Phase 3 Report

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Individual Heuristic Evaluations

Severity Scale
1 - Cosmetic Problem. Visually unappealing, but it doesn't really impact the user's performance.
2 - Minor Usability Problem. An issue that may affect the user, but doesn't significantly drive away users.
3 - Major Usability Problem. Significantly impacts user interaction. This is an issue that must be fixed as soon as possible. System is still somewhat usable, but very unpleasant.
4 - Extreme Usability Problem. Completely unusable and must be fixed immediately.

Heuristic Evaluation by Neel
Issue: When clicking on the Help page, there is an email to contact the undergraduate office for Computer Science. However, the text color of the link is a dark blue. This makes it hard to read as there is low contrast with the background.   **Violates**: Be Consistent   **Severity**: (2) Minor Usability Problem. User's that have trouble with vision may not be able to read the link.   **Fix**: Make the link color a different color that signifies that it is an email, along with contrasting from the background.
Issue: On the "Information about Iribe" page, in the paragraphs there are links that are presented with and underline (i.e Institute for Advanced Computer Studies (UMIACS). This being the same color as the rest of the text may make the user confused and slow them down as they are unsure if the text is a link.   **Violates**: Speak the user's language   **Severity**: (2) Minor Usability Problem. User's may click on the link and will be sent to a page that they do not want to be sent. They may click on the text not knowing it is a link and cause them to open a new page and frustrate the user.   **Fix**: To avoid this, the text that is a link could be a different color that can signify to the user that it is a link. Another fix could be when a user hovers over the link, the text itself changes colors.

Issue: While there is a home/landing page called "Alerts", it's not indicated as the "Home Page".

Violates: Speak the user's language

Severity: (3) Major Usability Problem. The alerts page does serve as a landing page, this may not be known to new users of the site. When navigating the website they may become frustrated at the lack of clarity with this. This can result in the user clicking off the website and never using it again in some cases. This could result in a poorer user experience.

Fix: To avoid this, rename the label's for pages in the website. Their assortment of the buttons for the pages could be reordered to have the "Home" button page be the very first button. This could allow better "fluidity" in the website.

Issue: There is a UMD Terrapin logo that could function as a homepage but does not.

Violates: Speak the user's language

Severity: (2) Minor Usability Problem. The user could think it's a home button that could lead them back to the home page. This may cause a slight annoyance, but it's not a major issue.

Fix: Make the Terrapin function as a home button that goes by to a designated page.

Issue: The alert page and the alert banner share overlapping information that is presented twice. The user may confuse the two alerts and spend unnecessary time trying to read the banner.

Violates: Simple and natural dialogue

Severity: (2) Minor Usability Problem. Users may be annoyed at the overlapping information

Fix: Have the information be presented in a way that doesn't cause overlap or have the most critical alerts be displayed on the banner.

Heuristic Evaluation by Erica

Issue: The text format of the announcements differ from the alerts. "Severe weather alert" is in all uppercase, while the "Room change" is not. So, even though both types are urgent, only the weather alert remains eye-catching and impactful. The announcements, in contrast, seemingly blend into the background. The black text communicates"standard paragraph text" rather than "important announcement".

Violates: Be Consistent

Severity: (2) Minor Usability Problem. Visual consistency facilitates reading and comprehension.

Fix: Make the titles of the announcements uppercase and bolded to draw immediate attention (ROOM CHANGE: …). Change the color of the announcements to gold (or another color) so that it stands out against the black background. This heightens the importance of an announcement, while signaling its difference from an alert.

Issue: On the Iribe Information page, the "The previous paragraph..." phrase is repetitive and robotic. Students' approaching a kiosk only want quick, relevant information for the question they have. Citing the source in this manner, after each paragraph, is excessive. Doing this also interrupts having consistent spacing between the question and answers.

Violates: Simple and Natural Dialogue

Severity: (3) Major Usability Problem. The issue hinders the intake of information for the user. Less distractions allow the user to focus on the relevant information.

Fix: Make a list of all sources at the bottom of the page. This way, the user is not distracted while reading, gets the relevant information needed, and has a dedicated location on the page to read sources.

Issue: The buttons on the "Event Calendar" have a slightly different design compared to all other buttons. Most of the buttons on the kiosk are flat and rounded with a solid border. The calendar's buttons, however, are pointed with an outset border.

Violates: Be Consistent

Severity: (1) Cosmetic. Buttons in a shared system should look similar.

Fix: Make the buttons on the calendar similar to the navigation and map buttons.

Issue: The "Iribe Information" button leads to a page called "Campus Information", which is misleading. If the Kiosk is specifically in Iribe, the user is not expecting general campus information.

Violates: Simple and Natural Dialogue

Severity: (1) Cosmetic. The information should only be about Iribe.

Fix: Change the title of the page to "Iribe Information".

Issue: The help page displays multiple icons, however both groups have different styling. The styles of the icons should be the same shape and size — either a white shape, or a box with a black image.

Violates: Be consistent

Severity: (1) Cosmetic. It may lead to minor confusion about the purpose of the icons, since they're both different.

Fix: Make all icons have the same style, especially since they're on the same page.

Heuristic Evaluation by Asha

Issue:
The map on the kiosk app prototype does not allow the user to move around to see other locations around that area. This can be frustrating for users who want to explore the buildings around that area.

Violates: User Control and freedom

Severity: (2) minor usability problem, It may be frustrating for users to be able to explore the area liked they'd like

Fix: It should be updated to allow users to move the map around and explore different locations around the specific area.

Issue: When you change the size of the window i.e minimize it, the word labels of the different pages are off and extend out of their text box.

Violates: Be Consistent

Severity: (1) Cosmetic, it would look better if it was uniform.

Fix:. Make it such that it's able to adjust the size of the labels to fit in their borders when the size of the window screen changes

Issue: The zoom in and out buttons on the map are not working properly. When they're clicked on they don't do anything.

Violates: User control and freedom

Severity: (3) Major usability problem. The inability to zoom in or out of a map can affect usability , especially for people with vision problems.

Fix:. The zoom in and out buttons need to be fixed to ensure that they're functioning properly. It should be able to show the current zoom level.

Issue: There is no labeling for the floors on the map page, they are just listed.

Violates: Provide help

Severity: (2) minor usability issue - Alot of people may not know what B and M is referencing

Fix:. They should add labreling that mentions those are the floors, and write out what B and M stand for

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Issue: When hovering or clicking on a building location, no information is displayed.

Violates: Provide help

Severity: (2) minor usability issue - People may not know the exact location of where the building is

Fix:. Display a popup when the building is hovered on, This could provide important information to the user like address just in case they aren't familiar with with the area

Heuristic Evaluation by Jay

Issue: When trying to find their location on the building map, the average user was unable to read any of the classroom numbers or figure out what direction they were facing to be able to understand where they were and where they had to go.

Violates: Be Consistent: With different size text around the site, the text in the map is unreadable and should match that of the readable text elsewhere.

Severity: (3) Major Usability Problem.

Fix: Orient the map in a direction that faces the same way the kiosk would be facing in the building and increase the font size of the pictures, making it easier to locate a classroom or area.

Issue: Upon navigating to the map, the user was unable to locate some key buildings, like the Stamp Student Union when looking to navigate to the building.

Violates: Speak the users' language: The user is unable to understand the map as they are new to campus and can't figure out which building is which solely based on the outline of the building.

Severity: (2) Minor Usability Problem.

Fix: Add labels to the map and allow the user to use the zoom in/out feature to view the map in more detail.

Issue: Upon navigating to the calendar, the average user is greeted with an upcoming events list, but the list involves items that are in the past, so the user is confused and has to double check today's date

Violates: Minimize the user's memory load: The user upon looking at the date of the upcoming events realize that they are indeed not upcoming and has to review both the current date and the date of the event

Severity: (1) Cosmetic.

Fix: Remove past events from the "upcoming events" section. Or, name it "Monthly Events".

Issue: The buttons for the building map aren't intuitive. The average user doesnt know what B0 and M0 mean in context to the building. While the building floor does change when pressing on the button, the user may think that the buttons could correspond with their placement in a gallery rather than a floor.

Violates: Speak the user's language: This could have better text to explain to the user what the floor levels mean or refer to

Severity: (2) Minor Usability Problem. The user will be confused on what each of the numbers mean.

Fix: Explain what each button means in regards to the floor plan and explain what B0 and M0 are.

Issue: The scrolling alerts at the top of the page are cut off and difficult for the user to read and take more time to decipher since the user has to wait for the other side of the page.

Violates: Prevent Errors

Severity: (2) Minor Usability Problem. The user will be confused on what the alert says, but they are displayed elsewhere too, so you can still find the info.

Fix: Remove the element or make the scroll smoother.

Issue: The user, upon acting with the kiosk will be more confused than helped by the beeps that occur on certain button presses as they only worked a portion of the time, making it confusing what they were actually supposed to indicate, like whether there was a warning on certain actions.

Violates: Be Consistent: If the feature doesn't work every time, take it out, or make it work better.

Severity: (1) Cosmetic - The user will be confused on what the beep does but it doesn't hinder function.

Fix: Remove the element or make it work better.

Executive Summary

       The enclosed report is a Heuristic evaluation of the Iribe Kiosk. Upon attempting various tasks as outlined in the provided task scenarios, there were multiple issues identified. These issues relate to the usability and user interface and experience of the application — and are highlighted in an attempt to ease the improvement upon the user's ability to accomplish tasks and improve their experience in using this product. The most notable issues relate to the lack of visual consistency, unclear communication with the user, and difficulty in usage of the software. Problems ranking minor (2) and major (3) were the most culpable in causing usability issues. Problems ranking cosmetic (1) were small yet noticeable , decreasing the enjoyability of the software.

       Visual Consistency is where the user subconsciously assesses your software, judging if it is trustworthy. Some of the design choices lack consistency and structure. The alerts and announcements have different formats, links vary in color, buttons vary in shape, and text alignment varies across pages. The lack of structure may cause distrust among users, as it conveys a disordered set of stylistic choices, rather than one harmonious design effort by the team.

       Communication is also another area the software is lacking. Certain titles and navigation buttons are misnamed. There is no "Home" page, which can cause navigation to be troublesome. New users who are not familiar with the Kiosk may become confused by the assortment of navigation buttons. This lack of intuitiveness can result in the loss of many users. The Kiosk is an informational resource, and should keep the user in mind when relaying information.

       Usability of key features, the "Campus Map" and the "Event Calendar", also need improvements. The readability of the map should be improved so that users can navigate it. Some buildings are not labeled, or identifiable — confusing unfamiliar users who may be already lost. The calendar doesn't update, mistakenly keeping past events. These key features should be responsive to changes, whether that be sizing, timing, etc.

       Overall, the Iribe Kiosk has a solid foundation, but is still in the early stages of being a functional software. With our Heuristic Report, we aimed to identify these flaws in hopes of improving the overall user experience of the software. With these changes, we believe the accompanied task scenarios can be more favorably executed.

Team Heuristic Report

Heuristic Evaluation
Issue: The map displays information that is not intuitive to the user. For example, in the campus map, there is important information such as McKeldin but not other important places like the other dining hall, STAMP as two for example. The maps do not give much information to the user on what they do along with each page not having much guidance on what the user can do. **Violates**: Speak the users' language **Severity**: (3) The user is not presented with understandable information that they want to see. This can cause frustration with the user and cause them to click off. **Fix:** Have more information on the maps and present it in a way the users can digest it.
Issue: While navigating the website, there are many times where users are unclear of where the user is in relation to the website. For example, with no designated home page there is confusion within where the user begins their browsing. When traversing to the "Building Map" and "Campus Map" the user is unsure of what they can do on each page as well. **Violates**: Speak the user's language **Severity**: (3) Major Usability Problem - This can discourage the use of the website as many users may struggle to understand how to use it and navigate the website. Being presented with a page with no instructions and making the user "figure it out" may result in users avoiding the use of the website altogether. **Fix:** A fix could be to provide information to the users through the use of highlighting things on the website to signify the users on what to click on and present information on what each page is doing.
Issue: Throughout the interface, the various elements are inconsistently formatted. Color, alignment, shape, and styling should remain similar — showing that the components belong in a shared space. However, there are many areas where the components are visually incompatible. For instance, some pages utilize a single column of text, while the "Help" page uses a double column. Some alerts have titles in uppercase, while others have lowercase titles. Some links are blue, while others are white with an underline. Some buttons are rounded and solid, while others are pointed and outsetted.

Violates: Be Consistent

Severity: (3) Major Usability Problem. These visual inconsistencies build distrust among users, and communicate disarray within the design team—and most importantly—the product.

Fix: Choose a specific styling for headers, text, buttons, and links and remain consistent. Creating a style guide for the developers would help remain committed to the design.

Issue: Some information displayed on the pages tend to be redundant. For example, the citing of "The previous paragraph..." phrase on the Information page, the list of events below the calendar, and the scrolling alerts on top of the alerts page itself. Having multiple areas of the same information can stress out users, and lessens the importance of it.

Violates: Simple and Natural Dialogue

Severity: (3) Major Usability Problem. The issue lessens the importance of information given to the user. Less cluttering allows the user to focus on the relevant information.

Fix: Prioritize what information stays on a page, and dedicate a specific location for it.

Issue: The Calendar doesn't update. There are situations where the events themselves do not update, and also instances where it doesn't reset to the current month after navigating away.

Violates: Minimize users' memory load

Severity: (2) Major Usability Problem. The user has to work harder to ignore past events on the calendar, or realize the calendar is set on the wrong month.

Fix: Once navigating away from the events page, reset the calendar to the current month.

Issue: When clicking on the button in the "Help" page and the links in the "Information on Iribe" page, the user does not know if the button has been pressed..

Violates: Provide Feedback

Severity: (2) Minor Usability Problem. The user may not know if they've clicked on the link.This can result in confusion for the user. They might click the buttons too many times, and spend excessive time on the site

Fix: Have a clearer change in color when links have been pressed and feedback if a button has been pressed. For example when the user clicks on each page button there is a noise that plays. Do the same for the buttons in the Help are.

Issue: The accessibility functions are hidden on the help page, rather than being visible on every page. So if a user wants to zoom in, they have to perform an extra step to reach the page, and hope they zoomed in enough once they go back.

Violates: Provide Shortcuts

Severity: (3) Major usability issue. Accessibility tools should be accessible from most pages of the Kiosk, otherwise it's counter-productive.

Fix: A drop-down menu, or a top navigation bar could be a better way to access accessibility tools.

User Study

Pilot Techniques and Script

The method we chose to use for our usability study is the think-aloud method. We chose this method because we don't have any of the original developers to provide constructive interaction with. So, since we want to know the users thoughts while not having the insights of the original team, think-aloud was the best option.

As the user interacts with the site, they will be asked to describe their thoughts and actions. These thoughts and actions will be recorded by the team as they see what it is the user has interacted with and as they explain what they were thinking as they were interacting with it. This can make it easy to understand what it is the user is looking at and gives us insight to certain things they think as they interact with the site. From this, we can also find reasons that they believe certain things are the way they are, and tell us why they interact with a certain aspect or why they didn't.

Before being asked to complete tasks using the think-aloud method, they will be prompted with the following:

> "Hello, here we have a prototype of a kiosk system for a building. We are trying to learn how well this system works by understanding how users make use of it or how they accomplish certain tasks. First, could you please play around with the system for a few minutes and get a good feel for the interface? While you do this, can you walk us through what it is you're thinking and the reasons behind your actions as you inspect the kiosk."

Upon completing this and taking notes, the user is then asked to accomplish a few tasks, the format of which is supplied here:

> "Okay, here we have a kiosk set up as if someone in front of you in line was using it and looking at the map. You are looking for a class named "CMSC434" and are trying to find out what room that class is and where that classroom is located. Please try to complete this task and walk me through how you would go about doing so as well as what it is you are thinking as you are interacting with the kiosk"

Upon being asked a few of these scenarios, we will find solutions to some main problems on the site that prevent or hinder a users experience with the kiosk in accomplishing some of its main tasks, we will also find some problems outside of that based on a user's conceptualization of how that kind of product should be used as they explore it in the first step and play and test with some functionality they are drawn to.

Pilot Consent Form

Before beginning the test, the user first has to consent to doing the study. The consent statement is written below:

> *Dear participant,*
>
> *We are trying to test out the usability and user experience of our health app prototype. During this study we will be watching how you interact with the app, as well as get your feedback about the design and functionality. There will be two segments. There will be a portion where we observe your behavior. The second and last segment will be for vocal or written feedback dependent on your choice.*
>
> *Please understand that your participation is voluntary and you may withdraw at any time. Your identity will remain anonymous.*
>
> *By agreeing to participate , you consent to the following,*
> - *To have your interactions to be recorded for evaluation purposes*
> - *To provide feedback and opinions about the prototype*
> - *To allow us to use your responses*
> - *To complete the assigned task given*
>
> *Feel free to come with any questions or concerns you might have.*

Pilot Trial Run

User's Perspective: As the user, I was asked to verbalize my thoughts as I used the prototype. I first opened the page and immediately saw the "Alerts" Page. I wondered what the difference was between the alerts and announcements. Assuming the alerts were the red labels, I tried clicking on them. They were not clickable. I explained to the tester's that I thought they would give more information. I continued to click around the system. After a few minutes, I had to perform specific tasks. One task was locating a classroom for CMSC434. I explained that I would click the building map button. Then I became stuck because I wasn't sure about the floor. So, I started confusingly clicking the gold buttons above. While doing tasks like these, I quickly understood the feelings of a prospective user. I think the testers allowing me to wander around the system first made me more comfortable performing specific tasks later on. A difficulty I encountered was deciding whether to act as a confused student or myself. I wonder if it would be more effective to have a random student perform this test, rather than me as a group member.

Testers' Perspective: We had one person observing the person interacting with the prototype and taking notes, and another person who was guiding the user through the process. This approach worked well and allowed us to gather valuable feedback from each user.

Pilot Results and Relizations

Upon running the trial, we learned a lot of things about the think-aloud method.

Firstly, it was extremely helpful and effective in not only seeing how a user would naturally interact with this kiosk after not having much experience with it. Next, it was helpful to hear the users thoughts and get inside their minds. This helped us to note what they thought was happening, what they thought should be happening, and what they are trying to accomplish at certain points as well as why they may have tried that action.

In terms of the negatives, we learned that it can be uncomfortable for the user to be sitting there observed by a few others and sometimes be stressful and potentially impact their responses, actions, or degree of thoughts mentioned. This could also keep the user from saying something in fear that they will sound "dumb" or like they don't know how to use the product. Lastly, we found that it was really hard to completely capture all of the users thoughts, actions, and ideas, as its much quicker to speak and complete actions than it is to take notes of both of such.