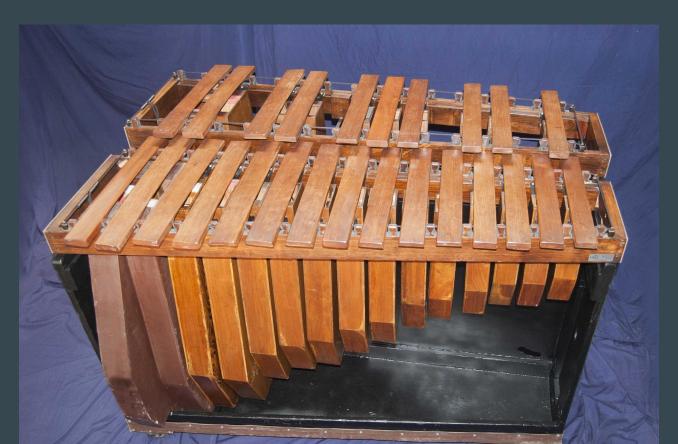# The Virtual Marimba

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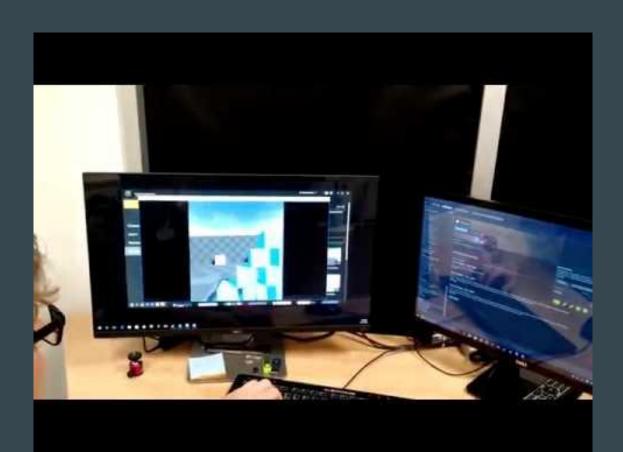
What is a marimba?

Technologies

- HTC Vive
  - Headset and Controllers
- Unreal Engine

Demo!

Considerations

- Motion sickness
  - Editing in Unreal causes lag for the user
  - Cross-eyed bugs, "the jaggies", moving the camera position on the Vive user
  - User teleportation might help move across the room
- Accounting for Glasses/Corrective Lenses
  - We've found that moving the headset placement around allows the user to find an ideal focal distance with the lenses
  - There is a knob to change the PID distance between your eyes, but the changes don't seem noticeable

Our Terminology so Far

- Holodeck
  - Default view when running Steam VR
  - Geodesic room with radial direction markers and camera position visualisations
- Hell
  - Device is off (Unreal is turned off) and the user is completely in the dark, blindfolded
- Safety Feature
  - On the Holodeck, you can project the Vive's head mounted camera above the controller visuals to see where you are in the room
  - Right now activating this crashes the Vive controller
- Netting
  - The projection of the camera bounds around the room

Stretch Goals

- Additional Instruments
- Advanced user feedback/haptics on the handles
- Audio interpolation dependent on how hard the Marimba is hit