TECHNOLOGY OFFER

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Ring-Shaped Portable Braille Device

This new reading device for blind people combines the benefits of both larger and portable conventional Braille displays by putting the conventionally flat line of text displayed on the inside of a ring. It is thus possible to display long lines of Braille text with a small and portable device.

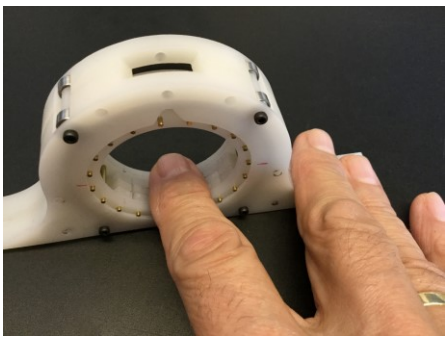
BACKGROUND

Access to text for blind and severely visually impaired people can be achieved in two ways: Converting the text into synthetic speech or into a dot pattern called Braille comprised of up to eight tactile dots. To read text from a digital source, blind people currently use refreshable Braille displays. These devices display Braille characters as a pattern of mechanically raised dots that can be recognized with the fingertip.

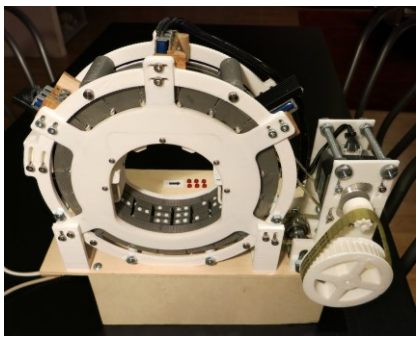
For technical reasons, these devices can only show one line of Braille text at a time. For mobile Braille devices, this line has to be kept short and thus the text will, in certain instances, be potentially tedious to read. Desktop devices with longer lines are frequently bulky and very expensive.

TECHNOLOGY

The new Braille reader will be small and, nevertheless, be capable of showing long lines of text. This is achieved by a technology which presents the Braille characters on the inside of a rotating ring. The reader will slide the entire device as usual along a horizontal line thus causing the ring to rotate. While the reading finger rests at the bottom of the device, the rotating ring produces the familiar sliding movement of Braille characters across the fingertip. Display elements passing through the upper half of the ring are mechanically set to show new text.



mock-up for the final size



working enlarged prototype

BENEFITS

- small and portable
- possibility to show an infinite line of text
- much lower costs than conventional displays with long lines of Braille

APPLICATIONS:

Access to text for people with visual impairments

DEVELOPMENT STATUS:

A first (enlarged) prototype was successfully developed

KEYWORDS:

refreshable Braille display, reading device, portable, mobile, blind, visual impairment

IPR:

Austrian patent granted; PCT patent application filed

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