



The Dot Pad uses pins to make images come to life for Braille readers | Photo source [Dot](#)

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## AN AI-POWERED DEVICE TRANSLATES IMAGES AND WEBPAGES INTO BRAILLE



COMPUTING & TECH

### The technology opens up a world of information for sight-impaired readers

**Spotted:** With only around three per cent of the world’s accessible texts available in Braille, people living with sight impairments have an extremely limited library from which to choose. Set to transform this situation is South Korean assistive device company Dot. With its new artificial intelligence (AI) powered software, the company is making more content—including images—available to Braille readers. To do this Dot has built a Braille Translation Engine that translates PDFs, text files, web pages, and more in real-time via a tactile display called the Dot Pad.

The Dot Pad translates online material using 2,400 moveable pins. The pins make images—including mathematical graphs, maps, and social media images—come to life for Braille readers.

Because there is such a limited amount of Braille material available, the Dot team built and trained its algorithm using translations validated by human experts. The AI translates much more accurately than other programmes because of its ability to contextualise an individual letter, word, or phrase.

Of immediate use in education, the technology also expands the ability of organisations to make their communications and public spaces more accessible. From websites and customer care contacts to wayfinding, the Dot Pad helps Braille readers engage more fully with the world around them on their own terms and independently.

The translation engine is currently compatible with iOS, and developers are working to expand the engine’s general accessibility via other brands. They are also working to improve the AI’s accuracy in translating images, and developing the ability to depict depth and slope information.

Springwise has spotted several innovations that make it easier to create and use Braille. An earlier [e-book reader](#) downloads texts and then translates them into Braille, while a [portable printer](#) allows those unfamiliar with the language to provide Braille translations.

Written by: Keely Khoury

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Email: [dot@dotincorp.com](mailto:dot@dotincorp.com)

Website: [dotincorp.com](http://dotincorp.com)

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## **Takeaway:**

The Dot Pad is part of a broader trend towards greater accessibility. Universal design is becoming more common, as designers, architects, and planners realise the benefits it provides for all members of a community. Changes that appear simple can in fact be tremendously helpful. Tactile aspects of design, including smell, temperature, texture, and sound can help people with a range of abilities navigate public spaces and engage more fully with the community. Making diversity an everyday aspect of life benefits everyone in a multitude of ways, including overall wellbeing, a stronger economy, through an atmosphere that supports creativity and innovation.