

# **Virtual Venues: Low-fi Prototype**

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# Overview

- Learned more about lighting design and existing interfaces from an experienced lighting designer on campus
- Created our low-fi prototype using a digital prototyping tool
- Tested our prototype with two experienced users and one beginner
- Received feedback about our interface for specific tasks and made plans to improve our next prototype accordingly

# Team Mission Statement

- Utilize VR headsets to allow designers to create and test light shows in advance
- Tackle issues currently associated with lighting design:
  - Number of tasks and options involved in developing a light show
  - Lack of informative interfaces
  - Inherent physical and temporal constraints

# Task 1: Lighting Placement

- Unique drag-and-drop functionality
- Ability to adjust lights in groups
- Top view and side view in 2D
- Fine tune in 3D

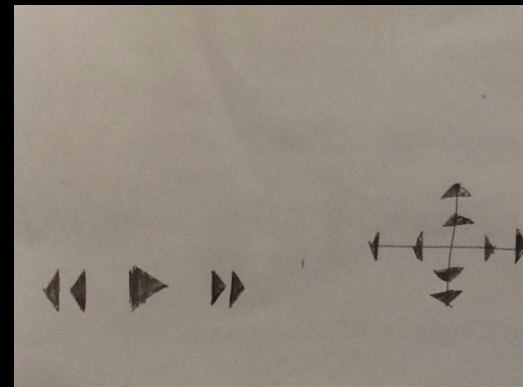
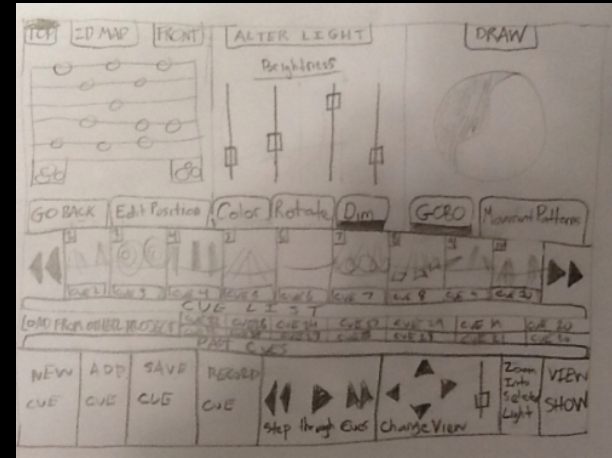
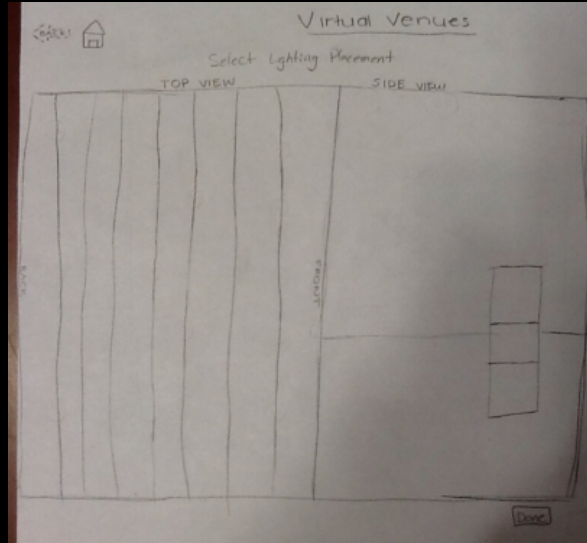
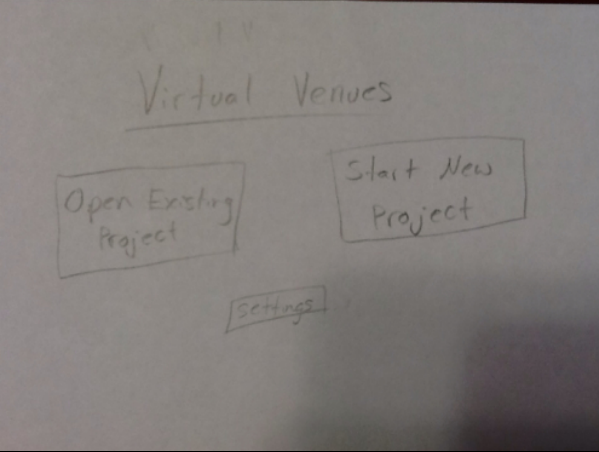
# Task 2: Lighting Adjustments

- Select individual lights or groups of similar lights to adjust
- Can pan and tilt from vantage point of light
- One “drawing” area
- Can view previously used cues
- Used tabs to reduce clutter from the large number of options
- Can step through cues

# Task 3: Visualization

- Can play, rewind, or fast forward through show
- Can adjust your position in the audience, will be transported smoothly

# Low-fi Prototype Structure



# Virtual Venues

Open  
Proj

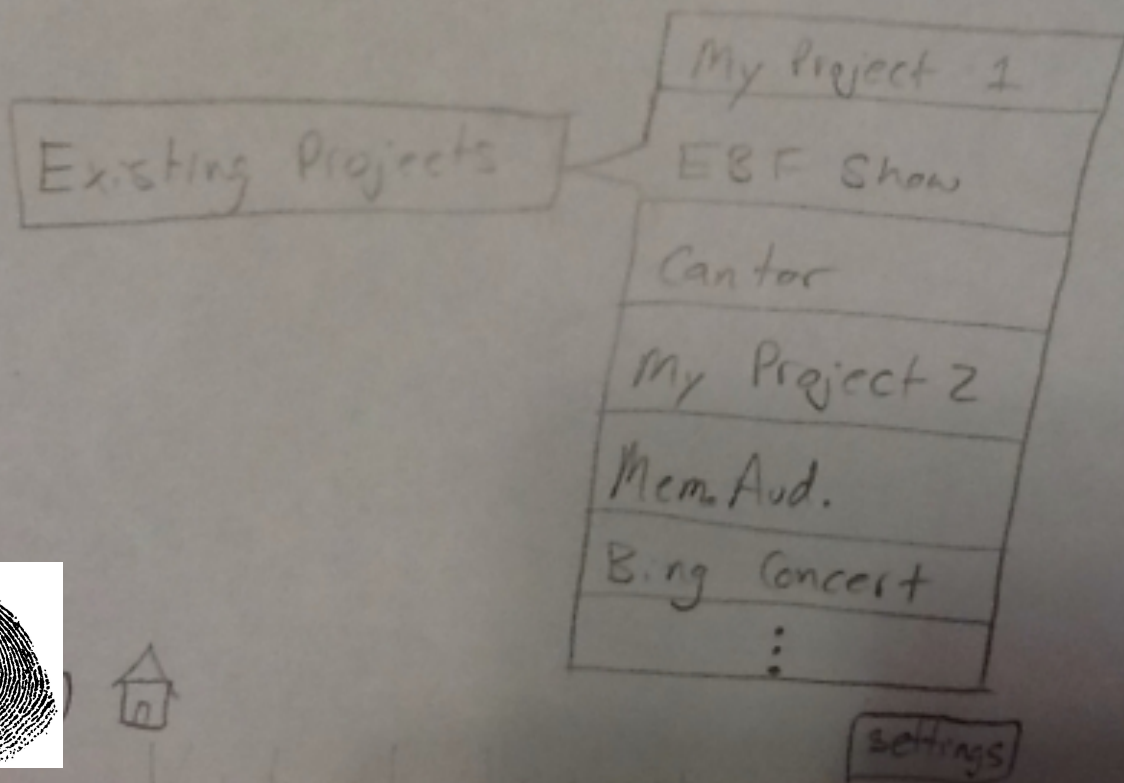


Start New  
Project

Settings



# Virtual Venues



# Virtual Venues

Open Existing Project

Select Project



Settings

# Virtual Venues



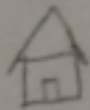
Recent Venues

All Venues

Import 3D Model

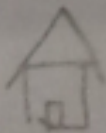
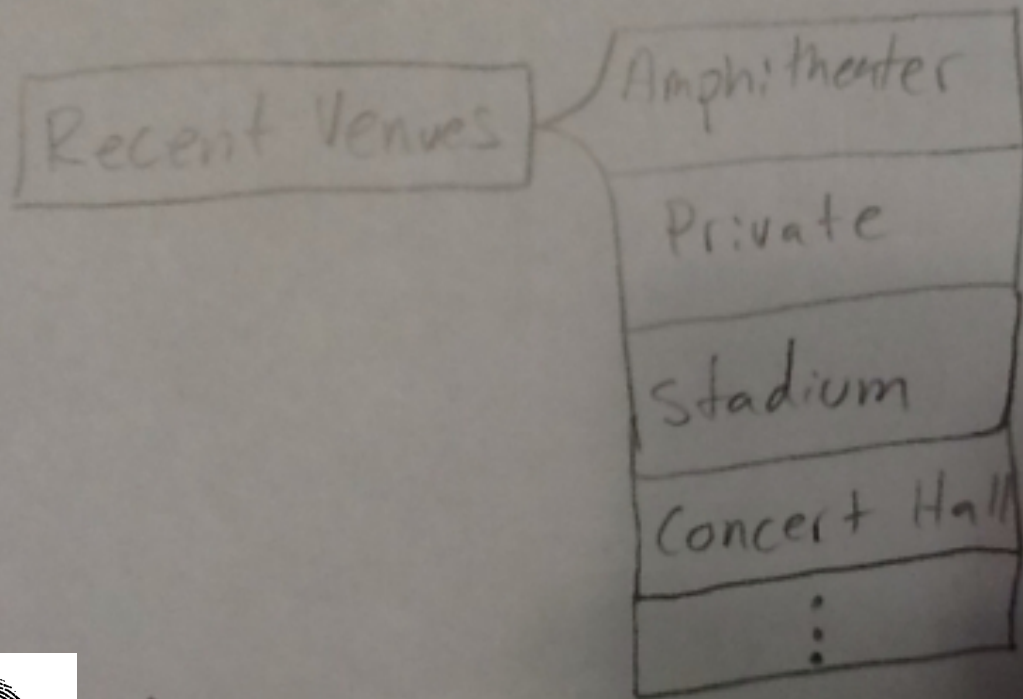
Import & Render Floor Plan

← Back



settings

# Virtual Venues



settings

# Virtual Venues

Recent Venues

All

Import 3D Model

Import Floor Plan

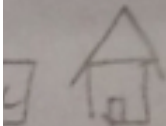
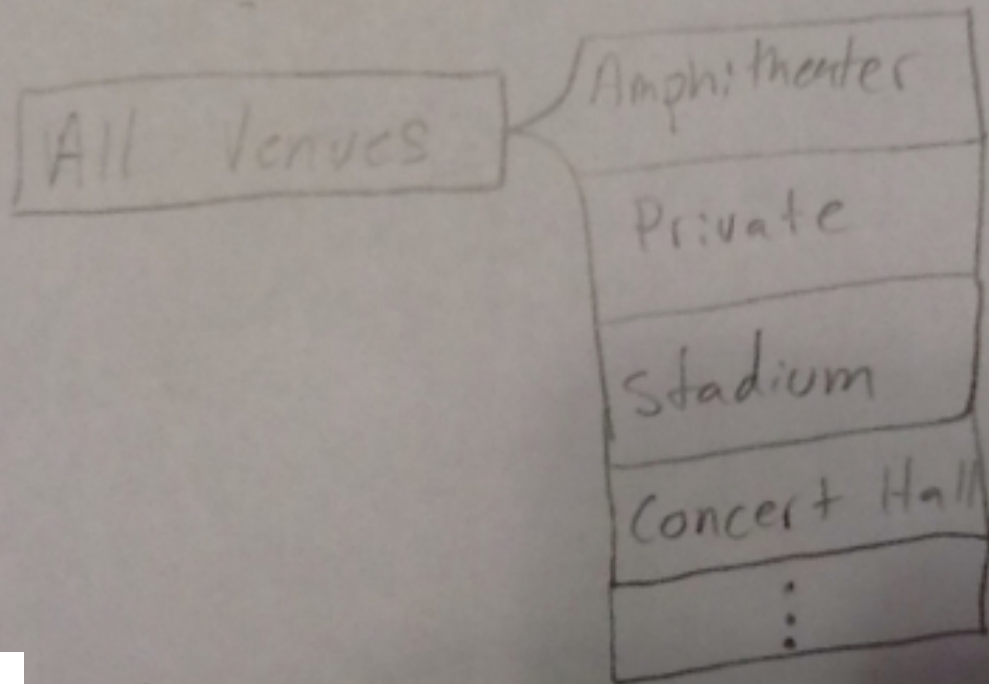
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settings



# Virtual Venues



settings

# Virtual Venues

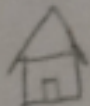
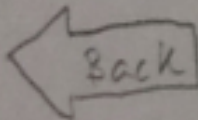
Recent Venues

All Venues

Import

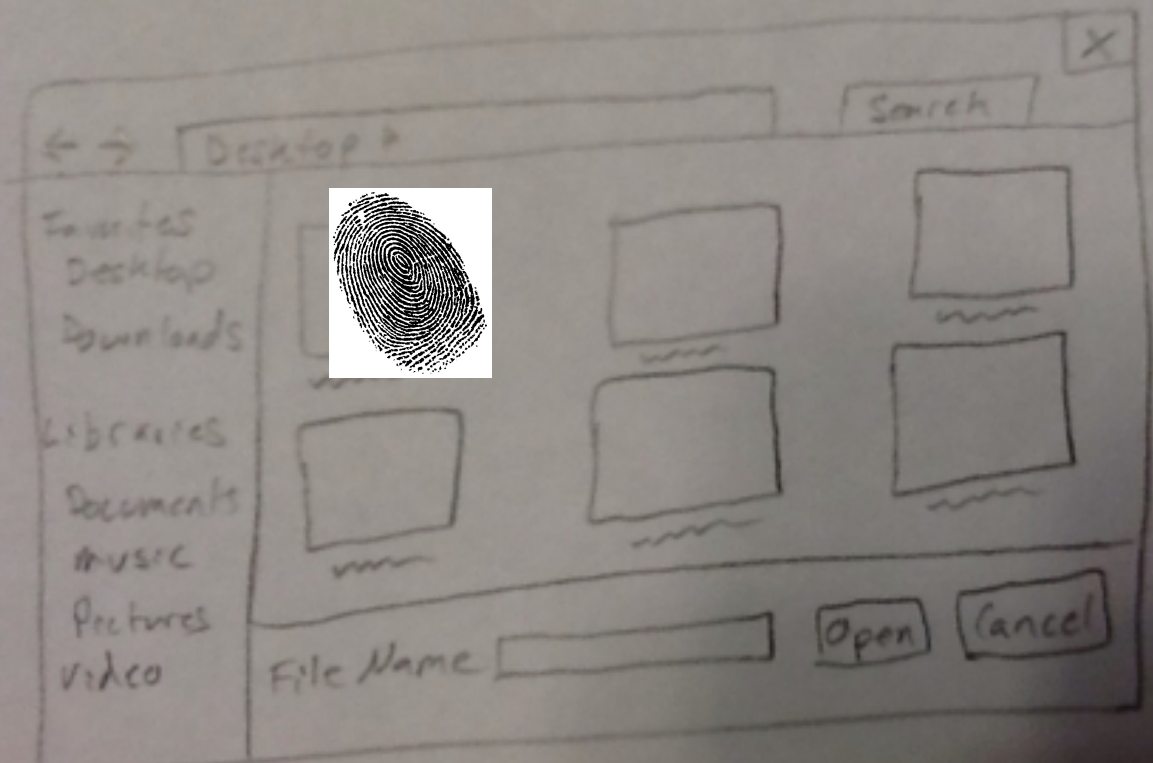
Model

Import & Render  
Floor Plan



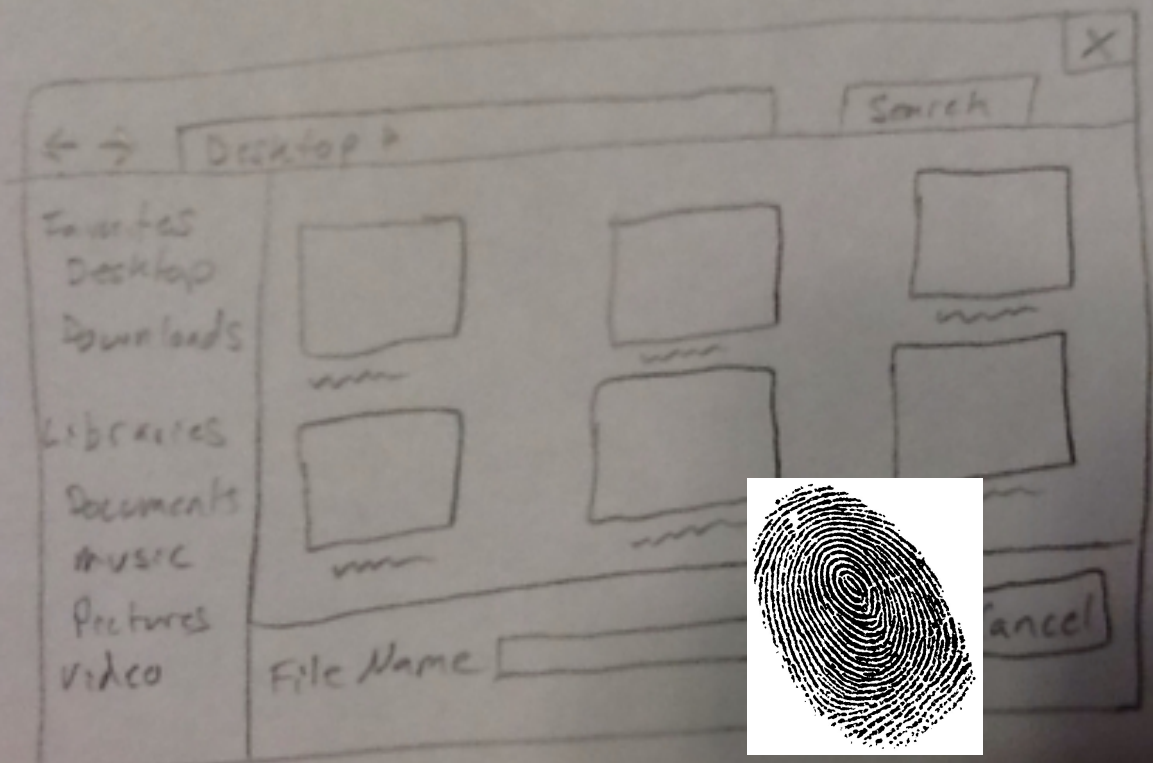
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# Virtual Venues

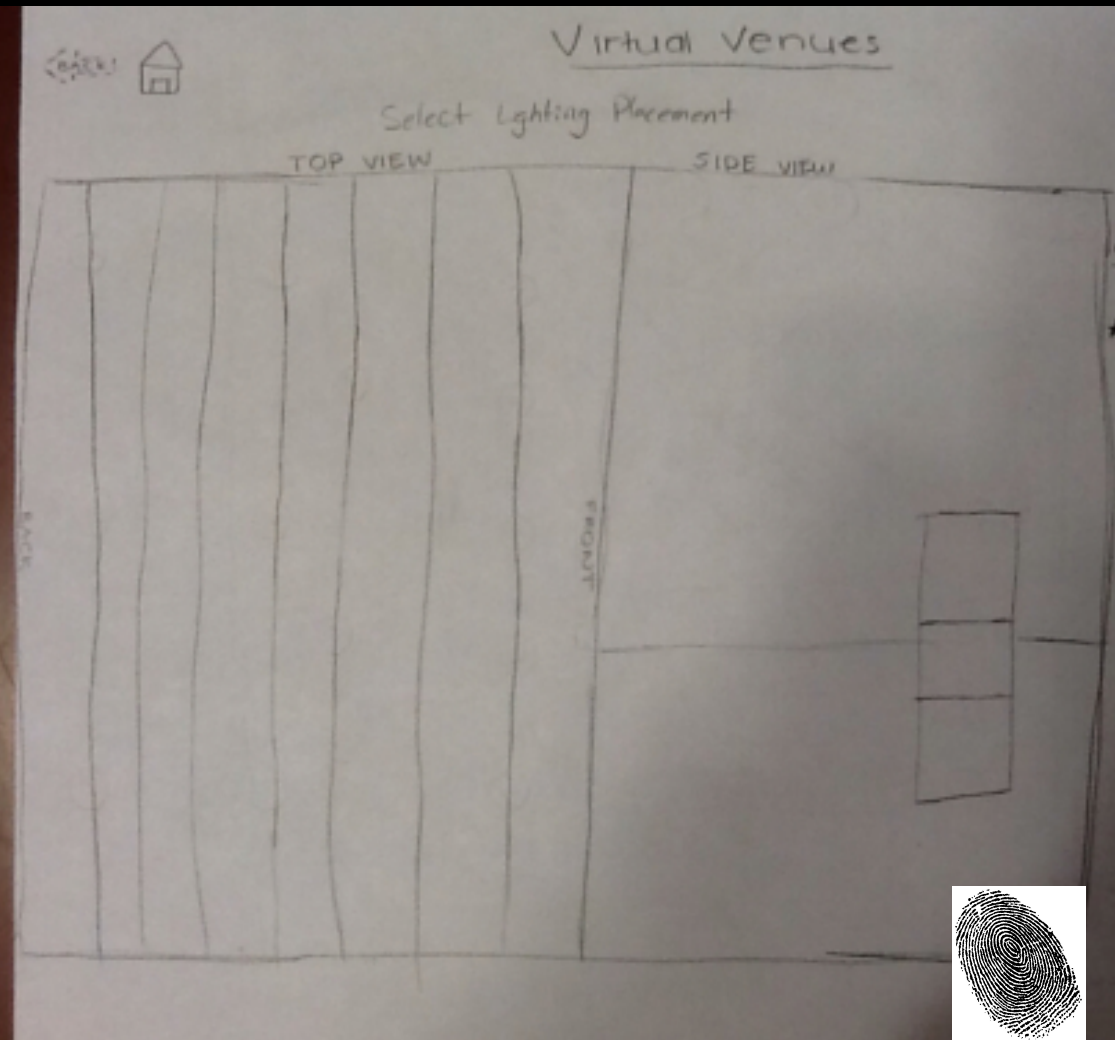




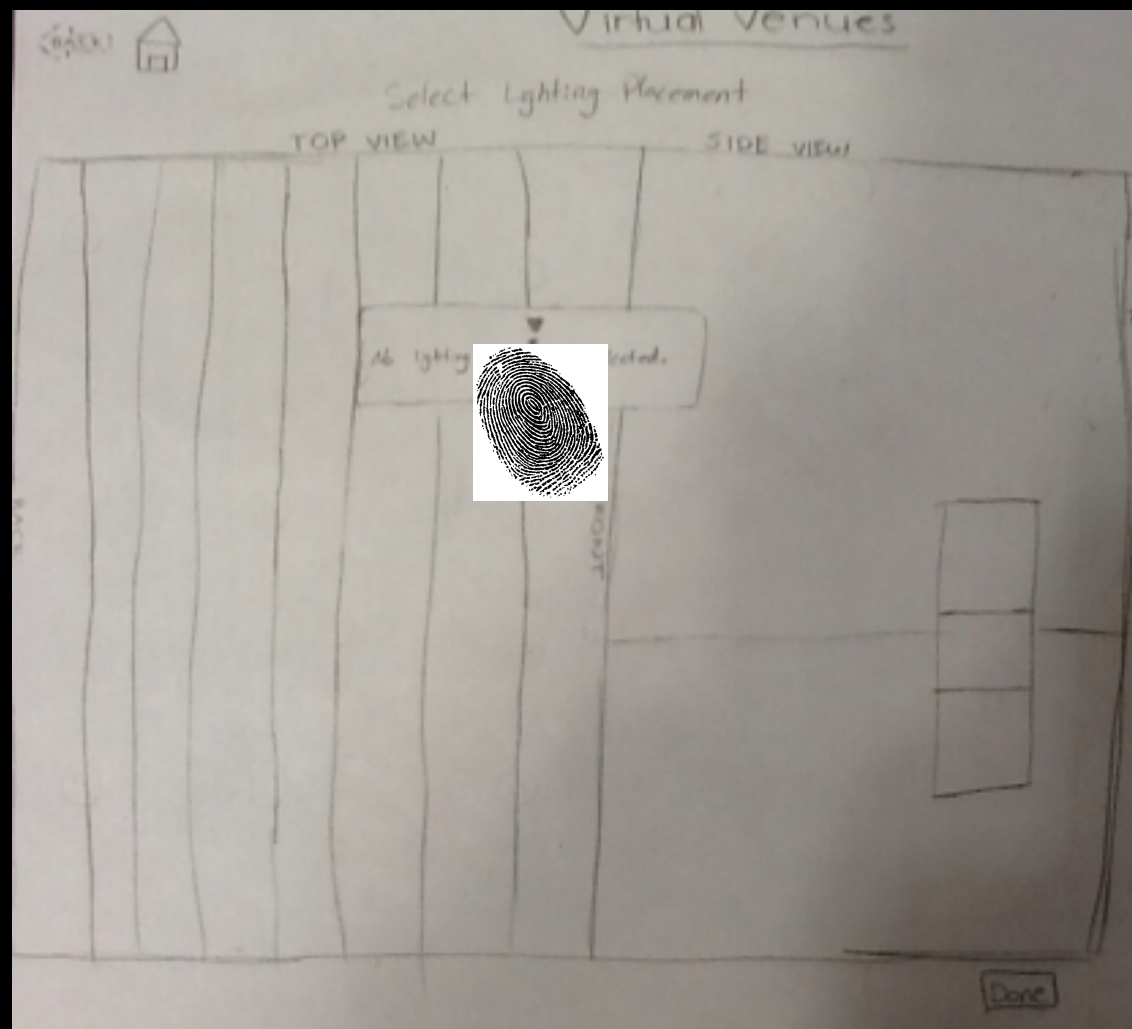
# Virtual Venues



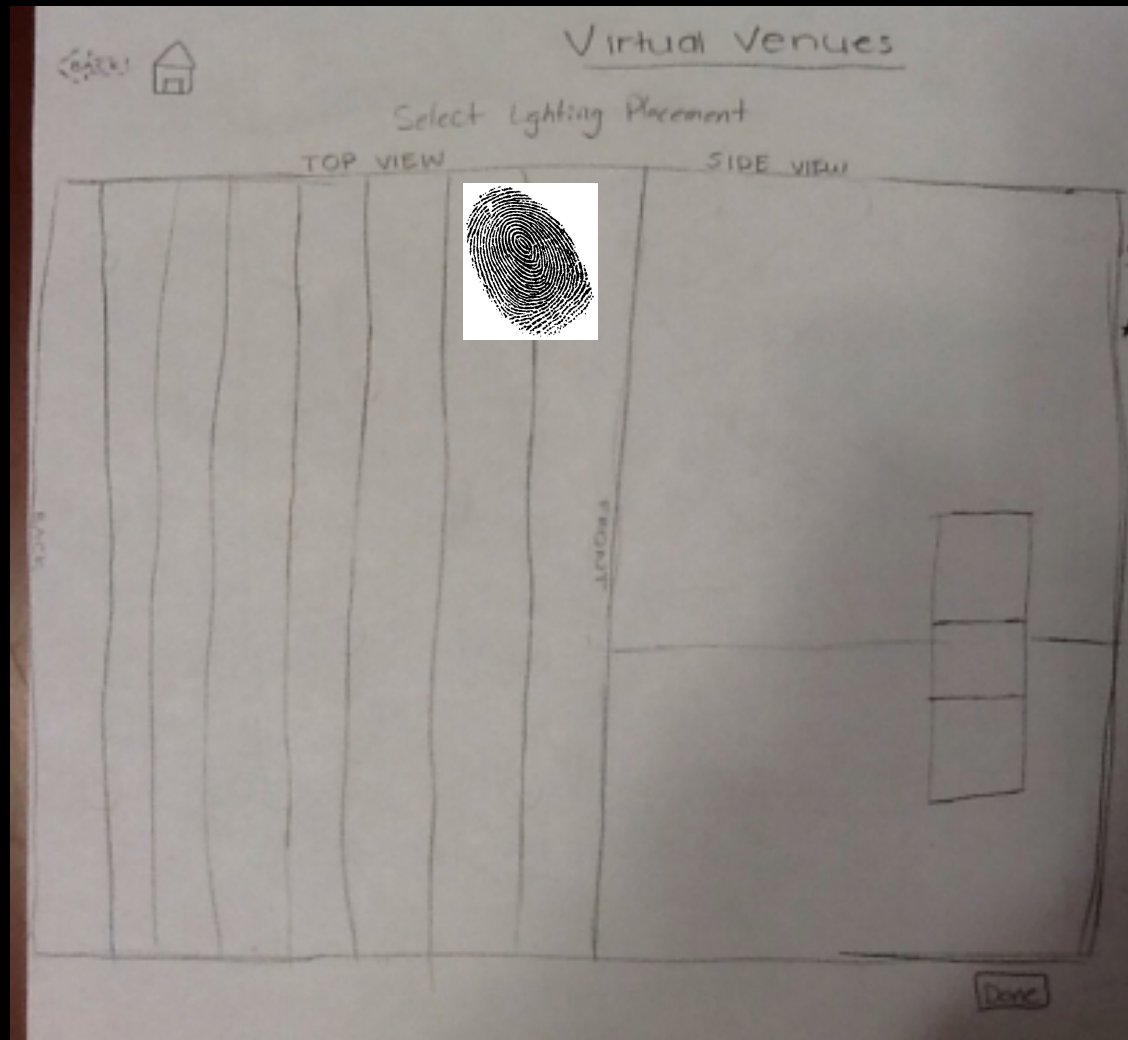
# Lighting Placement



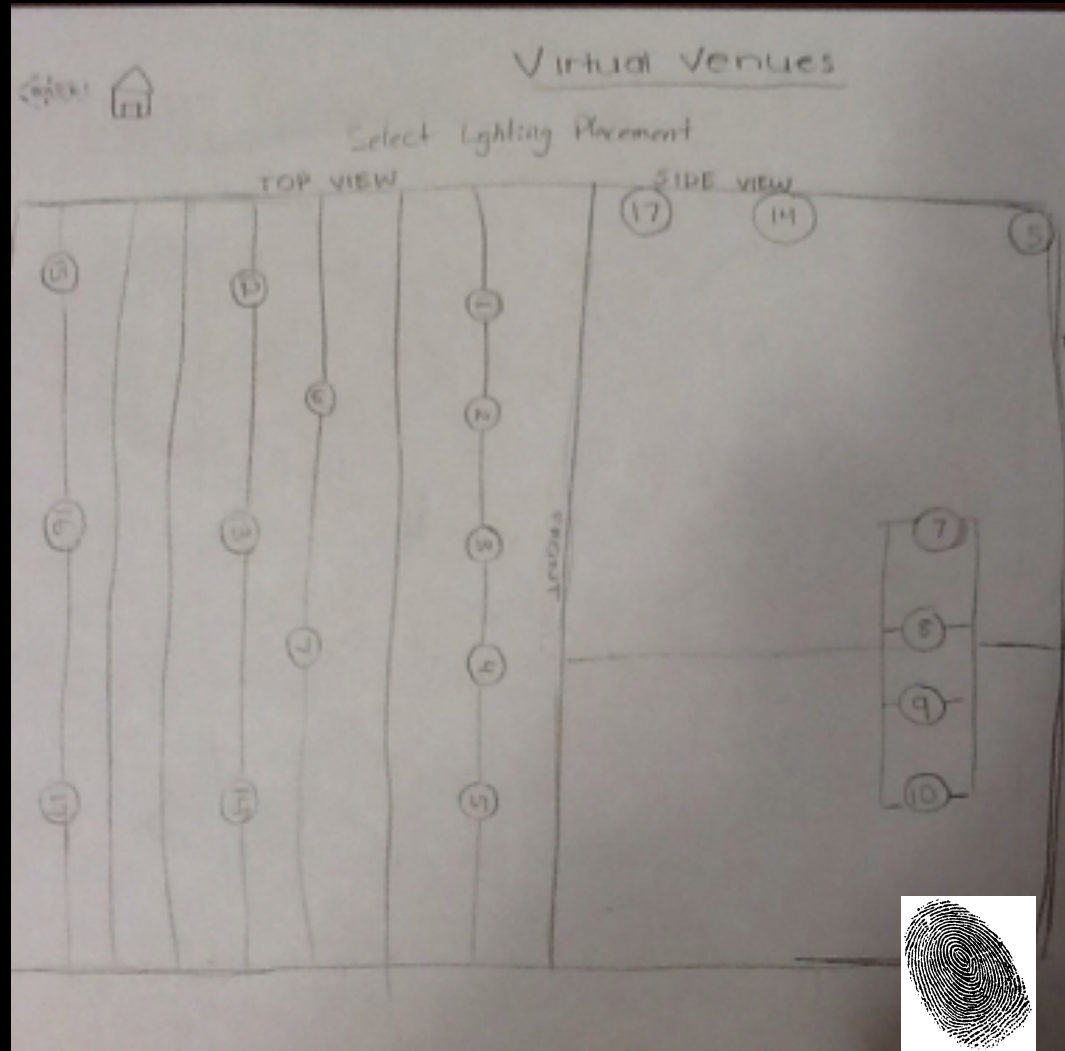
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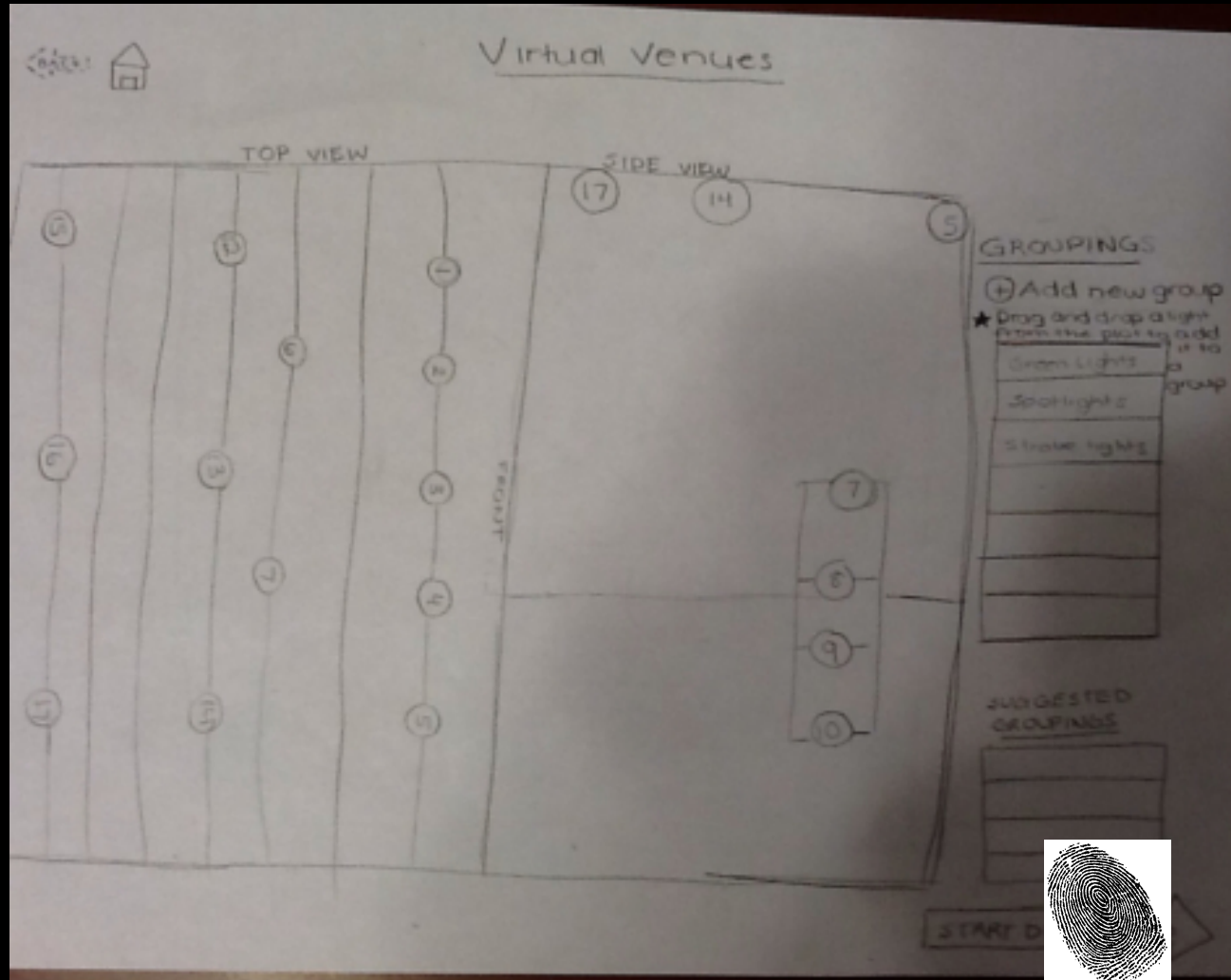
# Lighting Placement



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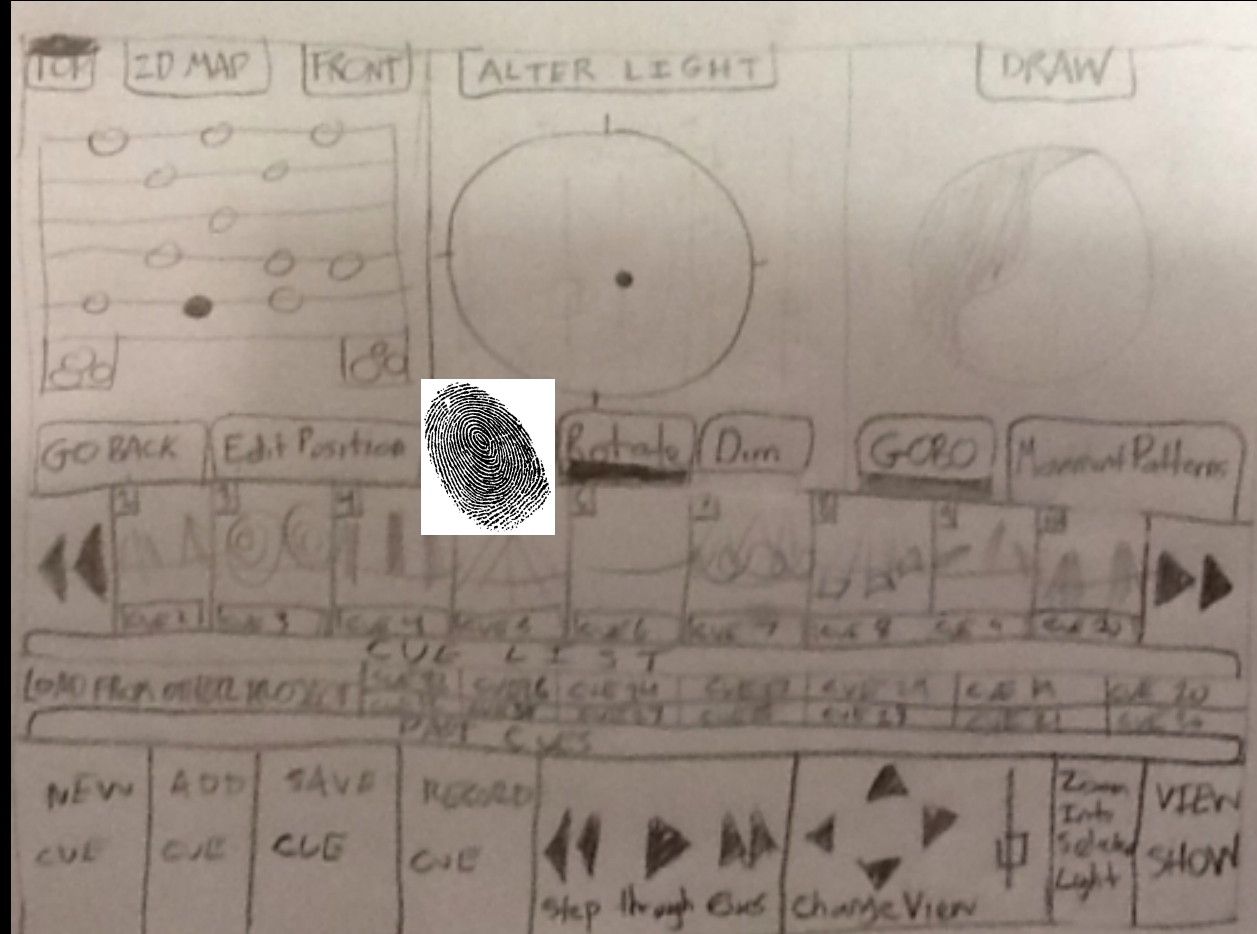
# Lighting Placement



# Lighting Adjustment

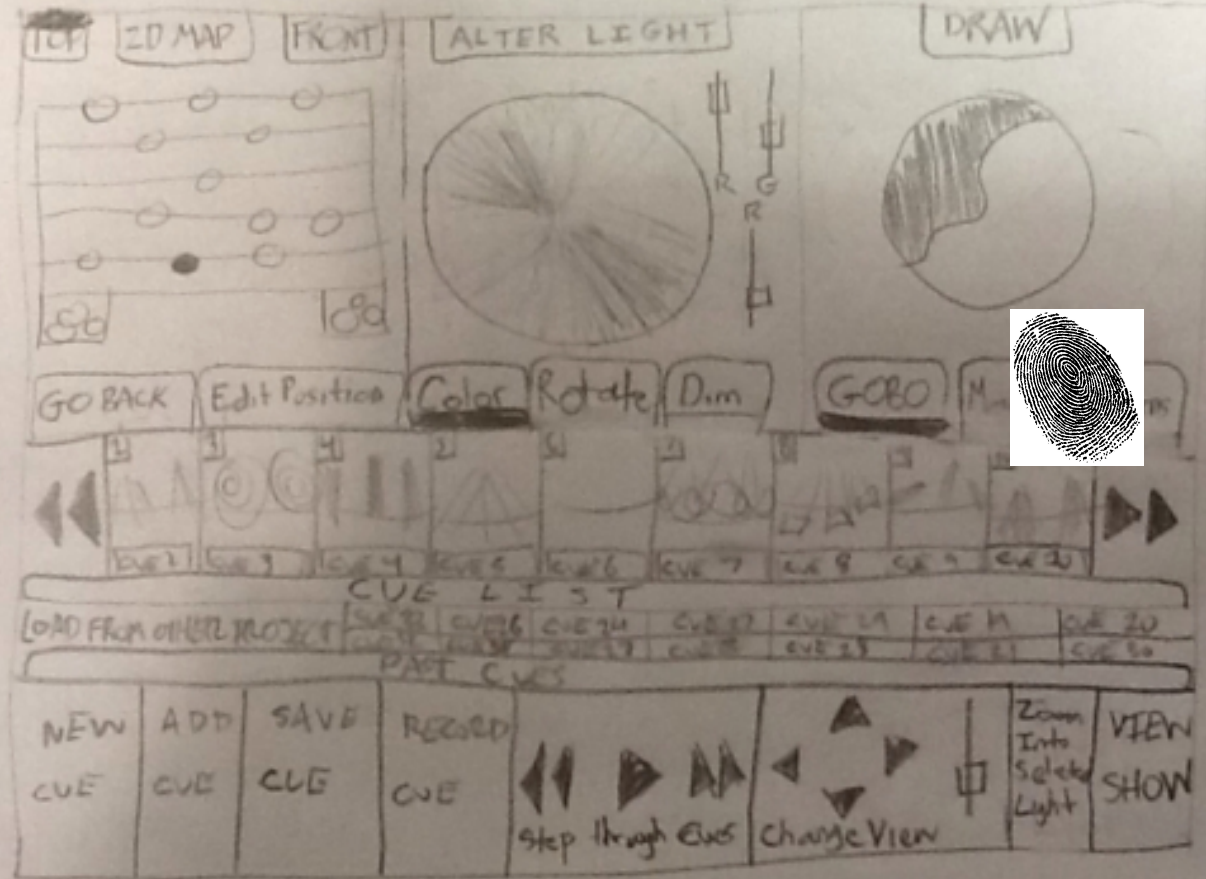


# Lighting Adjustment

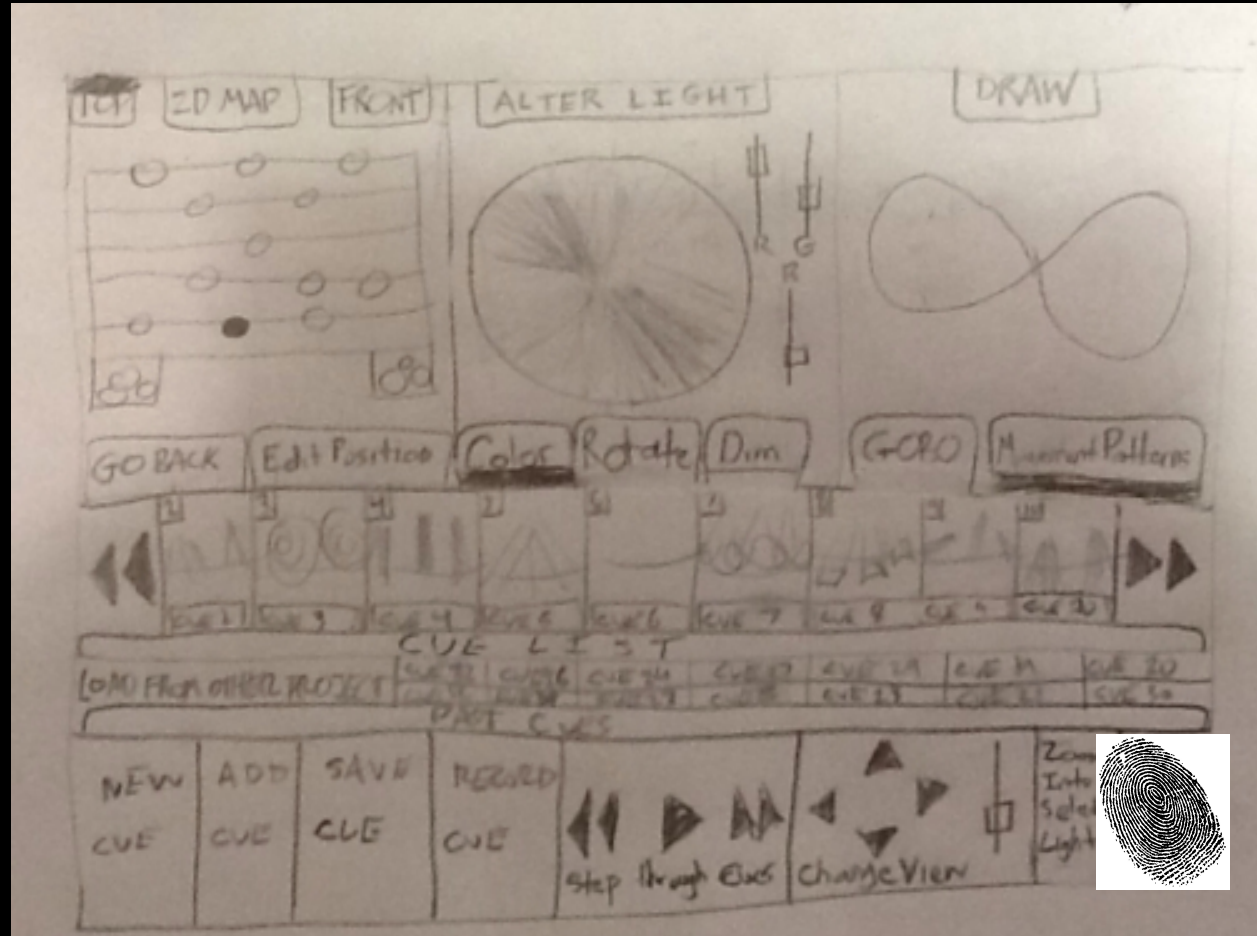




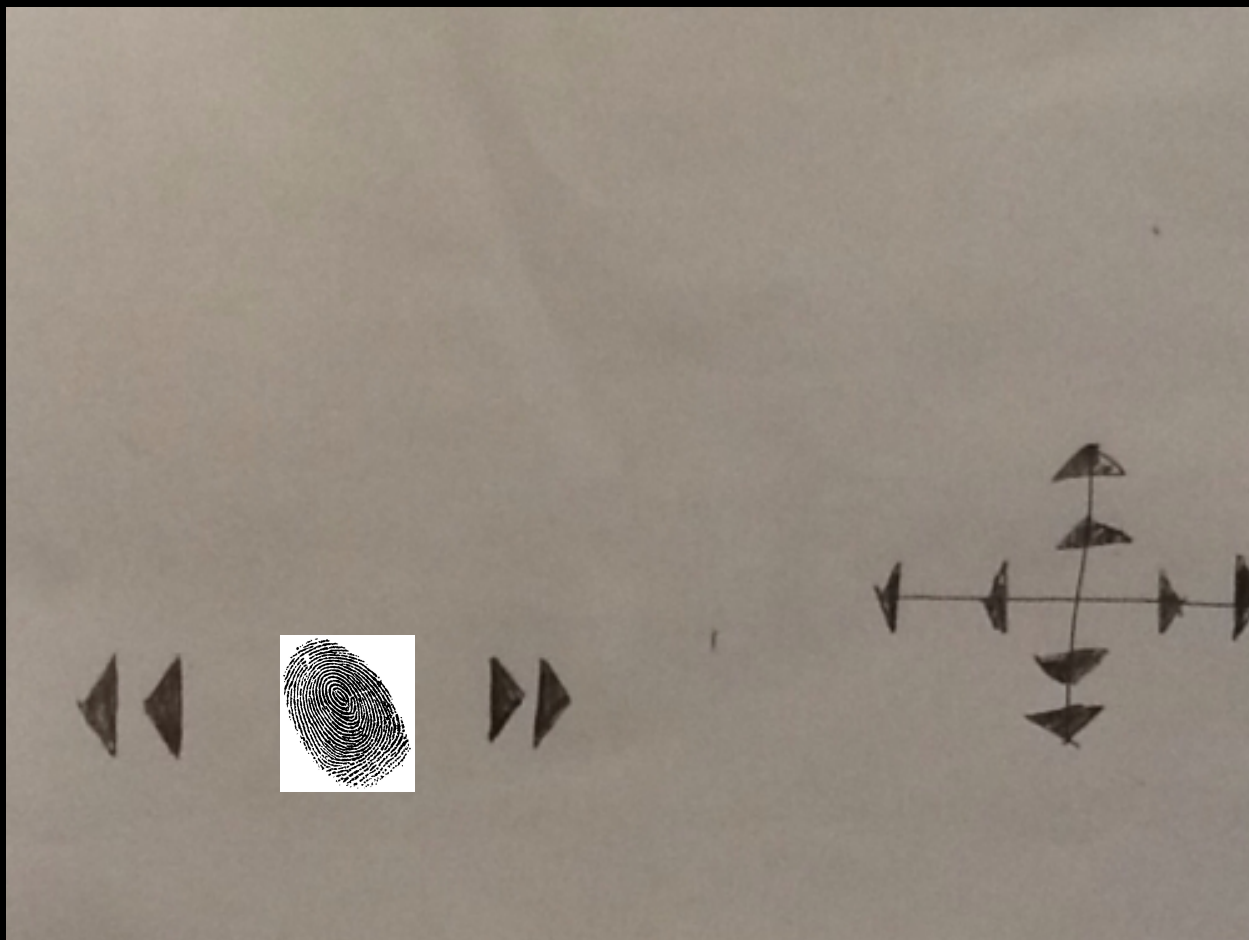
# Lighting Adjustment



# Lighting Adjustment



# Show Testing





# Experimental Method

- Participants: wanted professional feedback, two participants from Dynamic Sound and Lighting in San Jose
- Environments: two subjects in lighting store, the other in Kairos -- minimized distractions
- Tasks: place lights, adjust light type and movement, test
- Procedure: demo major screens and venue selection

# Results

- Early screens navigated easily by all three subjects
- Positive feedback on lighting placement
- No options for fixture types to place
- Lighting design screen: easy to navigate, well laid out

# Results: Subject One

- From lighting store
- Liked the option to draw movement pattern
- Lacked delay cue options

# Results: Subject Two

- From lighting store, experienced with customers
- Liked that entire process was virtual
- Concerned about defining parameters on a venue to keep lights tracking in correct space
- Delay cues essential to any performance



# Results: Subject Three

- Unfamiliar with lighting design
- Able to navigate through screens easily despite being a beginner
- Commented that layout was clear and easy to understand

# Suggested UI Changes

- We learned that our application would be most popular with inexperienced and amateur lighting designers, such as mobile DJs

# Suggested UI Changes

- The average DJ doesn't have access to HMDs and motion tracking systems
  - Normal user input devices (e.g., mouse & keyboard)
  - iPad interface?
- Beginning lighting designers don't want to be overwhelmed with options
  - Modify interface to be less technical
  - Reduce number of options
  - More presets/ built-in features and effects

# Summary

- Talking to four potential users and learning more about lighting design and current industry standards gave us insights into the features we wanted and the users we wanted to target
- Didn't have all of the features in this prototype
- We missed some obvious features
- Overall, confident about our layout and design choices