StructureUnityAR & StructureUnityUBT: Overview

StructureUnityAR and StructureUnityUBT are plugins for use in Unity3D.

You'll need a Structure Sensor and Unity

- Structure Sensor can be found here
- Unity can be found here
    - The Personal Edition works with our plugin
- Apple Development Certification
    - Information on Developer Certification can be found here
- OSX 10.10.5
    - Information on OSX can be found here
- Xcode version 6.4
    - Information on Xcode can be found here
- iOS 8.4
    - Information on iOS can be found here

StructureUnityAR vs. StructureUnityUBT

StructureUnityAR uses a form of camera tracking which follows observed real world objects and shapes to produce a camera angle and position relative to the scanned area. This allows the user to capture mesh data directly into a Unity scene. The observed data is matched and poses are estimated and updated on each frame to ensure that the scanned data matches the current observation.
StructureUnityUBT uses a different form of tracking which observes movement and estimates a new camera position and angle based on how the scene has changed between frames. This allows you to traverse any distance without being confined to any specific area. Because there's no history recorded (like a scanned mesh) returning to a location in the real world after wandering around it's likely we've accumulated some degree of drift.

StructureUnityAR: Features

Scanning and capturing a mesh overlaid with realtime color video. Once scanned the mesh is used by Unity to detect collision and mask game objects in the scene. A few example scenes are provided to give you a basic scene to get started.
The scenes start off with a scannable volume for you to position over a play area. Once you begin scanning the plugin accumulates real world surface geometry information. Once scanning is complete a duplication of the geometry observed in the real world is sent into Unity3D. This mesh geometry is converted into a mesh with collision.
Once the mesh is in the Unity3D scene, characters and objects are able to interact with it as though it were any other unity asset. This allows you to ray cast, and enable physics on the mesh for collision detection and occlusion of game assets behind the mesh.

StructureUnityUBT: Features

Unbounded tracking allows you to use the tracking capabilities of the Structure.Framework to send translation and rotation movements to a camera or object in a unity scene. With unbounded tracking you are able to move freely about a virtual scene without the aid of any additional external hardware aside from the Structure sensor itself.
Unlike virtual reality devices which use a camera or remote sensors, the Structure Sensor enables the iPad or any iOS device to traverse a virtual environment by observing real-world movement. The plugin converts the observed movement into translation and rotation in the virtual environment.
So if you lift your ipad up, the camera in the unity scene raises the same distance. If you walk forward then the camera in the virtual environment also moves forward. When you turn around the camera in game also turns around.