context of a video can seem very different if a user is not able to hear the narration, whether due to a hearing disability or simply no speakers on the device they are viewing the video on.

Low Priority

- **Provide an audio version of the downloadable game manual, for those who are not able to read it.** While some PDF readers will read PDF files aloud, having the manual recorded in an audio format would be a nice feature to provide, and would be easier to listen to than computer generated text.

Device Independence

Requiring use of an input device (such as a mouse) to browse a website excludes a large portion of users who are incapable of using such devices. Ensure functionality by implementing tab access and access keys which aids both disabled and non-disabled users. Providing alternative solutions for browsing allows for a wider audience for any website.

Suggested Changes

High Priority

- **Apply the "tabindex" attribute to (X)HTML tags for links, buttons and form fields to support tabbing to web page elements.** Navigation and forms do not presently use the "tabindex" attribute to order tabbing from page element to page element. Testing the home page showed the tabbing order consistently skipped all navigation buttons except the home page. Adding the "tabindex" attribute to applicable tags would ensure tab access through important site sections such as navigation and forms.

- **Ensure all elements that have a separate interface are operable without a mouse allowing for navigation without specific input devices.** Another recommendation within this report pertains to adding control buttons to the masthead movie section. Supporting tabbing or access keys to those interface controls offers accessbility to users who may not be using a mouse.

- **Ensure all event handlers do not require use of a mouse to provide functionality to elements.** Include additional event handlers, such as onFocus for the keyboard, to provide equivalent functionality with alternative input devices. Enabling activity with several input devices provides for greater accessibility.

Medium Priority

- **Apply the "accesskey" attribute to (X)HTML tags for links and form fields to support quick access to page elements via a keyboard.** The "accesskey" attribute assigns a keyboard key to jump to a particular page element usually on a form. Access keys were not consistently implemented within the current LOTRO.com code. Implementing this attribute on links and form fields site wide would greatly improve the user experience when not using a mouse.

- **Visually indicate to the user the assigned access key for a given element ensuring the user is informed and able to use the shortcut.** The access key is typically indicated visually by underlining the corresponding letter within the field's label. For example, "accesskey="s"" would be displayed on screen as 'Search' above the form field.

  Testing shows the current LOTRO.com code contains use of the "accesskey" attribute within several pages such as 'Lorebook' and 'Forums'. However, these attributes are not visually indicated to the user in any way. Without informing the user of the assigned access keys the convenience goes unused and unnoticed.

Graceful Degradation

Graceful Degradation refers to how the user experience holds up when technologies such as JavaScript, CSS and Java are disabled. A user may have JavaScript disabled because a screen reader cannot support it. Images may be turned off by a user with a slow internet connection. Providing alternative versions of the site for those users not using specific technologies may be part of the solution. However, it is highly recommended to implement a website that degrades gracefully without having to resort to a special version.

Practices to Continue

- **Continue to convey the basic information in the event CSS styles are turned off.** Some users with disabilities might browse with styles off or may not be able to render styles in an alternative format, and as such all the same information should still be conveyed regardless of whether styles are disabled or not. The site currently presents the same information with styles on or off.

- **Continue to support multiple browsers.** Testing in Firefox, Safari, Internet Explorer 6 (with one exception noted below), Internet Explorer 7 and Opera showed that the site looked and functioned very much the same and offered the same features. Only on Internet Explorer 5.x and 6 were problems using the site found, as noted below.

Suggested Changes

High Priority

- **Reduce the page weight to better support users who may be on dialup or other slower connections by using fewer images or by better compressing the images.** Currently the home page requires the download of over 470KBs of information to display all of the content. The recommended page weight tends to be about 60KBs. Due to the nature of this site and its target market, a larger than normal page weight is to be expected, but it should be kept as small as possible.

- **Enable Google Maps for Internet Explorer 6 or provide an alternative via a slideshow of static images.** Currently the Google Maps used to display game world maps do not load in Internet Explorer 6, and as a large percentage of Internet users still use IE6, this should be corrected. Google Maps do support Internet Explorer 6, so this is an issue with implementation.

- **Ensure that all blocks containing text have a background color assigned that contrasts with the text, even if there is a background image in that block.** This ensures that the text will have high contrast and readability even in the event that images are turned off. LOTRO.com currently uses decorative images for backgrounds on page elements such as article headlines. Disabling images during testing showed the headlines as unreadable due to poor contrast of (X) HTML text and the cell or div background.

- **Ensure that JavaScript does not crash older browsers like Internet Explorer 5.x.** Due to JavaScript errors or improper coding practices (not testing unsupported features), Internet Explorer 5.5 crashed when trying to load the website.

Medium Priority

- **Use an image replacement to provide the navigation option button images at the top of the site, so that in the event images are off the text would be displayed.** If images are turned off, navigation between the major areas of the site becomes very difficult as the navigation buttons consist of images only. By using image replacement, if the images are turned off the text would be displayed in place of the image.

- **Ensure the global navigation menus functions in Internet Explorer 5.x.** By implementing earlier suggestions in regard to changing the coding of the navigation menu to use standard XHTML/CSS rather than JavaScript, the global navigation menu will work in Internet Explorer 5.x.

Allowing User Control

Interface control is one of the most important elements to creating an accessible website. The interface must be flexible and offer choices to the user. Many users choose to increase the size in text using their browser. The page layout should not break due to the increase of text size. By creating options to turn on/off web page elements such as sound or video the user gains better control of their experience.

Practices to Continue

- **Allowing the user to change the size of body content text to provide a user experience that meets their needs and requirements.** The body content text can be increased up to three times the normal size before affecting the page layout. Additional body text styles are included within the stylesheet allowing for increasing and decreasing font.

Suggested Changes

High Priority

- **Implement (X) HTML and CSS instead of images and JavaScript for the global navigation, resulting in the ability to increase navigation text.** Navigation buttons are currently images which can not be resized. Navigation is key to browsing a website efficiently and the ability to increase navigation text should be supported. Additionally, avoiding the use of JavaScript for navigation supports users who disable the technology.

- **Add on/off buttons for the rotating movies, images and ads found within the masthead section granting the user control over moving elements.** Being that LOTRO.com is a website for an online gaming product the emphasis within the page layout of rotating graphics is common and expected. However, the constant change of content could be distracting and bothersome to some users. To help those who have cognitive disabilities or slow internet connections options should be added to stop, start and pause the rotation of graphics.

- **Include 'Skip Navigation' and/or 'Skip to Main Content' links to the top of the XHTML body code to aide screen reader and mobility impaired users.** Providing the ability to skip repetitive links and arrive at the main content of the page improves the user experience for those using alternative browsing methods. By adding this link to the top of the document, it ensures that it is available immediately. This link could be hidden from standard web browsers.

Medium Priority

- **Use relative sizing and positioning rather than absolute for page elements and font sizes.** Relative page elements render according to the user's screen resolution. Flexible design creates accessibility for all users.

- **Provide the user with a site map or table of contents for ease of locating specific information quickly.** Creating a site map allows all users to easily view the site's architecture and content. In particular users with disabilities and/or slow internet connections benefit from a site overview. A link for a sitemap could be displayed within the footer of LOTRO.com.

- **Add an accessibility page to the footer to inform users of access keys and other accessibility information.** Create a page to display access keys and educate the users on how the site endeavors to maintain an accessible site. Making information regarding plug-in requirements, browser support and downloads available aides not only disabled users but all visitors.

Respecting the User

If practices that convey a sense of disrespect or even outright abuse to users are continued, users will not return to the website.

Practices to Continue

- **Continue to show good contrast between foreground text color and background color in content text.** Although the website uses a primarily light text on a dark background for content text, in general there is a high level of contrast, which makes it easier for users to read. Exceptions to this contrast have been noted, such as areas where the glow effect overlays text or when background images are turned off.

Suggested Changes

High Priority

- **Use a print style sheet to allow the document to be printed that eliminates unneeded graphics and elements and presents just the content.** Currently the page tries to print pretty much as is, including all graphics and images. A custom print stylesheet that strips out graphics that aren't required would be a help to users that need to print out content to read it.

Medium Priority

- **Code the navigation bar to allow the URL to display in the Status Bar.** Many users will mouse-over navigation and view the URL in the Status Bar prior to clicking a link. Due to the way the global navigation menu is produced, URLs do not show in the Status Bar, which could be frustrating to users.

- **Use access keys that do not conflict with common interface shortcuts that already exist.** Users with disabilities tend to use interface shortcuts and common access keys more than non-disabled users, so it is important to make sure there are no conflicts with existing interface shortcuts and that the access keys used are either common or are labeled clearly.

- **Do not launch a new browser window without telling the user that the link will launch a new browser window.** This can be especially disconcerting to someone who is listening to a webpage, if there is no audible indication that a new window was opened. This also breaks the back button, which can hinder accessibility.

Additional Accessibility Issues by Page and Section

Further issues specific to various pages or categories are detailed within this section. Due to the templated layout found on the majority of pages most issues were noted within the general analysis of this report. However, if the page in question requires significant assistance to existing issues they are itemized below.

Home Page

Medium Priority

- **Enlarge the arrow on each 'LOTRO Headlines' preview bar to avoid precise clicking requirements.** Each headline bar currently has a small arrow to the right side that opens a preview of the story. Enlarging both the arrow and surrounding clickable area would aide all users, particularly those with limited motor skills.

- **Implement JavaScript functionality allowing keyboard access to open the preview bars for 'LOTRO Headlines' to improve tab access.** When using the tab key instead of a mouse the arrow to open each preview is skipped and unavailable for selection. Opening the preview menu with a keyboard only would provide accessibility for those who need it.

Lorebook Pages

High Priority

- **Increase content above the fold by reorganizing page elements and reducing the 'Lorebook' image dimensions.** As mentioned under the Supporting Visual & Non-Visual Navigation guideline, global navigation should be added to this section. Local navigation should be relocated to accommodate global navigation. The 'Lorebook' image takes up too much valuable space above the fold and should be reduced in size. Placing the most important content above the fold ensures users will not have to scroll to locate it.

- **Create links for the thumbnail images of 'Official Lore Pages', 'Advanced Search' and 'LOTRO Google Maps' to their respective webpages to better meet user expectations.** Upon clicking these three thumbnail images users are transported to a page dedicated to details pertaining to the .jpg clicked (instead of the section it is labeled after). Clicking an image of 'Official Lore Pages' should result in the user arriving at said page. Linking these .jpgs to the categories they are promoting better utilizes the images.

Forums

High Priority

- **Reorganize the information found within the 'Forums' section to improve page hierarchy and aide visual focus.** Currently the 'Forums' section supplies too much information for one page. Removing unnecessary items such as the calendar and features found elsewhere would supply needed white space. Providing prominent links for joining and managing a forum account at the top of the page would improve the hierarchy of the 'Forums' section.