Simulation for informed practise with children

Previous Designers:

David McCann

Beck Rowse

Brief

An educational virtual reality app built for the Gear VR Headset using 360 video.

The goal of this app is for students to experience a home visit as a social worker and then to discuss their views, opinions, and biases about it - with the teacher being able to lead the discussion about these topics.

Executive Summary

This application will explore the brief through an experience where the student plays the role of a social worker in the midst of a house visit, they will be asked to look for signs of neglect through surveying the room and then subsequently inspecting items with a closer look to gather the nitty-gritty information about said item.

Analytics from the students play session will ideally be available online (or somewhere else) for the teacher to use to create discussion in the classroom about differing opinions and views between the students and talk about the biases they displayed.

Design Pillars

Investigation
The users need to investigate, analyse and draw conclusions from an environment. They will have limited interaction available to do conduct this investigation.
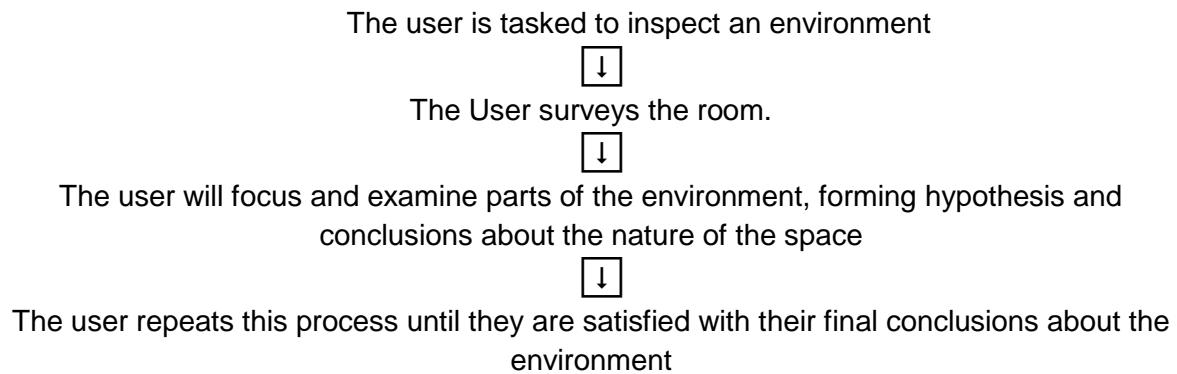
Discussion
Having conducted their investigation, students will participate in discussions about their investigations. The project needs to focus on facilitating these discussions by providing tools to better inform participants.

Bias
The project is going to be used as a tool to better examine the biases of students. This means it must focus on allowing those bias's to clearly present themselves to facilitate these conversations.

Interaction Loop

The user is tasked to inspect an environment

↓

The User surveys the room.

↓

The user will focus and examine parts of the environment, forming hypothesis and conclusions about the nature of the space

↓

The user repeats this process until they are satisfied with their final conclusions about the environment

Tech Details

User tech
The current project is designed to use the Gear VR that was being developed jointly by Oculus and Samsung. It also uses a Samsung 6 to dock with the gear vr. This means all processes must be optimised for a mobile deployment.

Developer Tech
The current project is being developed in Unity, using the Unity initial VR packages. Additionally, one of the development PC's is connected to a HTC Vive Pro, and this currently works with the in engine version of the build.

The current build version of Unity is 2018.2.11f1. The current project makes extensive use of prefabs, which will break if the project is updated.

Source Control
The current Repository is stored on GitHub by one of the Team B developers (David McCann). They are hoping to transfer full control and ownership of the repository to Shepard Masocha.

git@github.com:rexx1888/UNISAVRProjects.git

The purpose of this project is to run new students through basic scenarios, so they can practise investigating safe environments for children, and then participate in class discussion on how those sessions went. To better facilitate this, most systems are focused on analytics rather than user engagement

360 video scene
A scene where users can look around at a 360 recording of an environment. This scene will track their observation but they cant interact with anything in the scene.

Interactive build
This is a custom built scene. The objects and things in the scene must be modelled, uv'd and textured. The user can move around in this scene and look from alternate angles though.

Observation Recording
A system used to record what objects the player spends their time examining, and how long they spend examine them.
        <Note: this will work better in the interactive scene>

Heat Map of Observation
A colour overlay of the scene that shows where the player focussed their attention over a session by colouring it more severely for longer periods of scrutiny.

Observation Tracking
A system to track the progress of a users examination and record that progress in specific, timed increments. This record is then used to build a picture of where the student was looking and when. This picture is presented to users as a line render of their progress with timecode stamps at specific points.

The time code stamping allows users to move to that 'point' in the scene recordings to specifically see what was happening at that time and where they were looking.

Audio Priming
Users are often primed to judge the sessions negatively. Whether this is caused by preconceptions about the sort of people they are inspecting or the technology itself is irrelevant. We need to counteract some of this priming. To achieve this, we use an audio track that is light, calming and promotes inquisitiveness at the beginning of the program. We can't have any audio in the actual sessions, but we can at least try to prime our users to a more neutral state before a session starts.

Stretch: Time stress Sessions:
The time in a scene is already tracked as part of the observation tracking system. A timed session is a session where the time the users can spend in the scene is limited, forcing them to rapidly assess the environment rather than taking their time.

Stretch: Separate PC build
This will facilitate the lecture/tutorial process where a single student runs through the scene with a feed to a projector.

Appendix A
Target Summaries And developer teams

Team A
Designer : Beck Rowse
Artist: Tyler Ellul
Programmer: William Holman
Placement complete 9Nov2018

No Target Summary available

Team B
Designer: David McCann
Artist: Nicholaos Spartalis
Programmer: Camryn Schriever

Target Summary

- Adapt single static scene to play three video scenes and allow transition between them
- Create 2 versions of this scene:
  A 'Clean' version that only has the scenes playing and tracks the metrics of users
  An interactive version that provides users with more tools to examine and interact with the scene. – scrubbed from targets after an acknowledgement of it being a waste of resources
- Metrics to better track and facilitate user interaction in the scene, and then facilitate more discussion about them.