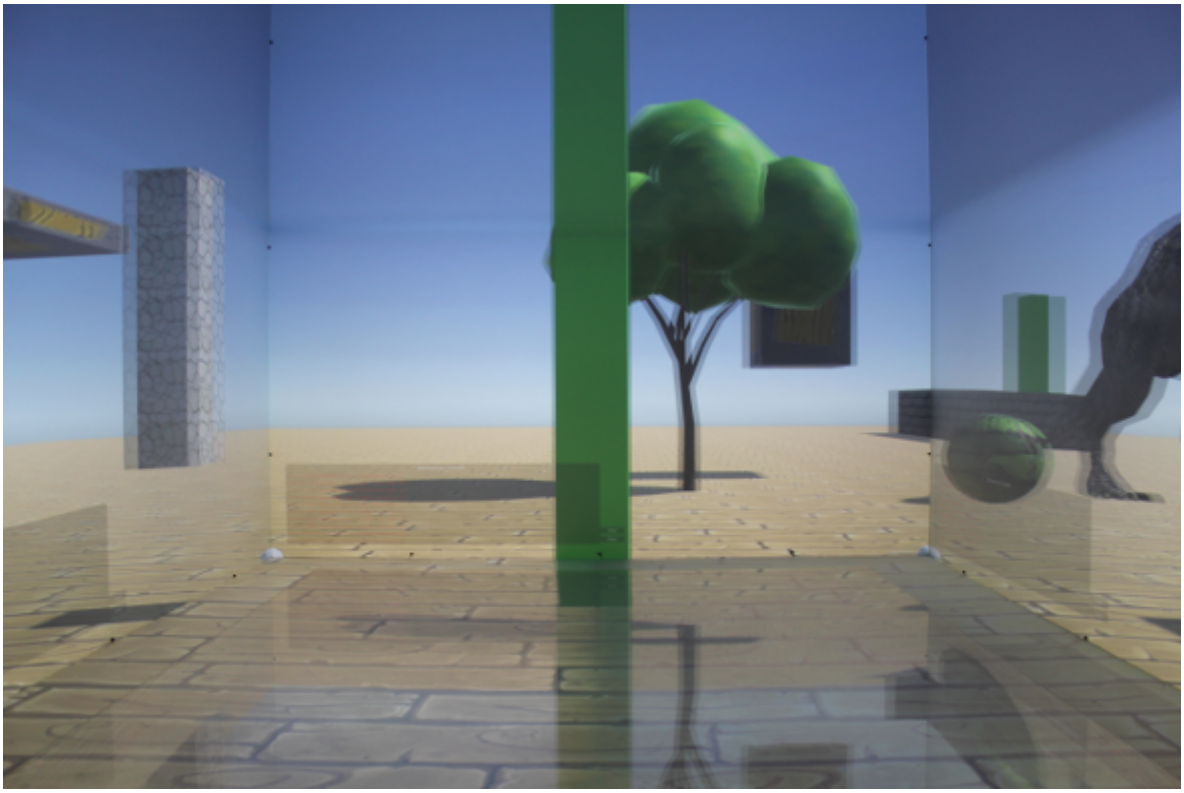
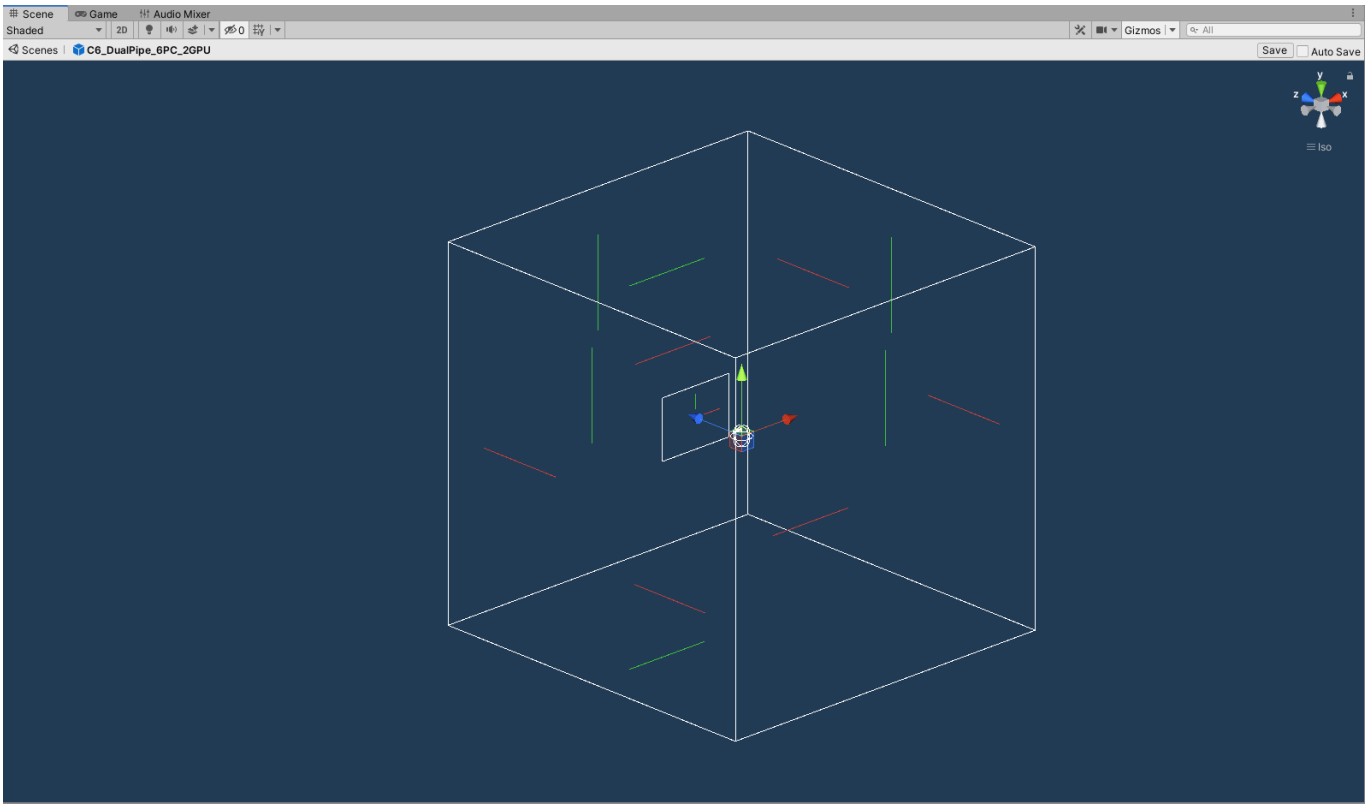
This page contains a description of some of our homemade UniCAVE setups. These setups can be found as prefabs within the UniCAVE package.

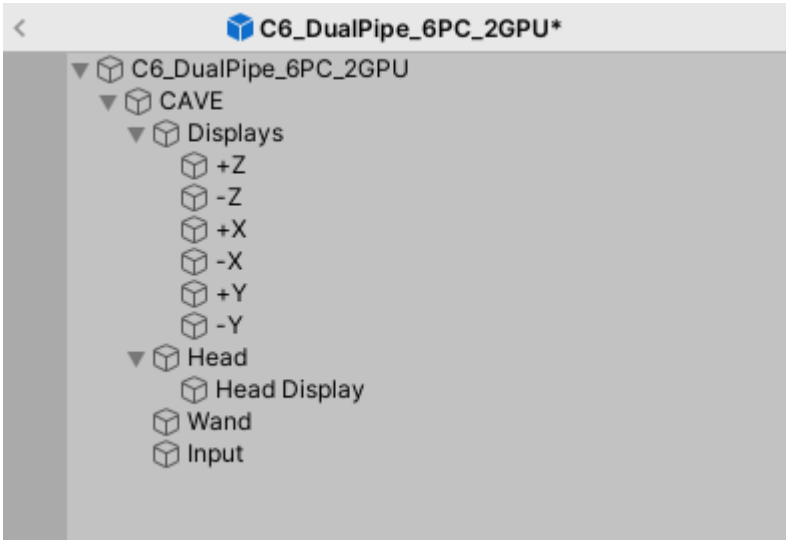
6-Sided CAVE

Prefab: UW/C6_DualPipe_6PC_2GPU



This prefab supports our six-sided CAVE system. Each side is a 9.5 foot square.

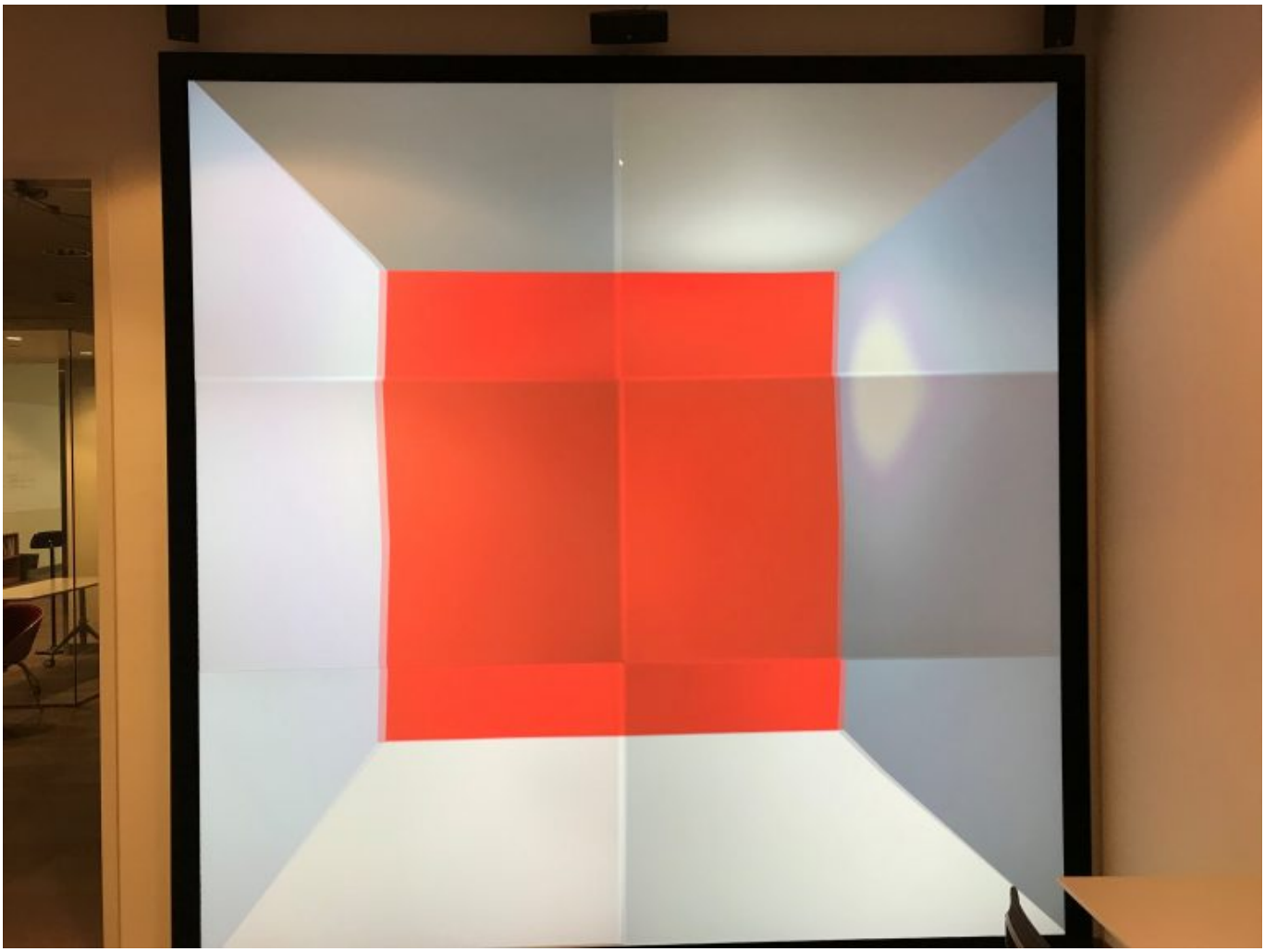




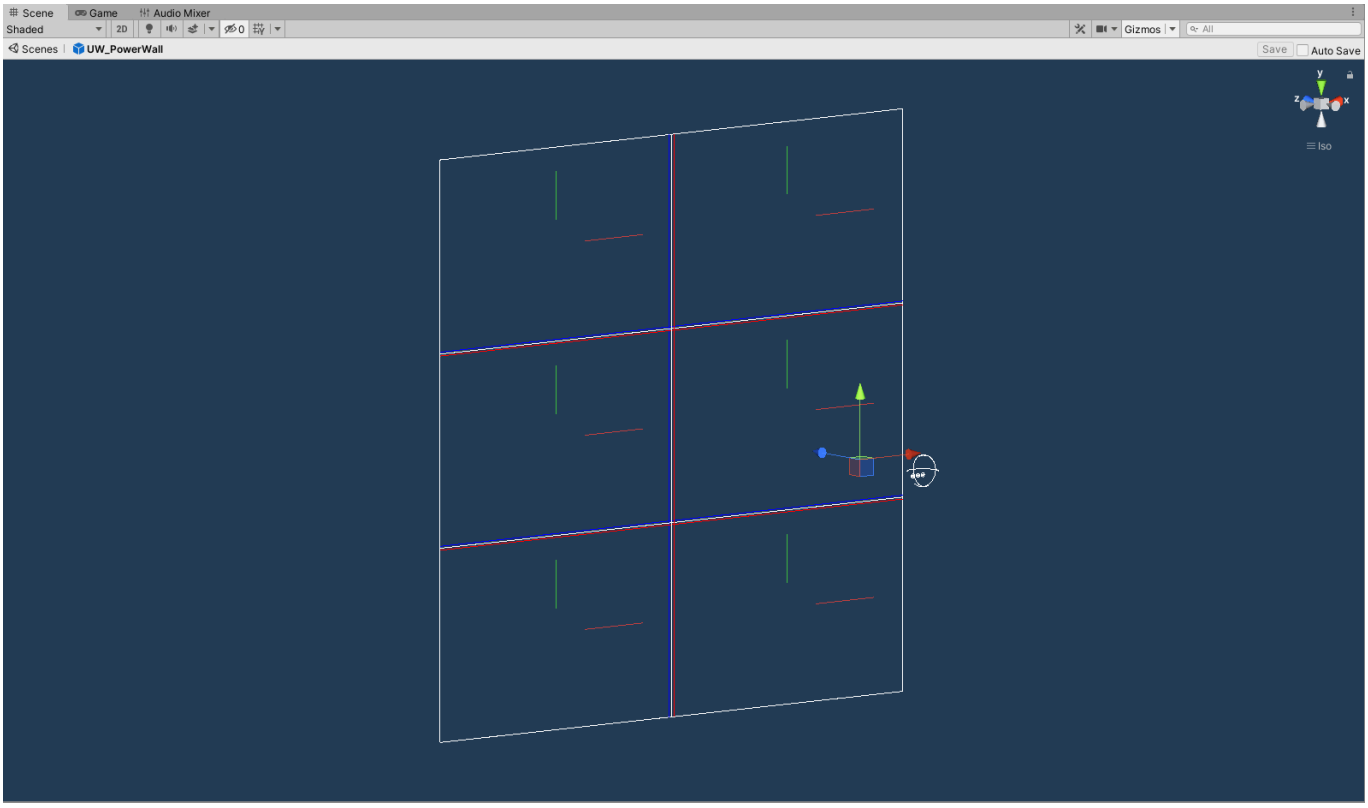
There is a single `PhysicalDisplay` for each screen: front, back, left, right, floor, and ceiling. There is no `PhysicalDisplayManager`. The displays are positioned to match the real world system and have their left and right 3D viewports set accordingly. As our CAVE uses VRPN tracking for input, there are additional `VRPNTrack` and `VRPNInput` scripts for the eyeglasses and control wand.

PowerWall

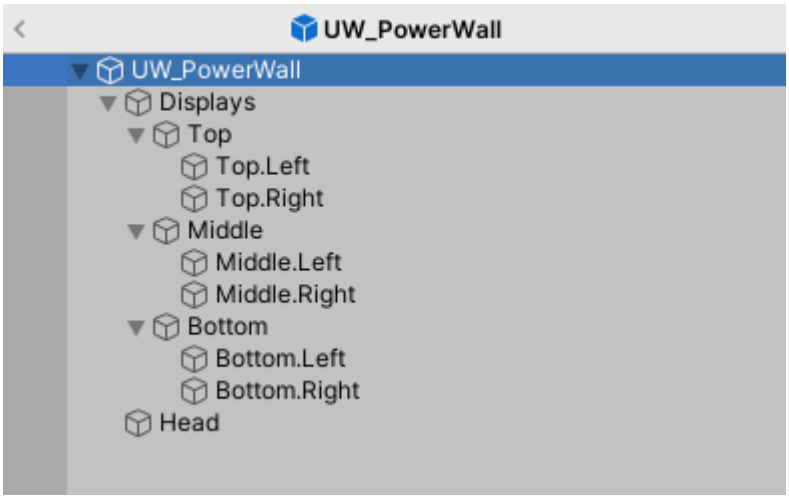
Prefab: UW/UW_PowerWall



This prefab supports our PowerWall. It consists of a single rear projection screen, the same size as one of our CAVE walls. The image is produced by six individual projectors, calibrated to produce a seamless image. More information about the PowerWall calibration process can be found here.



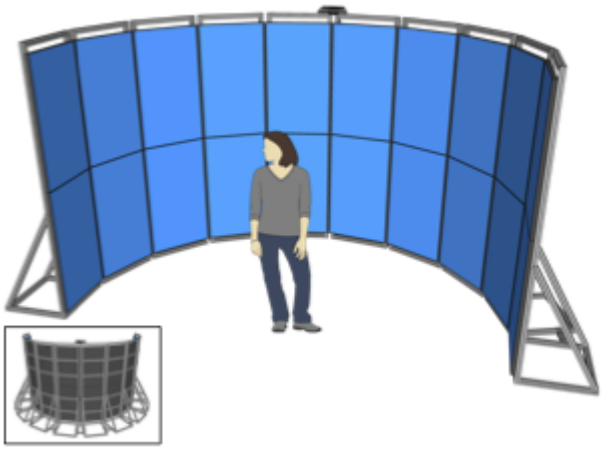
The prefab is divided into three sections: top, middle, and bottom. Each section consists of a `PhysicalDisplayManager` with two `PhysicalDisplays`.



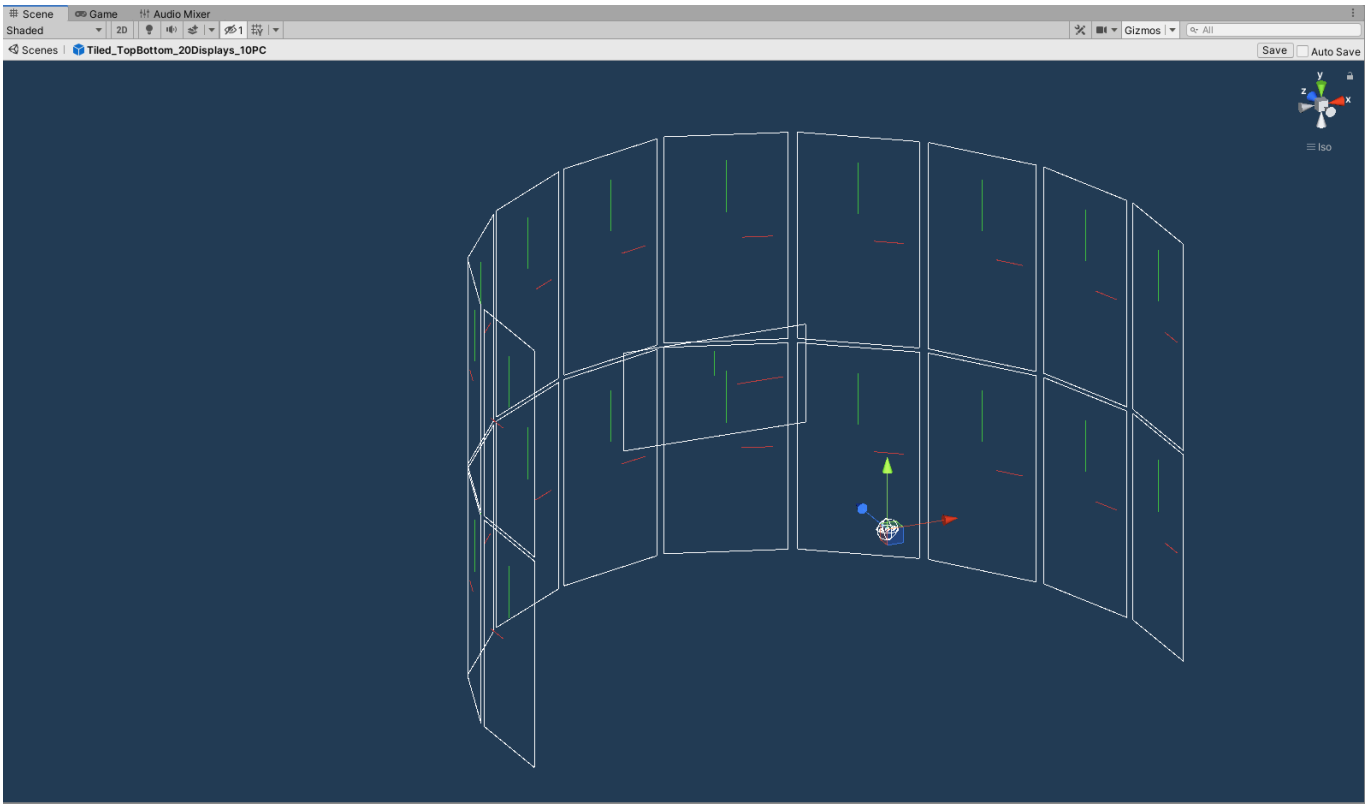
There is a 'RealtimeCalibration' script attached to the prefab root object, as well as 'PhysicalDisplayCalibration' scripts on each `PhysicalDisplay`. These scripts enable the calibration process.

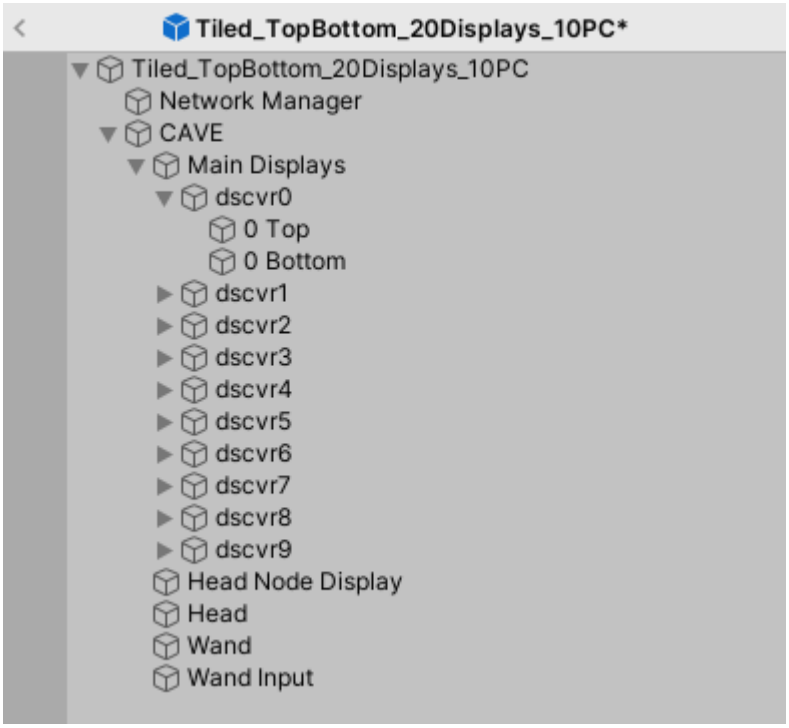
DSCVR System

Prefab: UW/Tiled_TopBottom_20Displays_10PC

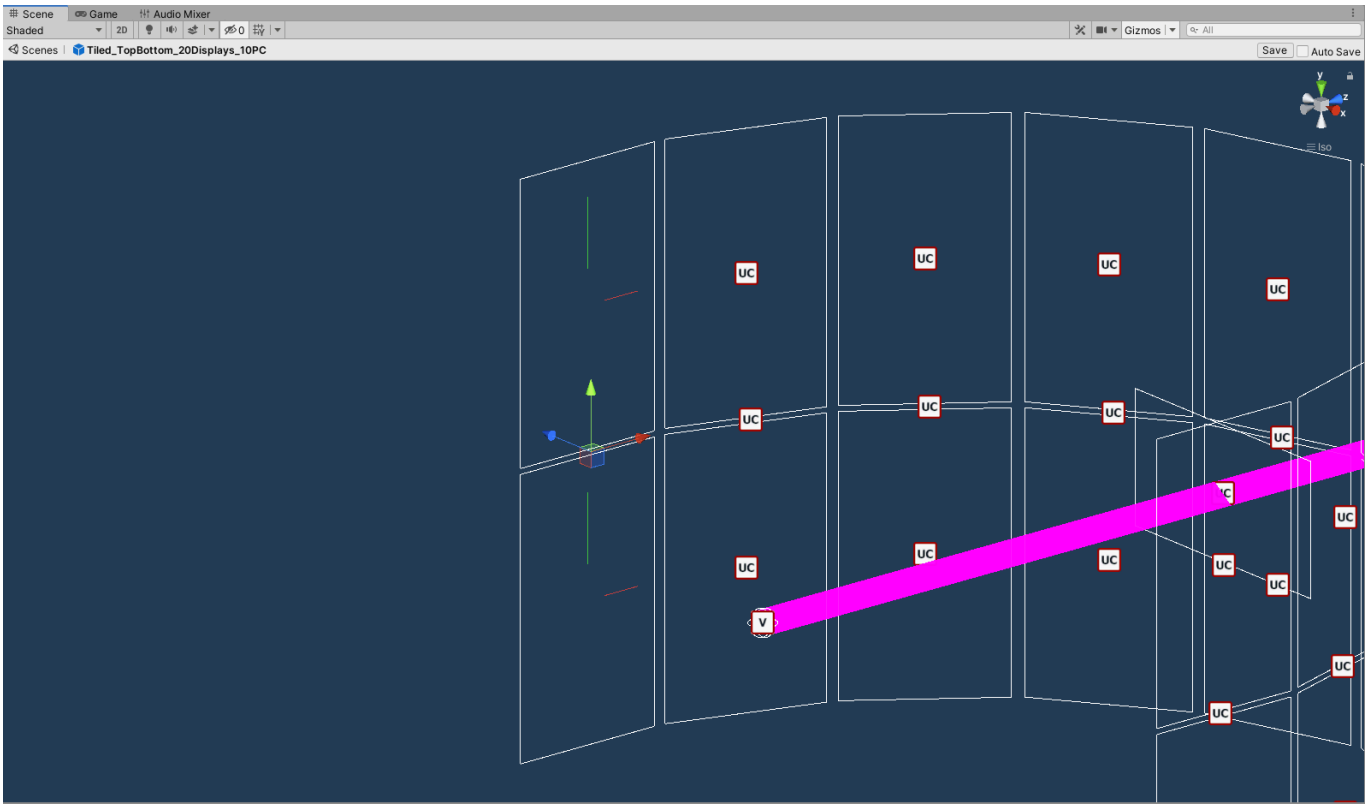


This prefab supports our 20-screen display setup, the DSCVR System. More information about the system can be found at https://blogs.discovery.wisc.edu/kponto/dscvr/.





The prefab consists of ten `PhysicalDisplayManagers`, each with two `PhysicalDisplays`, as well as an additional `PhysicalDisplay` for the head node. These account for the twenty individual displays in the system, as well as an additional display for the head computer.



Each unit consists of two displays, one above and one below. These two displays run on a single machine. The `PhysicalDisplayManager` is set to fullscreen mode. The individual displays are positioned to account for the curvature of the system and the bezels of each individual screen. As each `PhysicalDisplay` corresponds to a unique display, they don't need any special window bounds settings.