Dino Digger VR Report and Future Considerations

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Project Requirements

- To teach grade school students about dinosaurs and paleontology by creating an immersive, interactive medium.
- The implementation of this medium must be low-cost and simple to set up.

What we have accomplished

We managed to finish most of the things we set out to at the beginning of this project. We created a virtual reality application that runs on the Android platform and uses Google Cardboard to represent a virtual dinosaur quarry. In the app, the user is able to collect bones and move around the quarry by moving to specific points around the environment. Five bones are scattered around the environment that the user can collect. After the bones are collected, the user can go to the tent at the center of the map to complete their objective. The user is then free to roam the environment for further exploration.

We also put in educational information about the fossils in the environment as that was part of the project requirements. We talk about the bones as they are being collected, as well as information pertaining to the process of excavating dinosaur bones, and what it is like to occupy an excavation site.

Experience

On testing testing the application on the Google cardboard, there were a few challenges when we kept the auto-walk feature because of which the user got lost and had a very difficult time locating the bones. By adding the spheres for travelling, we made sure that the user didn't get lost on the quarry and looked after the collision avoidance. On testing the application after this implementation there was no complaints on travelling wrt to understanding, locating and the dizziness usually faced while operating a VR application. The overall feedback was excellent.

Future Possibilities

- HTC Vive (when the price lowers significantly from $800)
- Camera function used to detect change in user coordinates outside of the VR environment