Theia VR presents:
VR DISCO

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Abstract:

VR Disco is an immersive social virtual experience that caters to the music festival going crowd, specifically, the Electronic Dance Music (EDM) community. However, moving forward, it can also be used as a platform for other genres and music communities such as the rock, rap, or even classical. Get a real music festival experience (such as Coachella, Spring Awakening, or Lollapalooza), right through your android phone and a Google Cardboard headset. Listen and dance to a live DJ on a surreal venue without ever having to leave your room. Your dance moves are mimicked through an avatar so you can rock out with all your friends to your favorite songs.

VR Disco also appeals to the upcoming DJ who’s looking to make a name for him/herself. It is difficult starting out in the industry as the big names dominate popular events. This will give new DJ’s a low risk place to test the waters.

Objectives:

Network: Allow for players to see, move, and dance together. Additionally our network allows for a live DJ to play a set by having users download songs from a server that represents the DJ’s set list. The DJ or “Host” who sends an RPC to tell all clients what song to play, and can change music on command. Our music synchronizes across all devices with a less than 0.5 second difference in audio play.

Players: Player movement mapping cellular device movement to avatar movement wasn’t trivial to coordinate, especially with the multiple cameras required for VR. Since turning right on your device was not just turning a single camera right, but in fact a combination of different oddly angled multi-camera movements, it was difficult to translate that those camera movements into avatar rotations. After successfully coordinating that, we managed to add unique skins for each new player entering the game, as well as a unique name tag placed below the avatar (represented as a cube).

References:

https://www.youtube.com/watch?v=ELLANEuw5B8
https://www.youtube.com/watch?v=h5G0zh1380g
https://github.com/Kpplotte/Google-Cardboard
Unity Manual
https://docs.unity3d.com