



Velotron Arise

VR/AR interactive music and visual art performance
Duration: 5-10 minutes, Audience size: 5-50 people
Joseph Sheedy, David Hunt, Velotron Heavy Industries



Proposal for SIGGRAPH 2016 VR Village Installation/Performance

Abstract

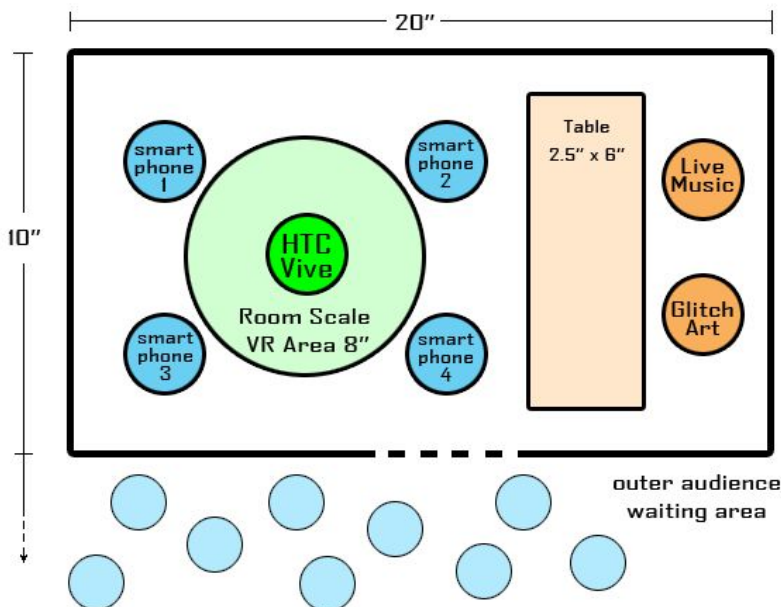


Velotron Arise is an interactive experience featuring live music and visual art performance. It incorporates a unique combination of VR and AR to bring multiple people simultaneously into the same realtime 3D animated scene. The story progression is driven by the interactions of the audience using connected devices that include the HTC Vive and handheld mobile smartphones. The connected audience size can scale from 5 to 50 people to accommodate the amount of space available. Visual elements within the scene are animated by live performance of the musician, Joseph Sheedy and unique visual glitch effects are generated within the 3D scene by the artist, David Hunt. The audience is immersed in this unique looking and sounding world where their actions influence how the scene plays out.

Logistics Plan

Setup time will take approximately 4 hours and will include the following facilities equipment:

- Tall curtains surrounding the outer area
- Half-height curtains in front
- A possible top curtain overhead is desired, but will be considered optional
- One table approximately 6" x 2.5" with two chairs
- Wired internet connection
- Two standard power outlets



Audience Interaction

One audience member is selected to operate the HTC Vive in full room-scale Virtual Reality.

Four additional audience members are selected to use handheld smartphones to connect to the same scene.

Up to 50 additional audience members can connect via their own mobile devices to view and interact with the same 3D scene using a basic set of controls displayed in their web browser.

Technical Details

Networking

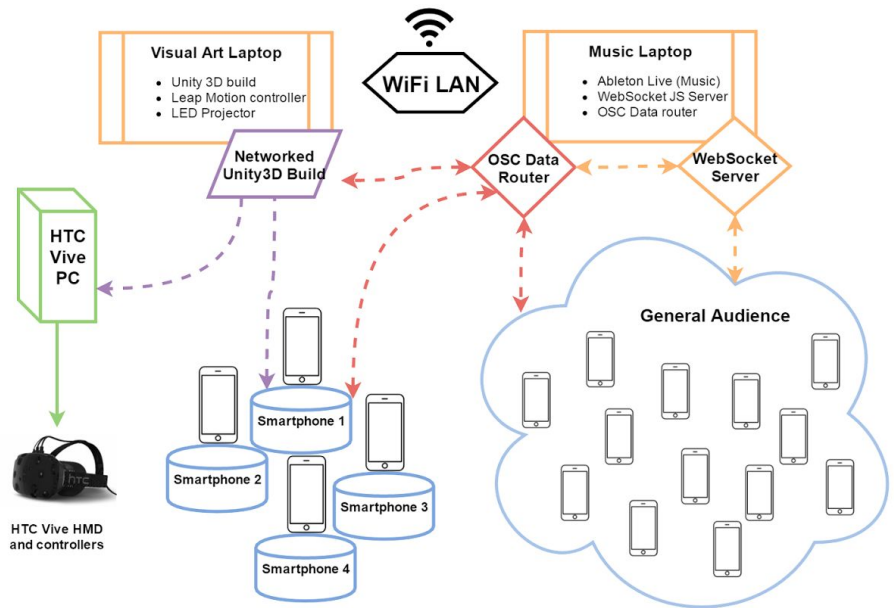
Wired internet connection is required. We will bring our own WiFi router equipment and broadcast a local area network within our the vicinity of our booth area.

Lighting

Semi-darkness is preferable for projection to be visible.

Audio

Semi-quiet location is preferable. Musical performance is entirely digital and is experienced through headphones and smartphone speakers. Audio output from this performance is minimal.



Hardware

We will bring and set up the following computer hardware equipment:

- PC Workstation
- 2 HTC Vive Lighthouse sensors - mounted 8" high at opposite ends of the booth
- 1 HTC Vive head mounted display and two hand controllers
- Grid of square carpet tiles to outline VR area
- 2 laptop computers
- Projector and 6" stand
- Screen 7" wide with stand
- 4 smartphones with wired headphones

Software

The following software is used in the creation of this project:

- Custom WebSocket server
- Unity3D
- Ableton Live
- Max4Live
- Autodesk Maya
- Autodesk 3D Studio Max

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