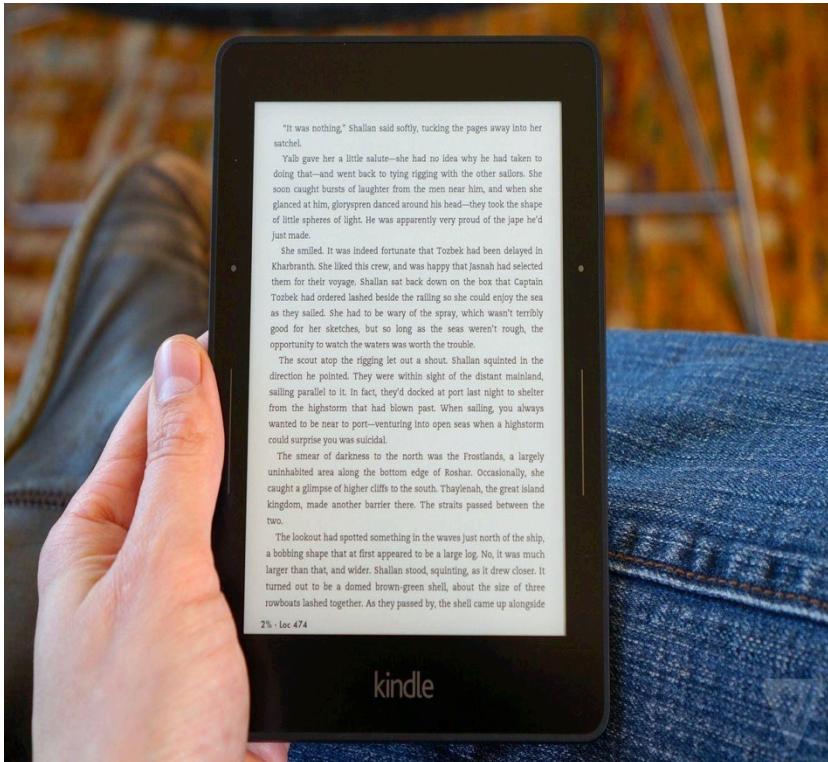


VibViz: Visualizing a Library of Vibration

Kailun Zhang
Hasti Seifi

Tactile Technology

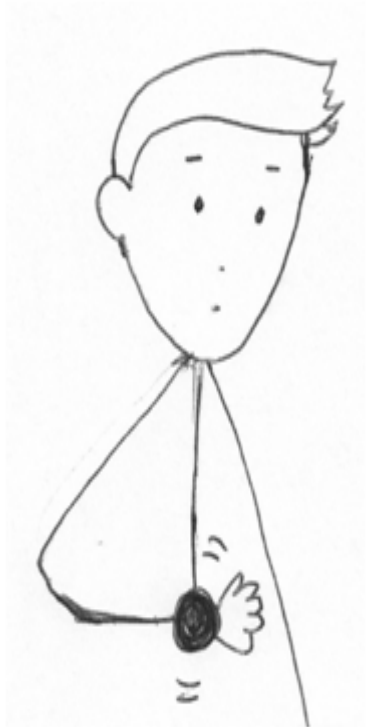
Kindle Voyage



Apple Watch



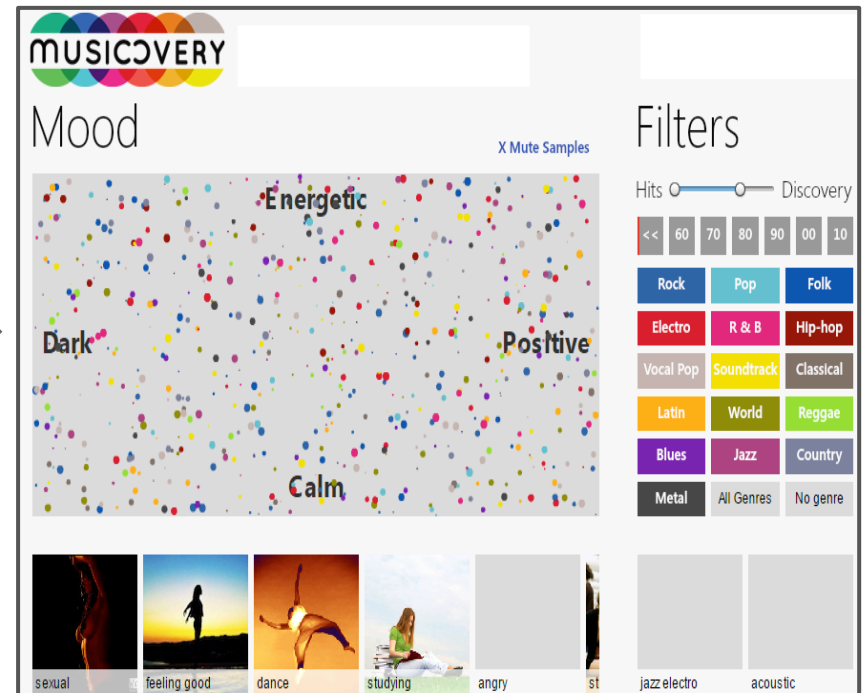
Presentation & Exercise Applications



Why to Visualize

- Large vibration library
- Easy to explore and discover vibrations

<input checked="" type="checkbox"/> Pictures of You	3/10/07 2:14 PM	
<input checked="" type="checkbox"/> Illegal Smile	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Spanish Pipedream	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Hello in There	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Sam Stone	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Paradise	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Pretty Good	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Your Flag Decal Won't Get You into Heave...	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Far from Me	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Angel from Montgomery	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Quiet Man	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Donald and Lydia	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Six O'Clock News	3/18/07 11:40 AM	
<input checked="" type="checkbox"/> Flashback Blues	3/18/07 11:40 AM	
<input type="checkbox"/> On the Jones	4/19/07 9:19 AM	
<input type="checkbox"/> Baptism By Fire	4/19/07 9:19 AM	

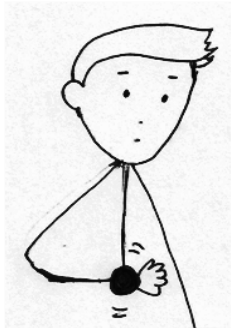




Vibration Library

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

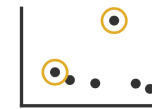
Users & Tasks

End-user



	Target known	Target unknown
Location known	 <i>Lookup</i>	 <i>Browse</i>
Location unknown	 <i>Locate</i>	 <i>Explore</i>

→ Identify → *Enjoy*



Researcher



→ *Discover*



→ Summarize

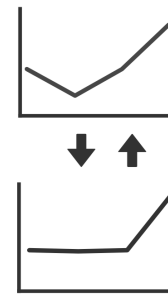


Demo...

Future work

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

→ Compare

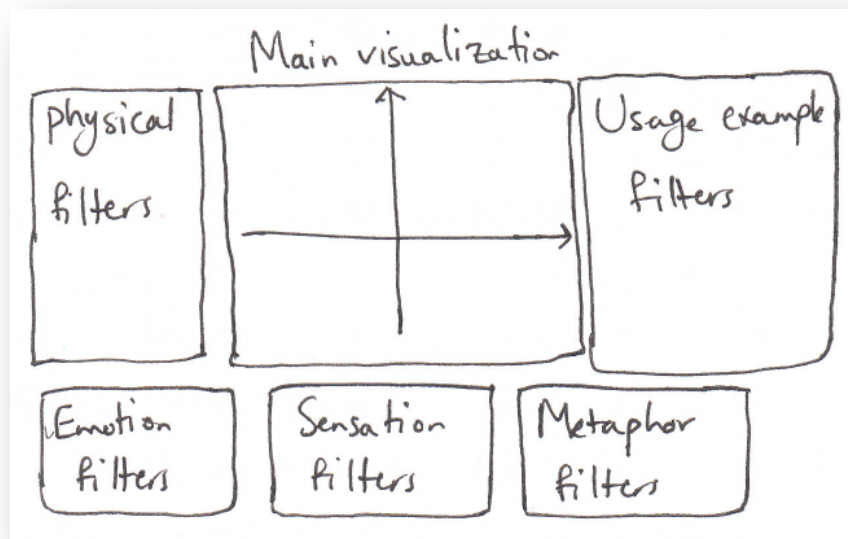


Thank you!

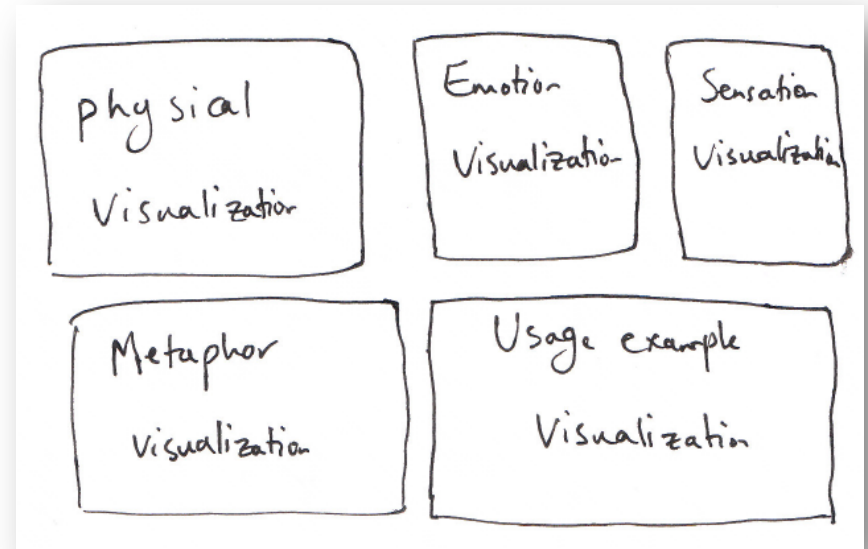
Design...

Design Decision 1

Mixed Views



Separate Views



Design Decision 2

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

