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3D PRINTED MAPS COULD HELP THE BLIND NAVIGATE THEIR CITY

● TELECOMMUNICATIONS

Japan's governmental department GSI is creating software that will enable those with visual impairments to print out 3D versions of online maps.

Modern technology has turned many of the things we consume from physical objects into pixels on a screen. While this has benefited the majority, those with sight difficulties often struggle with touchscreen devices. In the past, we've seen Yahoo! Japan develop [Hands On Search](#), a project that lets blind children carry out web searches with 3D printed results. Now, the country's governmental department [GSI](#) is creating software that will enable those with visual impairments to print out 3D versions of online maps.

The official mapping body for Japan — much like the US Geological Survey — GSI already has paper maps for the blind, using embossed surfaces to mark out roads. It's now developing a program that is able to do the same thing for digital maps.

The software first differentiates the highways, railway lines and walkways from the rest of the landscape. It then creates a 3D relief model that uses different textures to distinguish the features so that anyone running their finger along them will be able to determine what it is. The program also takes into account contour lines, creating accurate topographical representations of a particular area.

GSI has already processed the data for urban locations at a scale of 1:2500, as well as rural areas at 1:25000. Although users will need access to a 3D printer in order to create their own physical maps, the body believes the technology is becoming more and more affordable and especially holds value for those with sight difficulties. Are there other ways to intelligently replicate digital data in physical form for the visually impaired?

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