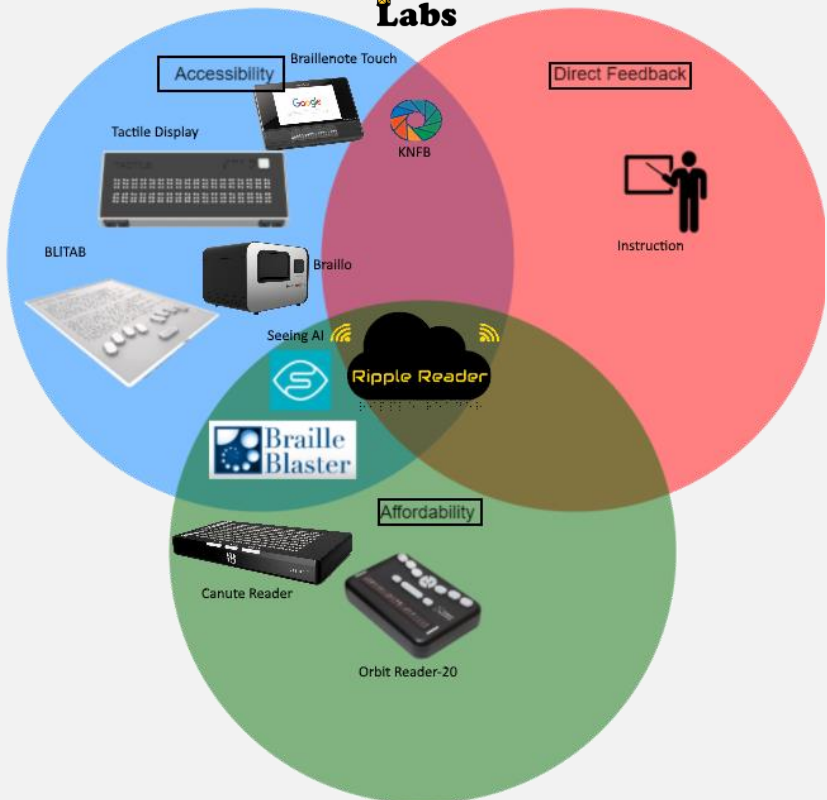Contact: cheidema@sfu.ca

Ripple Reader

LampLight Labs

Introduction

- ➢ Ripple Reader endeavours to help reverse decades of braille illiteracy
- ➢ Its core functionality converts print text into braille in near real time
- ➢ Assists content ingestion with two forms of dynamic auditory feedback
- ➢ Ripple Reader's proprietary optimization technology reduces required number of actuators by 83%*

Companion App

- ➢ Android app captures printed text.
- ➢ Optical character recognition extracts viable information.
- ➢ Extracted info. wirelessly transmitted, via Bluetooth, to physical device
- ➢ Smart device provides feedback via vibration, or speech, at each stage

Physical Device

- ➢ Converts incoming data into 6-dot Unified English Braille characters
- ➢ Characters expressed on refreshable braille cells by mechanical actuation
- ➢ Actuation system dynamically configures cells based on user position
- ➢ Users position triggers either character or word auditory feedback upon reading

Conclusion

Ripple Reader's unique capabilities, were specifically chosen to support the entire continuum of braille users from the novice learning their first characters to fluent user wishing for an everyday device with advanced feature such as UEB contraction.

Accessibility — Braillenote Touch — Tactile Display — BLITAB — Braillo — KNFB — Seeing AI — Ripple Reader — Braille Blaster — Direct Feedback — Instruction — Affordability — Canute Reader — Orbit Reader-20

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Rippl

ir sensor that detects fingers position
grid array of LEDs that represent 9 braille cells
microcontroller
Ripple Reader App (on smartphone)
-Captures Image
-converts image to text
-converts text to braille
-sends data to microcontroller

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