Project Deliverable H: Prototype III and Customer Feedback

GNG 1103 – Engineering Design

Faculty of Engineering – University of Ottawa

Team Members:

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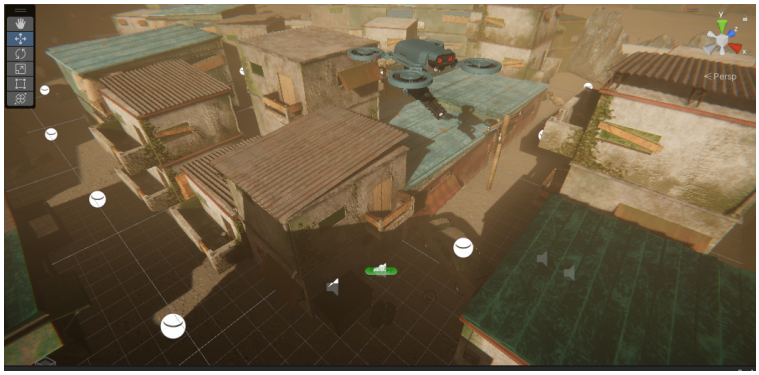
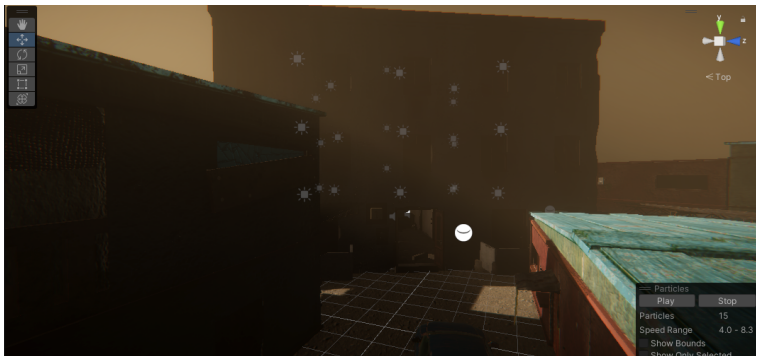
Prototype III:

Our third prototype shows lots of progress and improvement compared to the others. In the past weeks, we have finished finalizing the complete plot of our VR experience. This along with the script for our characters being fully written and recorded finishes the non-coding aspect of the project. Using the customer feedback we have shortened the complexity and have created a plot that will be able to convince the user of the ethical concerns of autonomous weapons while also keeping the experience simple and short. Our script outlines what our characters like the soldier, child, and general will be saying and amplifies our experience by making the user feel as if he is the soldier with those patriotic values. We have recorded the voice lines and plan to implement them into our experience. In terms of our VR experience, we have made lots of headway. We finalized and finished creating our setting with the use of a slum town asset. We have finalized the coding of the drone and now have a drone flyover and a drone chase scene. We have also been able to test the VR experience a few times and have had success in exploring the experience we have created. The asset for the child has also been located and implemented into our experience. We have also implemented invisible walls to limit the user's ability to stray from the main story. As the project end date nears we are reaching the final additions of our experience.

Our prototype seeks to convince those in support of autonomous weapons about the ethical concerns regarding them. Our final prototype will be able to do so by placing the user in an experience where they are minimal user interaction allowing for the user to fully immerse themselves into the experience without having to worry about their ability to handle the VR controls. Putting the user in the mind of a soldier and giving them a mission will appeal to the patriotic side of the user. This along with the use of a child and the drone attacking the child will clearly imply that these drones are unable to see through the fog of war and will be mistaking civilians as those involved in the combat. This is the main point that we are trying to convey. Drones are unable to see through the fog of war and will mistake people for being active fighters including children who happen to be wearing army camouflage. It will also show the helplessness behind fighting against drones are our soldiers will be unable to fight the drones and only run and hide. Our final prototype will include a full experience with the user being able to start the experience and smoothly run through the motions. Currently, we have yet to finish all the scenes and implement the voice lines of the characters however, with a few more days of work we will be able to finalize these aspects of the experience. We have been able to run some tests in the VR and have had some progress in understanding how to set up the experience along with being able to troubleshoot some issues.

Prototype Testing Plan:





#	Type	Objective	Fidelity	Feedback	Objective	Result
1	Testing of basic unity asset on VR system	Performance of VR system	Low	No client involved	Making sure the VR works with unity and works well with the asset.	The asset looks very good in VR. Very realistic.
2	Moving around in the VR experience.	Performance off the experience.	Low	No client feedback.	Making sure the experience runs smoothly and isn't laggy when the user is moving. Also making sure that the user's hands are visible and not transparent.	User's hands are transparent and some tweaking with the software must be done to resolve this. However, the movement in the game is smooth and feels realistic.
3	Testing drone flight in Unity	Find out if the drone flies smoothly and have it fly over the character for our next scene.	Medium	No client feedback.	Making sure there are the drone can fly properly and the first scene can be recorded well.	Drone flyover was performed and the drone chase scene is completed.
4	Testing child asset in VR experience	Find out if the child fits the setting and if the character works in VR.	Medium	No client feedback.	Making sure the child looks normal in VR and fits the experience well.	-
5	Testing voice lines of characters and recording of a new scene.	Do the voice lines fit the scene and exchange the experience?	High	No client feedback.	Making sure that the voice lines fit the experience.	-

Images of Prototype III:

Feedback from Potential Clients:

- VR Experience should stick to the storyline and project. (Try not to get sidetracked and make it more like a game)
- Slumtown asset is very realistic and increases the realism of the experience.
- Sounds should be added to increase the experience.

- Storyline is good and convinces users of the ethical concerns.
- Voice lines may need tweaking and must be more realistic.