MICHIGAN STATE UNIVERSITY | Usability/Accessibility Research and Consulting

To: Robert Van Rennes, Big Ten Academic Alliance
From: Grey L. Pierce, MSU Usability/Accessibility Research and Consulting
CC: Heidi Schroeder, MSU Libraries
Subject: Swank Motion Pictures High-Level Accessibility Evaluation for the Library Accessibility Alliance
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MSU Usability/Accessibility Research and Consulting (MSU UARC) conducted a high-level accessibility evaluation of the Swank video platform to evaluate its conformance with WCAG 2.0 AA Criteria. This evaluation did not include all functionality or content of the site or all WCAG 2.0 AA Success Criteria.

During this evaluation, a number of issues were found that may make some site content impossible to use for some individuals with disabilities and may make the site difficult to use for many others.

Critically, custom keyboard shortcuts on the Video page interfere with browser functionality and do not work with assistive technologies.

Keyboard users, including screen reader users and users with dexterity impairments, will find it impossible or injurious to use some site content. Some content cannot be reached or operated via keyboard, making it impossible to use for those that rely on keyboard access, and some content requires an inordinate number of key presses to reach, creating potential pain and injury risks for some users. Focus order is incorrect in some places, increasing the difficulty of using the site with a keyboard. Some interactive elements lack a sufficiently visible focus indicator, making it difficult for many keyboard-only users to effectively use them, as they cannot determine when they have reached the correct element.

Individuals with visual impairments, including those that rely on screen readers, will also have problems using the site. Some content is not read out correctly and structural information (including headings and lists) is not appropriately conveyed to users, making it difficult or impossible to understand content and organization in places. Some form inputs are not appropriately labeled, making those inputs difficult or impossible to use for those that rely on screen readers. Custom elements do not correctly announce themselves to screen readers, making them difficult to understand and use. Most images have inappropriate or missing alternative text, significantly impacting users with visual impairments.

Other issues were found that will make it difficult for users with a variety of disabilities to effectively use the system, including insufficient color contrast, insufficient link context, no means to bypass repeated navigation, and inappropriate page titles.

To improve access for users with disabilities, MSU UARC recommends a full WCAG 2.0 AA evaluation and that the problems discovered be remediated.

Note: Results for "Billy Elliot" were used as an example of a Search Results page and "Billy Elliot" (2000) was used as an example of a Video page.

For reference, a screenshot of the Home page at the time this evaluation was completed has been included at the end of this memo.

High-Level Findings

Document Structure

- Headings are not appropriately structured throughout the site. [WCAG 2.0 SC 1.3.1]
  - On the Home page (Title tab), "All" should be an h2, not an h3, and should be grouped under an h1
  - On the Home page (Category tab), "Recently Added", "Recently Watched", "Action", etc. should be h2s, not h3s, and should be grouped under an h1
  - On the Home page (Category tab), "See All" text shouldn't be part of headings
  - In the Advanced Search panel, "Advanced Search" should be tagged as an h2, not an h3
  - On the Search Results page, "Search Results" should be tagged as an h1, not an h3
  - On the Video page, movie title (e.g., "Billy Elliot") should be tagged as an h1, not an h2
  - On the Video page, "Synopsis", "Audio Languages", etc. should be tagged as h2s, not h5s
  - In the Keyboard Shortcuts lightbox on the Video page, "Keyboard Shortcuts" should be tagged as a heading (h1)
  - In the Keyboard Shortcuts lightbox on the Video page, "Global" and "When Focused on Player" should be tagged as h2s, not h3s
- On the Home and Search Results pages, lists of movies are not coded as programmatic lists. [WCAG 2.0 SC 1.3.1]
- In the Keyboard Shortcuts lightbox on the Video page, lists under "Global" and "When Focused on Player" are not coded as programmatic lists. [WCAG 2.0 SC 1.3.1]
- On the Home page (Category tab), carousel content that is not on screen is read out (i.e., movies in lists that require hitting the previous or next buttons to see). [WCAG 2.0 SC 1.3.1]

Keyboard Support

- On the Home page (Category tab), carousel previous and next buttons cannot be reached via keyboard. [WCAG 2.0 SC 2.1.1]
- On the Home page (Category tab), "See All" links cannot be reached via keyboard. [WCAG 2.0 SC 2.1.1]
- In the Advanced Search panel, opening dropdowns via the Enter key erroneously submits the form. [WCAG 2.0 SC 2.1.1]
- On the Video page, video time and volume sliders cannot be reached via keyboard. [WCAG 2.0 SC 2.1.1]
- In the Keyboard Shortcuts lightbox on the Video page, "x" (close button) cannot be reached via keyboard. [WCAG 2.0 SC 2.1.1]
- On the Home page (Category tab), keyboard users are forced to move focus through all items in carousels, rather than navigating as mouse users do (moving only through visible items and previous/next buttons). This results in users needing to make over 1,000 key presses to get to content later in the page. [WCAG 2.0 SC 2.1.1, WCAG 2.0 SC 2.4.3]

- On the Video page, keyboard shortcuts conflict with basic browser usage (e.g., Ctrl+K to access browser search bar plays/pauses video, typing "m" into the Swank search input mutes the video). [WCAG 2.0 SC 2.1.1, WCAG 2.0 CR 4]
- On the Video page, keyboard shortcuts do not work when screen reader is in use. [WCAG 2.0 SC 2.1.1, WCAG 2.0 CR 4]
- Focus incorrectly goes to the page behind "Loading Content Please Wait" messages when they are present. [WCAG 2.0 SC 2.4.3]
- On the Home page, focus incorrectly goes to the currently active Display tab text (i.e., "Title" or "Category") when it is not interactive. [WCAG 2.0 SC 2.4.3]
- On the Video page, focus incorrectly goes to the page behind the Keyboard Shortcuts lightbox when it is open. [WCAG 2.0 SC 2.4.3]
- Focus is not sufficiently visible on dropdowns and buttons throughout the site. [WCAG 2.0 SC 2.4.7]

Navigation

- Page titles do not describe page contents (e.g., "Search Results" should be in the title of the Search Results page) and do not provide the site name (i.e., "Swank"). [WCAG 2.0 SC 2.4.2]
- The target of the "Michigan State University" link at the top of pages is not clear to users (it does not go to the Michigan State University homepage). [WCAG 2.0 SC 2.4.4]
- No means to bypass repeated navigation exists (no h1 at the start of unique page content and no "Skip to Main" link provided). [WCAG 2.0 SC 2.4.1]

Forms and Data Submission

- On the Home page, dropdowns (e.g., Category, Sort) are not labeled. [WCAG 2.0 SC 3.3.2]
- On the Video page, radio buttons in the video settings popup are not programmatically associated with grouping labels (e.g., "english (united states)" and "Audio"). [WCAG 2.0 SC 3.3.2]

Images

- "Michigan State University" image at top of pages does not have alternative text. [WCAG 2.0 SC 1.1.1]
- On the Home and Search Results pages, movie posters are decorative, and should have null alt attributes, and "Generic Poster" would not be appropriate alternative text if alternative text were needed. [WCAG 2.0 SC 1.1.1]
- On the Search Results page, "x" in search input does not have appropriate alternative text. [WCAG 2.0 SC 1.1.1]

Color and Visual Characteristics

- Blue text on dark green background (e.g., "Go to Advanced Search" when focused; "Content Catalog" when focused on Video page), light grey text on white (instructions in inputs in Advanced Search panel, e.g., "YYYY"), grey on white ("x" icon in search input on Search Results page), white text on light green (e.g., "Success", "Copied Copy Direct Link to clipboard", "x" in copy link lightbox on Video page), and light grey on white ("Search" in text input, "x" in Keyboard Shortcuts lightbox on Video page) have insufficient contrast. [WCAG 2.0 SC 1.4.3]

Custom Elements and Dynamic Content

- Screen readers are not notified when "Loading Content Please Wait" messages appear. [WCAG 2.0 SC 4.1.2]
- Screen readers are not notified when the Advanced Search panel is expanded or collapsed. [WCAG 2.0 SC 4.1.2]
- On the Home page, roles and values (i.e., that they are tabs and whether they are selected) are not provided for "Title" and "Category" tabs. [WCAG 2.0 SC 4.1.2]
- On the Home page, role and value (i.e., that they expand/collapse and whether they are expanded or collapsed) are not provided for dropdowns (e.g., Category, Sort dropdowns), and screen readers are not notified when they are opened or closed. [WCAG 2.0 SC 4.1.2]
- On the Home page, screen readers are not notified when Category or Sort dropdowns are activated and page contents are updated. [WCAG 2.0 SC 4.1.2]
- On the Video page, screen readers are not notified when "Success" messages appear after activating Copy Link buttons. [WCAG 2.0 SC 4.1.2]
- On the Video page, screen readers are not notified when video controls are activated (e.g., mute, video settings, full screen). [WCAG 2.0 SC 4.1.2]

Audio and Video Media

- Audio description of visual content in videos is not provided. [WCAG 2.0 SC 1.2.5]

Usability Observations

- On the Video page, proper names in the video settings popup are not capitalized (e.g., "english", "united states", "french", "france").

Home Page Screenshot