Shubham Banerjee holding a Braigo printer

BRAIGO

2014 Nominet Trust 100 Winner

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2014

MASSIVELY LOWERING THE COST OF BRAILLE PRINTING

By Braigo Labs

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- Community Engagement
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It took a bit of LEGO and some dirt-cheap hardware to fashion together the world's first truly affordable Braille printer. At a stroke, Shubham Banerjee's open-source 'Braigo' (from 'braille' and 'LEGO') cuts the cost of braille printers, from $2,000 to just $350. Not bad for a 12-year-old.

'Assistive technologies are either too expensive or difficult to obtain for normal people,' says the Californian high-school student, who has been dubbed a boy genius and tipped as the next Steve Jobs or Bill Gates by CNN.

He was inspired to make the machine when he saw a charity leaflet fundraising for a printer. After seven attempts prototyping, using a basic, pre-existing pattern, he'd built a machine and software programme that could render the six dots that make up the tactile writing code – using a standard LEGO Mindstorms EV3 robotics kit, printing onto standard calculator paper and with a thumbtack as its primitive printer head.

'I've been building my whole life,' said Banerjee, whose father is an engineer. 'When I learned how many people can't afford to buy a braille printer, I realised I could probably build a solution... [and] thought it would be cool to make [it] completely out of LEGO.'

The prototype is slower than commercial models – taking five seconds to print a character. But Banerjee is tweaking the model to speed it up, and incorporate other elements such as text-to-speech software.

The invention was Editors Choice at Maker Faire's flagship Bay Area Faire 2014, and Banerjee was among delegates to the first ever White House Maker Faire this summer.

Image courtesy of Braigo

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