VibViz: Visualizing a Library of Vibration

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Apple Watch
Presentation & Exercise Applications
Why to Visualize

- Large vibration library
- Easy to explore and discover vibrations
Vibration Library

- 123 vibrations (data points)
- 5 groups of attributes
  - Physical (duration, energy, ...)
  - Emotional (valence, arousal, emotional tags, ...)
  - Sensation
  - Metaphor
  - Usage Example
# Users & Tasks

## End-user

<table>
<thead>
<tr>
<th>Location known</th>
<th>Target known</th>
<th>Target unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look Up</td>
<td></td>
<td>Browse</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location unknown</th>
<th>Target known</th>
<th>Target unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locate</td>
<td></td>
<td>Explore</td>
</tr>
</tbody>
</table>

## Researcher

- **Discover**
- **Summarize**
Future work

• Support other tasks
• Fine tune the interface
• Iterate design & empirical study

→ Compare
Thank you!
Design...
**Design Decision 1**

**Mixed Views**

- Physical filters
- Emotion filters
- Sensation filters
- Metaphor filters

**Usage example filters**

**Main visualization**

**Separate Views**

- Physical visualization
- Emotion visualization
- Sensation visualization
- Metaphor visualization

- Usage example visualization

VibViz
Design Decision 2

- Raw waveform
- Color-coded VT envelope
- Abstract dot design