Virtual Venues

Tyler Sorensen, Aashna Mago, Aaron Furrer
Overview
Problem & Solution
Thai Phan
Task analysis

● Who uses system?
  ○ DJs, lighting designers, musical artists

● What tasks do they now perform?
  ○ Venue scouting, light placement, synchronization, and light testing

● What tasks are desired?
  ○ 3D venue rendering light placement and testing

● How are they learned?
  ○ Buttons in the interface will be self-explanatory
Task analysis

- Where are the tasks performed?
  - Wherever
- What’s the relationship between customer & data?
  - Customer uses interface to add and create light data
- What other tools does the customer have?
  - Vectorworks, LX beams, Visual, AGi32
- How do users communicate with each other?
  - They could potentially share their designs with other users
Task analysis

● How often are the tasks performed?
  ○ Before each performance, or whenever they change or write a new song to be performed

● What are the time constraints on the tasks?
  ○ Varies by venue

● What happens when things go wrong?
  ○ Broken equipment, wasted time, low quality performance
Task 1: Virtualizing the Venue
Task 2: Lighting Placement and Timing
Task 3: Evaluation of Light Show
App Idea 1: Oculus Rift Interface

- Oculus Rift is the future.
- Graphics on a Rift will be more realistic than on an iPhone or iPad.
- User input through a controller is feasible, but through motion capture system would be complicated, expensive, and possibly infeasible.
- Access to Oculus Rifts at the Stanford Virtual Human Interaction Lab would be helpful.
App Idea 2: Non-touch touch UIs

- All control panels are at your finger tips
- Motion tracking
- Necessary equipment:
  - VR headset
  - flat surfaces for VR touch screens (tactile feedback)
- Economical
- Extremely portable
App Idea 3: iPad User Interface

- Better than Rift because more people own one and know how to use it
- More power than iPhone, bigger
- Allows for more of a touch UI and user interaction than virtual reality alone
- Possible to 3D print mobile viewers and see virtual worlds in stereo
Design Sketch (App Idea 1)
Design Sketches (App Idea 2)

Plywood or some random material

sees and can control a "touch UI" for ding and lighting
Design Sketches (App Idea 3)
Summary

- Three potential interfaces
- Major issues:
  - Processing power
  - Adoption of VR headsets
  - Cost and feasibility of motion capture systems