Affordable Assistive Technology
Let's create it together

TETRAGON

*Eco***Braille**

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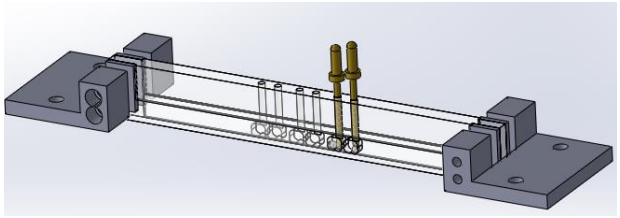
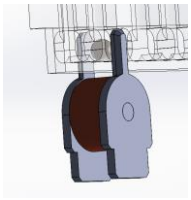
*Eco***Braille** is a new modular concept for economically building Braille displays of various sizes with simple mass-produced components. Sizes may vary from single-line displays with 10 to 80 characters of Braille up to entire screens with 7,000 dots, suitable for multiline Braille and graphics.

This could be achieved by a simple and robust latching mechanism where small steel balls are moved by sliding magnetic actuators. In contrast to most presently available Braille displays, where an actuator is necessary for every single pin, *Eco***Braille** requires only one (!) actuator for an entire line of dots, irrespective of the length of the line. For an average display, this means a reduction in the number of actuator by a factor of 80 (!).

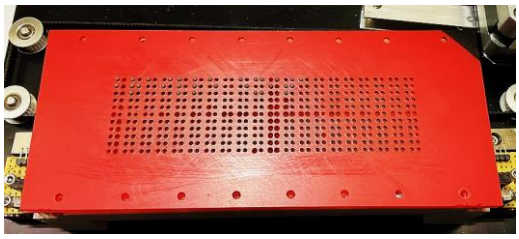


Operating principle – left pin down, right pin up



Sliding actuator moving a steel ball

The present prototype (still under development) uses rather simple and robust parts which can be mass produced at reasonable costs. However, if the displays would be completely produced in industrialized countries, such a device would not be affordable for more than 90% of the world's blind population.

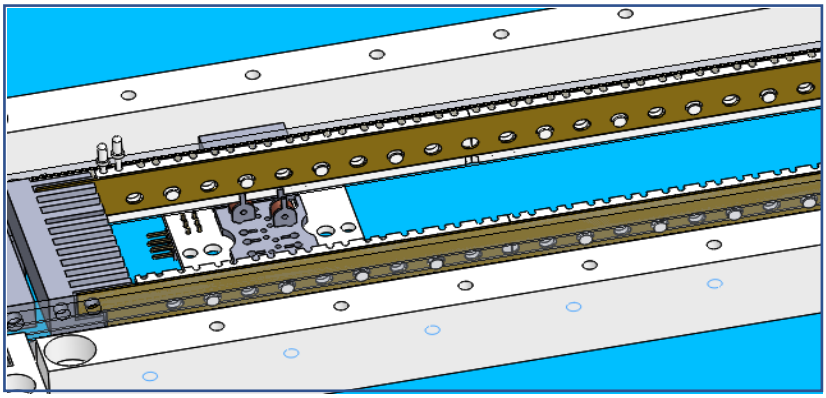


Present prototype (three lines of 20 characters)

Detail of the reading area

In order to make Assistive Technology affordable for the majority of disabled people, we propose:

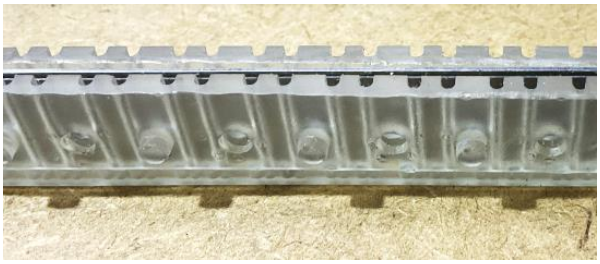
- Producing all high-tech components in large quantities in Europe – thus reaching significant economy of scale.
- Delivering the parts as kits at production cost (estimated 10% or less compared with the western price of the final product).
- Finding partners (maker-spaces, start-ups, SMEs, etc.) in Africa willing and able to do the assembling, testing, marketing, distribution and servicing on a local / regional basis.
- The African partners will get all the necessary know-how, training and tools to do this job.
- They will assemble, customize, sell and service the final products in their own country / region.



View of the components to be assembled

Examples of the main components:

One of many pins and balls inserted into strip



Two strips clipped together

Two actuators before coil-winding

Three actuators inserted in slider-carrier

Can you imagine becoming our partner in Africa in order to make this vision a reality?

For more information please visit: **https://tetragon.at/republica**

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