Heuristic Usability Evaluation – Group 73

Samuel Bruin, Rafayel Gardishyan, Tejas Kochar, Jannes Kelso, Danylo Kozak

ABSTRACT

Heuristic Usability Evaluations are done to find problems in user interfaces of applications. This report is about the evaluation we have conducted for our application 'talio.'. In this report, we describe how we have conducted the evaluation (instructions given to evaluators, format of submitting an evaluation and criteria on the basis of which the application is to be evaluated) - so that the evaluation can be reproduced - and the actual results of the evaluation (the feedback received and how we will act on it to improve the product).

1 INTRODUCTION

The main goal of this evaluation is to find problems that potential users of this application might face so that they can be fixed and the overall quality of the application can be improved. We are specifically looking to

- improve on the ease of use and intuitiveness of the user interface
- provide the user with all the functionality they might need
- give the application a clean and minimalistic design

The mock-up that the evaluators were provided with can be found here. The mock-up has four pages -

(1) Initial Join Server - This page allows users to connect to a server
(2) Home - This is the page where users can see all the boards that they have joined, and can join more boards
(3) Board Overview - This page displays the actual board with columns and cards
(4) Client Settings - This page gives an idea of what the client settings page might look like

2 METHODS

In order to properly conduct the Heuristic Usability Evaluation, 5 (I think 5 members in their group right?) experts were recruited to offer their reviews on the prototype. The experts currently follow a BSc in Computer Science and Engineering, and are all accustomed to modern technology standards, making them suitably qualified to conduct a heuristic report of the prototype. Their prior experience and interest in Software Development and general technology makes them extremely sharp in regard to identifying and isolating flaws within an application's UI.

In order to conduct the HUE, the experts were given a standard procedure to follow, which allowed them to get an overview of the entire application and all of its moving parts. The procedure was relayed to the experts in the form of a manual on Google Docs, with a set of instructions and criteria to focus on during the evaluation. The prototype presented to the experts for review was an interactive and navigable mock up of the final application, which allowed the experts to get a feel of how a user might actually use the program. First, the experts were instructed to go over the entire prototype once. Since the prototype was functional, this could be done with

the use of built-in navigation tools, providing a fully immersive experience to the reviewers. After doing a preliminary run through the application, the experts were asked to list any general flaws they faced in the UI. They were asked to use a 4-step format, consisting of:

(1) Problem Description
(2) Likely/actual Difficulties
(3) Specific Contexts
(4) Assumed Causes

which allowed the experts to identify issues as well as pinpoint the contexts in which these issues were most likely to appear. Next, the experts were asked to identify errors specifically related to each of the 8 curated Heuristics criteria listed in the Google Docs. The criteria correspond to the industry standard Heuristic model, involving the following 8 points:

(1) Visibility of system status
(2) Match between system and the real world
(3) User control and freedom
(4) Consistency and standards,
(5) Recognition rather than recall
(6) Flexibility and efficiency of use
(7) Aesthetic and minimalist design
(8) Help and documentation.

The aforementioned criteria were briefly described in the document, with much more documentation available online. For each specific criteria, the experts were encouraged to provide criticism in the following format: Page; Type; Category; Description, which greatly helps in identifying exactly where and how any issues are occurring, making them easier to address in the development process. Heuristics is a largely qualitative area and should be addressed as such. Given the aforementioned criteria and structure, the experts were able to provide qualitative feedback which could be categorised by where it occurred, and the Heuristics category. While numerical data may be easier to visualize and model, the qualitative feedback provided serves as a perfect foundation to specific issues that can be addressed in the development process, and specifically, placed on gitLab to be resolved by a discrete Merge Request.

3 REPORT

This section contains the problems reported by evaluators, grouped by page and ordered by perceived severity of the issues.

3.1 Initial Join Server

The most severe issue reported for this page was that it was not very intuitive and lacked the necessary descriptions or instructions without which the new users could feel lost. Two evaluators also pointed out that a default server address was missing, which would make things much more evident. A default port number was also requested.
Another piece of feedback, was that we need to rigorously error

check and throw corresponding error messages on the "Server Connection" screen, so that users know what's going wrong.

3.2 Home

A very general issue raised by a reviewer was the concern that users may be disoriented when first arriving on the Home page if they haven't used the app before. A proposed way of fixing this is to add a "Workspace" or "Dashboard" label to the page. Changing the header of the page to read "Talio: Dashboard" could certainly help some users understand exactly what they are looking at and make sense of the various buttons and boards.

One piece of functionality that we forgot to display in the prototype is the ability to disconnect from the current server and reconnect to a different one. The current prototype would not allow for any such change: after connecting to a server once, it would not reopen the "Server Connection" screen as it does the first time that one launches the app. This was simply an oversight in prototype design and we will make sure to have an option for this on the home page, which reopens the "Server Connection" screen with an additional "Cancel" option, as planned.

3.3 Board Overview

An issue users may face on the Board Overview page is finding the Board settings. The prototype allows access to this by clicking on the board name at the top of the screen, which also displays a pencil icon, indicating editing, when hovering over it. A reviewers speculation as to why this may not feel so intuitive, was that the board name is very large and feels more like a static title than a functional element.

A similar issue was raised about how copying the board code feels a bit unintuitive. The code can be found both under the board settings modal as well as copied by clicking the paperclip icon at the top right.

A reviewer noted that (if we wish to complete the advanced features) cards should have both a title and a description. They will have these features, they were just not clearly communicated in the prototype.

One reviewer noted that the edit list and edit tags modals are not implemented in the prototype.

Another reviewer expressed concerns that some of the mock cards don't have tags, don't have titles, or don't have descriptions, and that this may confuse users. The prototype is not fully fleshed out and therefore not all the cards are entirely prepared. Only some of the cards had all the features implemented to briefly demonstrated what that will look like. In the final application the user will only be presented with a single empty list upon creating a board so there is no need to worry about the users impression of the specific mock cards in the prototype. They can add tags as they wish and cards will require a title.

3.4 Client Settings

All the reviewers were satisfied with the settings.

4 IMPROVEMENTS AND CONCLUSIONS

In the initial join server page, we will:

- briefly describe what is expected from the user, so that non-technical users are not confused
- provide a default server address for users to connect to
- provide users with the option of hosting their own server
- guide users to provide a valid server address with precise and helpful error messages. The cases we have decided on are for when a user does not provide any address or provides an invalid address. In case the server is not responding, this will also be conveyed in a non-technical, user-friendly manner.

To the home page, we will:

- provide a way for users to disconnect from the current server so that they can join another server
- make it more evident that this page is the dashboard, perhaps by putting such a label at a prominent position near the top of the page
- more clearly indicate that the board settings can be accessed by clicking on the board title
- clearly indicate how to copy the board invite code by changing the paperclip icon to text reading "Copy Code" and moving the button into the upper bar aside the settings and tag buttons
- the lists currently have a pen indicating an editing feature, but those will be replaced by X's to indicate deletions, as the only other feature, renaming, can be done by clicking on the title of the list
- the edit tags modal had not been implemented yet in the prototype, but will follow a similar minimal style as the rest of the app and have the following features:
  - OK (finalize changes and leave modal)
  - Cancel (revert changes and leave modal)
  - Add new tag and set name
  - Remove tag
  - Rename tag
  - Change tag color

The Board overview was the page with the most features, and also the most reported problems. To fix these, we will

- make the board settings easier and more intuitive to find, maybe by making the pencil icon beside it visible at all times instead of just showing it when a mouse hovers over the name of the board.
- move the copy board button to the bar at the top of the screen instead of being in the body. We will also make it more easy to identify.
- provide cards with both a description and a title, as opposed to just a block of text as they have now.

5 CITATIONS

You can cite papers, e.g., [1]. To make the references appear, make sure to compile the latex sources, then bibtex, and then latex twice.

REFERENCES

[1] First Author, Second Author, and Third Author. 2018. An Examplary Paper For The References. In *International Conference on Silly Walks*.