

## NISTTech

### Refreshable Braille Reader: Apparatus & Method Utilizing Bi-Directional Relative Movement (Continuation-in-part Patent)

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#### Low cost, simple design for e-books and other print media

#### Description

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The first of the major refreshable braille reading devices created by NIST, the Refreshable Braille Reader is comprised of a rotating drum-like cylinder with rows of openings for retractable pins.

See parent patent under references below.

#### Abstract

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Apparatus and Method Utilizing Bi-directional Relative Movement for Refreshable Tactile Display: Patent # 6,692,255

A refreshable Braille reader apparatus and method are disclosed, the apparatus preferably utilizing a rotating cylinder having endless rows of openings defined there through to a display surface with a pin held in each opening and freely movable therein. Static actuators at least equal in number to the rows of openings through the cylinder are maintained at a station adjacent to the surface of the cylinder, and are configured and positioned so that the pins are selectively contactable at either of their ends by different ones of the actuators during cylinder rotation in either forward or reverse direction thereby selectively placing first ends of the pins relative to the surface of the cylinder to allow streaming of Braille text across a display area in either forward or backward order depending upon selected direction of cylinder rotation.

#### Inventors

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#### Citations

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1. NIST Docket #99-021, U.S. Patent # 6,776,619, Extended Refreshable Tactile Graphic Array for Scanned Tactile Display,
2. NIST Docket #02-002, U.S. Patent #7,352,356, Refreshable Scanning Tactile Graphic Display for Localized Sensory Stimulation
3. NIST Docket #02-003, U.S. Patent # 7,009,595, Extended Refreshable Tactile Graphic Array for Scanned Tactile Display,

#### References

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- U.S. Patent # 6,692,255 issued 02-17-2004 , expires 05/19/2019
- Docket: 99-021CIP

#### Status of Availability

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active patent and available for licensing

Last Modified: 02/24/2011