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Heuristics Analysis Report: Library Digital Signs

Introduction

On March 16th, 2023, our group conducted a Heuristic Analysis of the Michigan State Libraries' digital signs following [Jakob Nielsen's 10 general principles for interaction design](#). By reviewing these guidelines and comparing them to the signs, we found concerns that we hope to take note of and improve upon when creating the final client project. Detailed below will be our summary of methods, findings and next steps, as well as missed opportunities and shortcomings.

Summary of Methods

Our group analyzed the following three pages:

1. **Home** (displays library hours, upcoming events, library's social media, and an accessibility statement for those who need further help)
2. **Find a Book** (used to find a book's location with its call number)
3. **Maps** (used to find and view different floor maps of the library)

In order to judge these pages, we had a list of Nielsen's 10 principles, which include:

1. Visibility of system status
2. Match between system and real-world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Help users recognize, diagnose, and recover from errors
10. Help and documentation

We each had a copy of this list, which we used to evaluate different elements of each screen we observed. Then, we ranked its severity; the higher the severity, the more we thought it was significant to remedy. Following this data collection, we regrouped and compiled our findings, which are listed below.

Findings and Next Steps

Detailed below are the heuristics that we found to be of high importance and/or severity. We hope to remedy or improve most of these in the final client project.

Home Page

HEURISTIC	ISSUE
Visibility of system status	"Select a button to get started" prompt disappears from the screen occasionally, which can confuse the user or make the screen look non-interactive.
User Control and Freedom	Rotating information is too fast and takes away freedom from the user in what they want to access.
Help and Documentation	The only visible help/documentation is the accessibility link – which is ironically not accessible because the user has to type the link into their phone or computer instead of just pressing a button.

Find a Book

HEURISTIC	ISSUE
Visibility of system status	Default screen has no map; instead displays a blank area. This may cause confusion for users if they don't know what to do in order for a map to appear.
User control and freedom	No option to input book title or genre. The process of searching for a book is difficult.
Recognition rather than recall	The buttons to navigate around the library look like regular text, not clickable buttons. Button display is also hard to comprehend. Some areas of the map have restricted access.
Aesthetic and minimalist design	Some map colors are low contrast or hard to see. Too many colors and some are irrelevant to basic navigation.
Help and documentation	Directs the user to a help desk if they can't find a book as opposed to offering help or solving the problem on the spot via the screen (thus causing more inconvenience).

Maps

HEURISTIC	ISSUE
Visibility of system status	Default screen has no map; cardinal/floor directions are displayed in an ineffective manner (keep moving positions in each map); 3 East was missing from the list instead of the screen just informing the user that the floor is unavailable.
User control and freedom	No option to zoom in.
Consistency and standards	Varying font sizes on map; some font sizes are too small to see even if standing close to screen.
Help and documentation	No help/information button.
Aesthetic and minimalist design	Floors were organized in a way that looked unappealing and not intuitive.

Missed Opportunities and Shortcomings

Throughout our observations, we made several suggestions on how the interface could be improved:

General
- Add an **"Are you still there?"** popup instead of automatically switching to the home screen after 2 minutes.

Home
- **"Click a button below"** should remain consistent and not disappear.
- **Lower the speed** at which text and images change to make accessibility information more readable to the user.
- **Navigation buttons** on the Home Screen should be modernized and circular to appear like buttons. Perhaps this will increase engagement.
    a. Additionally, the color options to show which page is active is *not* intuitive and is not aesthetically pleasing.
- **Zoom in/out** and drag functions (like Google Maps) for Maps to see words/specific locations in the library.

Find a Book
- Instead of opening on a **blank page**, the screen should have a map pop up of the current floor the user is on to lessen confusion.

Maps
- Include the **3 East floor** name to the list of map options, but gray it out so users know it is unavailable/restricted.
- The maps function should be made distinct from the find a book function. As they are presently, they accomplish roughly the same things, and redundancy is something we do not want in our design.
- Standardize the font size on the map locations.

In addition to these suggestions, we recommend completing a competitor analysis to look at how different libraries display their screens and what is effective for them.