

Progress summary #2 - Orion Gonzales

Since the last progress report, I was able to complete almost everything I was hoping such as creating a new screen display layout and the additional screen for the database that keeps track of each connection type of each network separately, new BSSID and SSID prefabs when there's a change detected and a Shadow IT Scan prefabs have been created with corresponding information when doing a hidden SSID scan. Data Receive Speed, Data Transmit Rate, Network Frequency, and a BSSID database have also been created within the new screen layout able to grab the correct wireless details. Whenever a user connects to a new network, I've added a function that will create a new mapped-out area where it will save information only within that network, and if you were to change it back to a previous network you mapped out, it will return your previous scans within the same session. Additionally, within the application, I've added a demo button that will change the wifi signal strength and security to random values to show users how an unstable or unprotected network would be displayed. A delete radius button removes all scans within the network you are currently in from a 5ft radius around you, however, it does not remove prefabs from another mapped-out area that has scans already. Another function added is a toggle button for override mode which will replace each scan that is within the same radius when you get a new updated signal.

Finally, I've created the shadow IT scan function within a button where it will begin to take in all network SSIDS within the area and create a pop-up window for the user to choose for each SSID to be placed as whitelisted or blacklisted. When the scan is completed, a new prefab will be placed in a scan and this prefab is not affected by the different network-mapped changes or specific to only one mapped-out area. It is not affected by any of the other previous functions and has its remove button in the prefab. I've also begun this week adding and installing the New plugin ARCOREXR and started messing with some anchors and scripts that allow the user to change positions but keep all the scene scans and maps from readjusting or shifting positions.

Before the next update, I want to get a quick update on my scripts of the Hidden SSID scans to be able to get the dBm signal strength of each from the user scan position to attempt to roughly see where what areas are being affected the most. I'm hoping to have to finish my last two functions before working on my

senior paper which is the anchor system and the saving system. The anchor system should be able to prevent the scene from rotating when the user changes position along with the creation of new anchors when the user enters a new room. Along with it, I want to be able to achieve an out-of-session save system instead of just using dictionaries currently. I'm unsure what kind of system I want to use that is supported with the quest to be able to save each scan and map out space when the user reopens the XR application. However, this will be based on the Anchor system if it can provide the coordinates of each object within the Augmented or if it's even necessary. Also, I will be creating a video demonstration for my project for an event that I'm in which is called Backdrop Builds V3 I display my build process of this project within the last 3 weeks.