ARSandbox Traffic Simulation Install Guide

Team 56

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1 System Requirements

- Microsoft Kinect V2 Sensor.
- 1080p Webcam.
- A mini short-throw projector.
- Intel Core I7 or equivalent processor.
- 8+ GB RAM.
- GTX 1080 Graphics Card (Other cards may likely work, but are untested).
- An elevated sandbox with approximately 200 lbs. of play sand and an overhead mount for the projector, webcam and Kinect.

2 Install Unity

- Go to urlhttps://unity3d.com/get-unity/download and download Unity version 2018.3.12.
- Execute the downloaded installer and follow the instructions given.
  - During installation, ensure that the "Vuforia Augmented Reality Support" option is enabled.

3 Install SUMO

- Go to `https://sumo.dlr.de/wiki/Installing#Windows` and download the 64 bit Windows installer.
- Execute the installer and follow the instructions.
  - When prompted, select "C:\Sumo\" as the installation location
  - Follow the websites instructions to add SUMO to the PATH on your computer and add the environment variable SUMO_HOME. For more information or help please visit the following webpage. `https://sumo.dlr.de/wiki/Basics/Basic_Computer_Skills`

4 Clone the repository

- `https://github.com/spencjon/AR-Sandbox-for-OSU-Civil-Construction-Engineering.git`

5 Open one of the two scenes in Unity

- For Traffic Simulation mode, open \src\AR_Sumobox\Assets\Scenes\SampleScene.unity
- For Depth, Design, and Cut & Fill modes, open \src\AR_Sandbox\Assets\Scenes\Sandbox.unity

6 Ensure Vuforia is enabled

- Open File > Build Settings
- Select "Player Settings"
- Expand "XR Settings"
- Make sure that "Vuforia Augmented Reality" is checked
- If the checkbox is not available, do the following:
  - Click "Vuforia Augmented Reality" under "XR Support Installers"
  - Run the program that is downloaded and follow the instructions (you will need to close Unity to finish the installation)
  - Reopen the scene in Unity