OOP Project Report – Group 44

Rebecca Nys, Matei Hristodorescu, Marius Frija,
Matthias van Vliet, Zico Krassenburg, Yulia Waarsenburg

ABSTRACT

The purpose of the Heuristic Usability Evaluation which has been performed is to offer a meaningful understanding of how our application prototype adheres to the 10 heuristics proposed by Nielson [1] and how we could possibly improve our User Interface design to produce a better application user experience.

1 INTRODUCTION

The aim of this report is to evaluate and improve the prototype of the User Interface of our Task List Organiser application, which will now be introduced in more detail.

1.1 *Task List Organiser*

The Task List Organiser, which we will from now on call TaLiO, is an application which allows users to make so-called boards on which lists of tasks can be added to. This serves the users as a useful tool for many purposes, for example to keep track of any tasks that should be done, are being done, or have been completed in the past.

Some of TaLiO's key-features are:

- The option to create boards which have a certain board title
- The option to add lists to existing boards which in turn have their own list title
- The option to add cards to existing lists which have their own title and description
- The option to add tasks to existing lists
- Built-in functionality to edit or delete any of the existing elements
- The ability to collaborate in real-time with other users to work together on the same board
- The persistence of boards, so that boards are saved in a database and can be retrieved by users at a later time

1.2 Prototype

The prototype that was used in this Heuristic Usability Evaluation has been produced using Moqups, an online tool for quickly making a working prototype of a GUI - a graphical user interface. The prototype can be found here. It was largely based on the GUI of the application at that point in time. That way any issues that were found in the prototype could also be improved upon in the real application.

2 METHODS

2.1 *Experts*

A good heuristic evaluation is never done with only a single individual, because one person will never be able to find all the usability problems in an interface. Different people will find distinct usability problems, thus improving the evaluation significantly. Since Nielsen stated in his research that his recommendation was to include 3-5 evaluators [1], we conducted a meeting with another group of students, consisting of 5-6 people, to which from now on, we will refer as experts or evaluators. Their level of expertise is between novice and advanced. Each of the experts, performed the heuristic evaluation alone, since everyone's level of expertise, was above Fundamental Awareness (basic knowledge), we didn't have an active observer during the evaluation.

2.2 *Procedure*

For the heuristic evaluation we had the choice to either let the evaluators verbalize their comments to an observer or to let them give their findings via a written report. Since the group, we were doing the evaluation with, didn't have their evaluation yet prepared, we decided to do the evaluation with the aid of Google forms. This kind of written report was the best suited for us, since it didn't require us to wait for the other team and to fully customize the kind of questions we wanted to ask the other team. Another benefit was that each individual evaluator could inspect our interface alone, so there wasn't any communication between them at all (we also specified to them, that they should answer the questions individually). In this way we ensured that there were unbiased evaluations.

2.2.1 Instructions.

In our Google Forms, we wrote an extensive instruction, on how the evaluators should use our prototype and that the mock-up they were presented with, was interactive, meaning that all the buttons, presented as elements of the GUI, triggered specific actions. We also provided instructions on the format we expected the evaluators, to answer our questions. For example, in the case of identifying any specific issue, the instructions informed the evaluators to structure their answers according to the following criteria:

(1) Give an elaborate explanation of the problem/issue you identifed.
(2) State the the anticipated difficulties that the user will encounter as a result of the problem.
(3) In which context may the problem occur?
(4) Give a description of the causes of this particular problem/issue.

We wanted to provide to the evaluators as little guidance as possible, since everyone had some experience with the application. In case that they needed some aid, we stated that they could use the "Hotspots" functionality of Moqups. We also stated, that this should only be used as last resort.

2.2.2 Prototype.

Since we already had some functional scenes in our project, we decided to create a prototype, which would be the closest possible to the current state of our application. We made use of https://my.moqups.com to create the prototype. We only added some minor modifications to the slides, to show some more functionality which we decided

to implement. The final result was that we provided our evaluators with 11 slides, each slide represented a different state of the application which would occur during its usage.

2.2.3 Steps.

2.3 *Measures (Data collection)*

In our heuristic usability evaluation we are measuring how well our application follows Jakob Nielsen's 10 broad rules of thumb [1]. These are basically general principles for a user interface design. The 10 heuristics are listed below.

(1) Visibility of system status
(2) Match between system and the 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

Experts need to report any issues and improvements of our application which correspond to the heuristics listed above. We record their responses using a Google Form. We asked them to give our application a score ranging from 1 to 5 based on each heuristic separately, a score of 1 meaning "Very bad" and a score of 5 meaning "Excellent". For each heuristics principle, we also asked them to give an explanation of their rating. Thus the raw results of the evaluation are collected in the following format: for each heuristics principle, the evaluation result consists of a score ranging from 1 to 5 and of an elaborate explanation of the given score, which usually includes descriptions of issues and/or suggestions for improvements.

3 RESULTS

4 CONCLUSIONS

5 IMPROVEMENTS

REFERENCES

[1] Jakob Nielsen. 1994. How to Conduct a Heuristic Evaluation. https://www.nngroup.com/articles/how-to-conduct-a-heuristic-evaluation/