**Problem**
- Lighting inside of SIPA model is too dark (low visibility).
- Model edges are jagged, sharp and rough.
- User center pivot for rotation is eccentric.
- Walkthrough particle guidance texture is missing.

**Solution**
- Reposition the sun accordingly to illuminate the interior of the SIPA model.
- Add anti-aliasing attributes to smooth edges.
- Locate and change center pivot of user to center of body.
- Create walkthrough particle texture.

**Current System**
- Sun transitions across the sky illuminating the SIPA model.
- Optimized full scale model of SIPA building.
- Motion sickness alleviated with smoother transitions.
- Visible walkthrough with intuitive guidelines.

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**Requirements**
- Accurate and comfortable user movement around the virtual world.
- Intuitive pointer to select and point at objects.
- Ability to play videos and show graphical assets.
- Proper walkthrough and guidance system for user to follow.
- Correctly display the soil animations in the model.
- Align camera to the correct wall for the interactive wall experience.

**System Design**

**Implementation**
- The system was implemented using Unity 3D for the environment model and the Oculus Rift for interactions in the Virtual Reality.

**Verification**

**Object Design**

**Summary**
- Multiple experiences for the user to interact with.
- Easy to follow walkthrough particle guidance system.
- Accurate lighting and ambient illumination.
- Smooth model transitions.
- Optimized SIPA model for faster rendering.
- Intuitive object pointer.

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