Haptic Edge Display for Mobile Tactile Interaction

Sungjune Jang, Lawrence Kim, Kesler Tanner
Outline

● Current state of haptics in mobile devices
● Designed system for novel haptic interactions
● Developed example applications with informal user study
● Future work
Limited Means of Interaction

haptics?
Most Prevalent Haptics

(( vibration ))
Under-utilized

Non-dominant hand
So,
Concept Design

- 24 actuated pins
- Touch sensing  (3 mm x 3 mm)
- Bluetooth 4.0  (Low Energy)
- Compact design
Prototype

- Pins
- Touch Sensor
- Motor Driver
- Microcontroller
- Smart Phone
- Servo Motors
- Bluetooth
- Case
Touch Sensor

Capacitive Touch Sensing

Copper Tape

Pin

Touch Sensor

Pin Number + Touched

Certain gap
not to touch next pin
The Result
Applications
Future Work

● Smaller Design
● Higher Resolution
● Better Input
● Pins on both sides
Conclusion

● Designed system for novel haptic interactions

● Developed example applications with informal user study

● Outlined steps for future work
Thank you