RESEARCH INTO THE SIMULATION OF SHOCK WAVES

Graphical User Interface Evaluation

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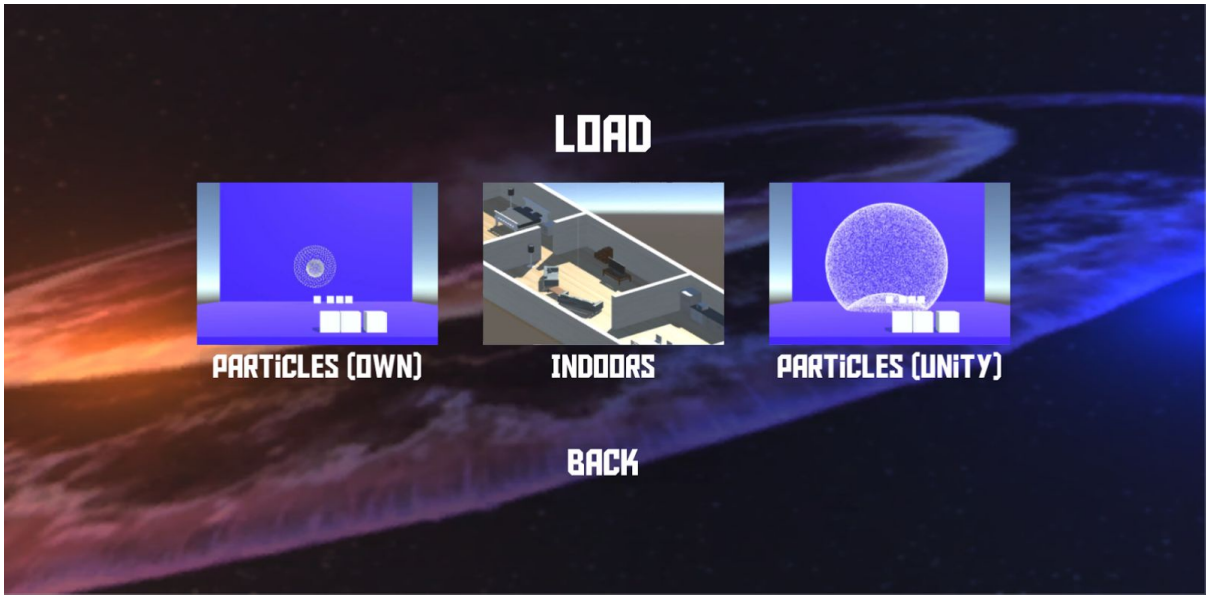
Introduction

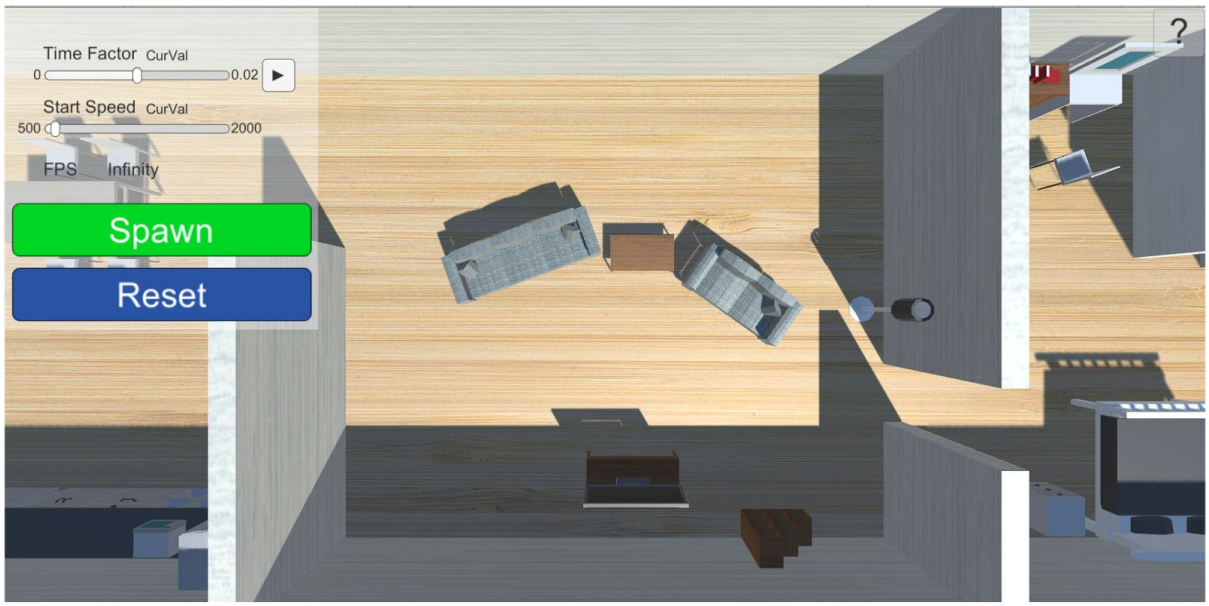
This document gives an overview of the products final design. In this document we will evaluate the final GUI design and discuss the changes that were made from the initial sketches and as to why they were changed.

Final Designs

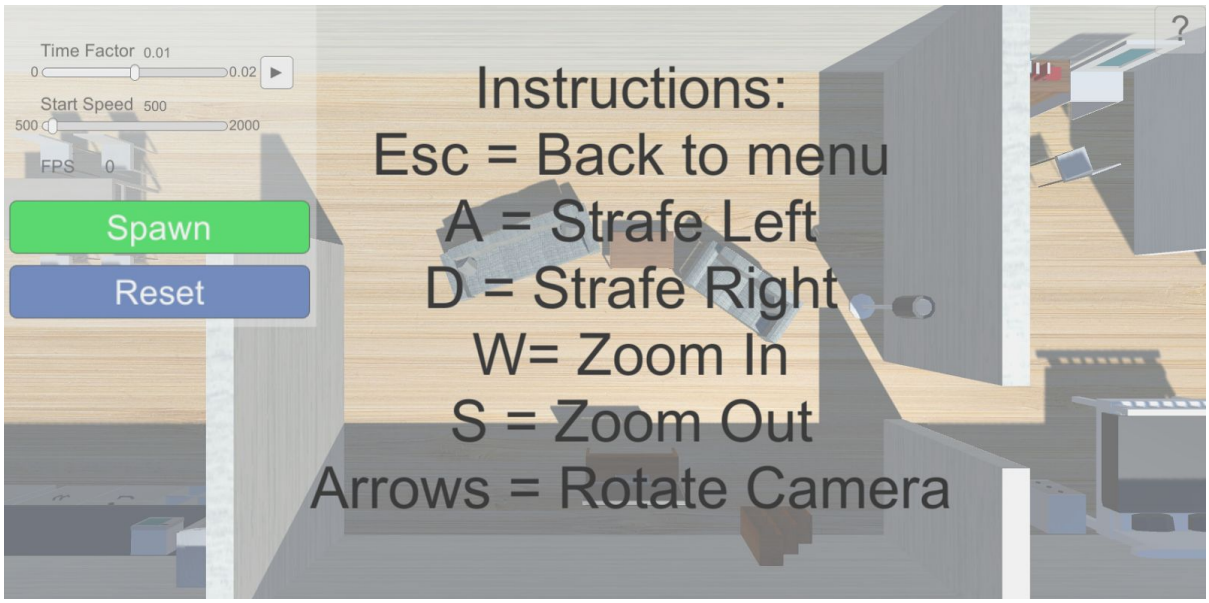
Main Menu



Load Menu



Scene



Overlay displayed when selected help button (the question mark in top right corner)

Changes Made From Wireframes

Some features specified in the wireframes were kept, these were:

- Time handler
- Play/pause button
- Help button (question mark)

However, as a result of work on the backend development some changes were made to the features which would be able to be displayed on the GUI. To see the features which had to be taken off the final system refer to ‘functional testing’ in “*Front End Testing*” file. The features that were added as a result of development into the shock wave were as follows:

Reference Name	Feature	Description
Scene-05	Start Speed	In order to test the different strength of forces, and also to ensure that forces were correctly being calculated within the back end, users were given the ability to change the initial speed that the particles would be travelling at.
Scene-06	Spawn Button	As V3's version of the project used a wave that was always spread equally, we decided to allow the user of the system to be able to move the location of the wave spawn. This meant that the simulation would always be different. It was also necessary to have the ability to spawn the wave, as this was the only way a wave could be put into the scene with the altered attributes, given by the start speed slider.
Scene-07	Reset Button	When pressed the scene gets reverted to the initial setup.
Scene-08	Frame Per Second Counter (FPS)	This displays the time taken for each frame

Conclusion

As a whole, the GUI was very successful. It proved to be aesthetically pleasing for the user to use with only minor negative feedback in the user testing. Furthermore, although very different to the initial designs, the GUI has become more user friendly and has only improved. We aimed for the GUI to focus entirely on the user and our project fair feedback (See document entitled "*Survey Responses*") proves that we have achieved this aim, with over 80% of people rating the interface 4/5 or for ease of use and with almost 60% of those rating it 5/5. Moreover, even though, the GUI did not pass more than half of the functional testing due to not implementing some features, there was valid reason for this and other features were implemented instead. Therefore, we feel that for these reasons, the GUI can be considered a complete success.