Augmenting Braille Input through Multitouch Feedback

Lack of Tactile Feedback

How do users know that touch input has been correctly detected by the system?

HoliBraille

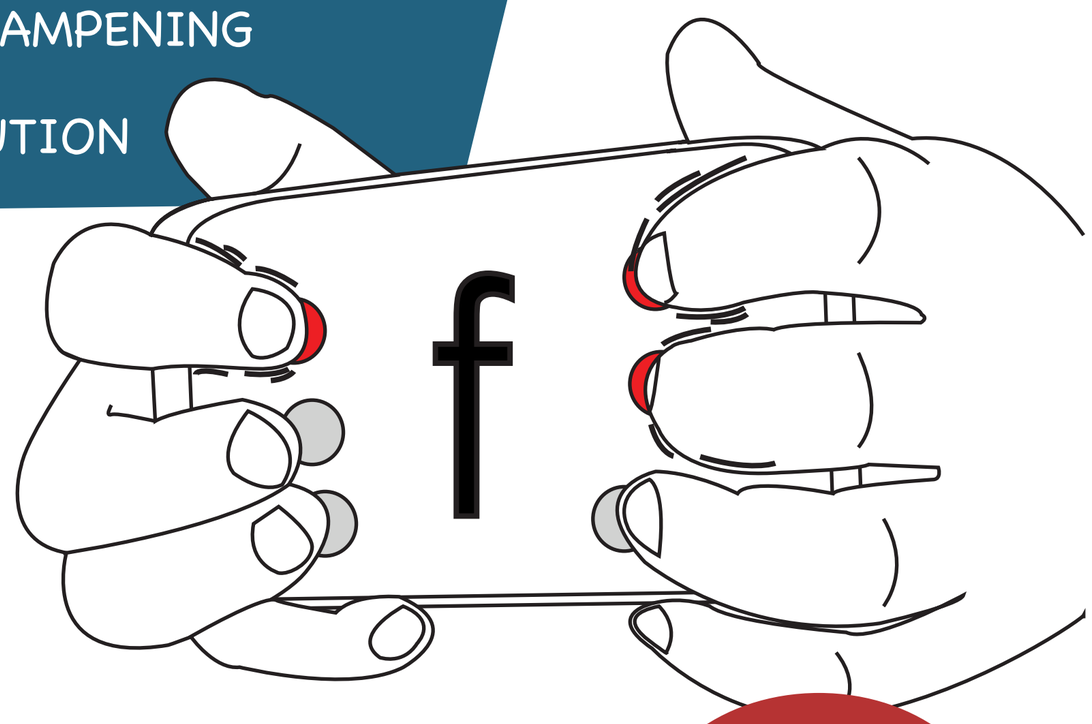
Holistic approach to Braille Input and Output

Improve Braille Input Accuracy

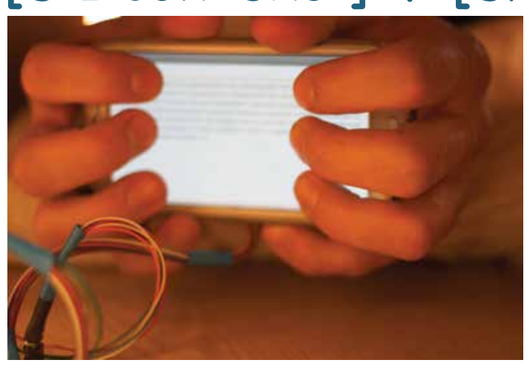
Localized Finger Feedback

Vibration Dampening

Mobile Solution



[Silicon Case] + [Springs] + [Vibration Motors]



Direct feedback on fingers

Molds to users' hand shapes

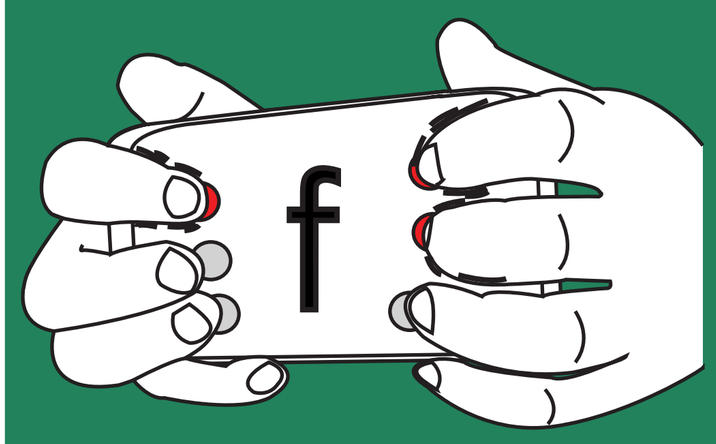
Dampens vibration for each motor

100% Single finger Discrimination

82% Chord Discrimination

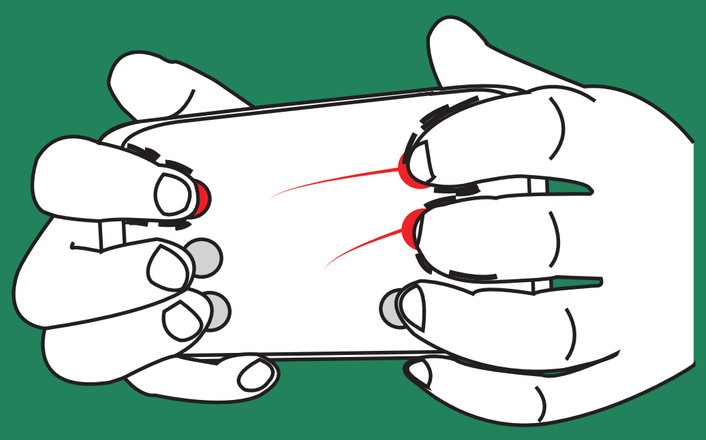
Leveraging MultiTouch Feedback

Typing



- Improves typing performance
- Informs blind user whether the device correctly recognized the intended chord

Multitouch Gestures



- Text editing actions
- Cursor movement
- Rich multi-point tactile feedback

Private Reading

- Vibrotactile reading
- When auditory feedback is inappropriate or impossible
- Vibrating fingers that correspond to a specific character

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SiDE Social inclusion through the digital economy

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FCT Fundação para a Ciência e a Tecnologia Ministério da Educação e Ciência