G12

Simulation environment for point cloud scanning augmented reality application development

UFO game port to GamiLiDAR core

17.4.2025

Introduction

Purpose and scope of project

We created an ufo shooting game at the proof-of-concept level ([Issue #72](#)). The customer wished to know / see how this game would function on top of the core application, so we ported the game onto it for this purpose.
This document describes what steps were necessary to achieve this.

Ufo game port

- Export ufo scene from simulation, Import to core
- Remove our tests that came with the package
- Copy Xr origin, ar session to ufo scene
- Move rifle from under Player->main camera to under XR origin ->main camera
- Delete fog objects, map generator, terrain mesh, vegetation generator, roadmesh, pointcloud, keybind manager, UI canvas
- Copy lighting settings from some other existing game (dont want to use our simulation skybox etc.)
- Delete our scripts files (pointcloudmanager, pointcloudvisualizer, pointcloud, seenmeshmanager, vegetationgenerator, mapgenerator, legendmanager, keybindmanager, playermovement)
- Restore StaticVariables.cs into its contents before importing was done as our version overwrites it
- Delete assets/editor/generatoreditor
- Set ufo prefab in UfoSpawner object (prefab UfoFinal in assets)
- Set rifle transform to (0.035, -0.03, 0.06) so it's positioned well with camera
- Add UFO2 scene to the list in SceneSelector scene's "selector" object

Playing the game

After successfully building the application in unity to user's phone, the game can be started by selecting UFO2 (current name of the game) in the application's game menu. The game opens and shows the world through the phone's camera with added gun element on the right side of the screen. The game can be played by moving and looking around for spawning UFOs and tapping the screen to shoot them. The UFOs will disappear after a short duration or when a player has successfully "destroyed" them by

shooting them down. The UFOs spawn pretty high up in the sky so looking upwards is recommended.