

Designing an arcade cabinet for Stichting Gamelab Oost

Public summary

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Background Information

The foundation Stichting Gamelab Oost offered an assignment to design an arcade cabinet. For this assignment, it wants a functional, yet aesthetically pleasing design. The arcade cabinet should be able to be brought to events to showcase the serious games developed by Stichting Gamelab Oost and it should be able to be used by their game development teams to test their prototypes on it. Additionally, it should be designed in the style of an arcade cabinet that still follows the design guidelines of Stichting Gamelab Oost and is able to store all components provided Stichting Gamelab Oost. This bachelor thesis aims to further improve the design of the hardware of the arcade cabinet so that it enhances the user experience of the different stakeholders connected to Stichting Gamelab Oost. Thus, a main research question can be stated which goes as follows:

“How does the design of an arcade cabinet fulfill the needs of the different stakeholders connected to Stichting Gamelab Oost?”

With this main research question, this Bachelor Thesis assignment's major goal is to better understand the different stakeholders connected to Stichting Gamelab Oost in order to come up with a design that satisfies their needs and wishes. The arcade cabinet might be produced if Stichting Gamelab Oost approves the design.

Approach

To answer the main research question, an approach was taken that splits the main research question into two phases which eventually will lead to a solution. Phase one focuses on gaining knowledge regarding the different stakeholders connected to Stichting Gamelab Oost with the usage of literature research. Within this phase a literature research, a contextual analysis on the stakeholders and a style analysis on Stichting Gamelab Oost were conducted. Phase two focuses on conceptualizing a design that will be evaluated by the different stakeholders connected to Stichting Gamelab Oost based on its functionality and aesthetics through interviews, observations and user-testing. Within this phase an ideation subphase, conceptualization subphase, prototyping subphase and evaluation session were conducted.

Results

Based on the 2 phases, the needs and wishes of the different stakeholders connected to Stichting Gamelab Oost became clear. During the development of the concept, the factors that fulfill these needs and wishes were taken into consideration which goes from understanding the user, to ideating for them, to prototyping. In the end the design of the arcade cabinet was evaluated by these stakeholders. With this, the stakeholder needs and some of the wishes were fulfilled both on aesthetic needs as well as functional needs. A final concept of the arcade cabinet can be seen in figure 1.



Figure 1. Final concept arcade cabinet

Limitations

The limitation of this Bachelor Thesis was evaluating the final design with the target group. Since a part of the target group involved 10 to 15 year old children, it was not possible to do the evaluation. The reason was because an evaluation session could not be planned with them as they had their summer break at that time. Thus, some needs and wishes could not be fully met due to not being able to collect all the stakeholders their opinions on the final design.

Conclusion

In conclusion, an answer has been provided to the main research question. The functional and aesthetical aspects of the design have been researched on and evaluated by the different stakeholders connected to Stichting Gamelab Oost. Additionally, Stichting Gamelab Oost was in general positive about the final design even though the design was not fully optimal yet. The following step is to further research and develop some design features, do more qualitative evaluations with the stakeholders and look if it is possible to mass produce the arcade cabinet.