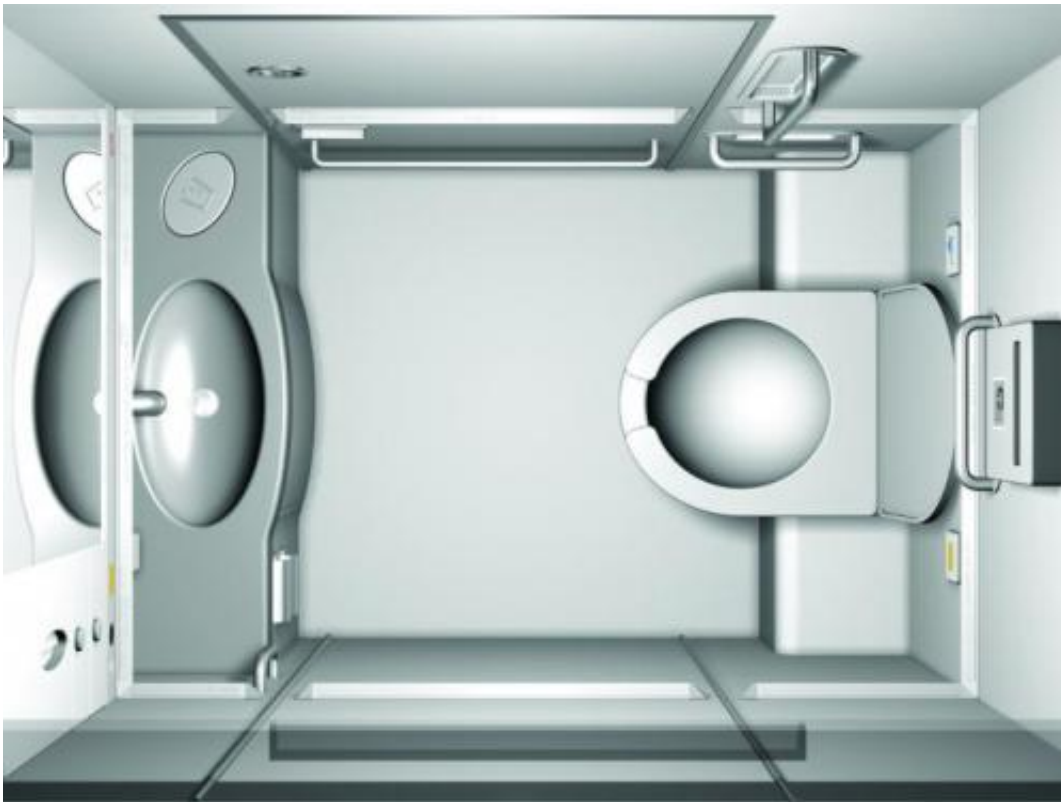


BrailleWise aircraft toilet: Making air travel easier for visually impaired people

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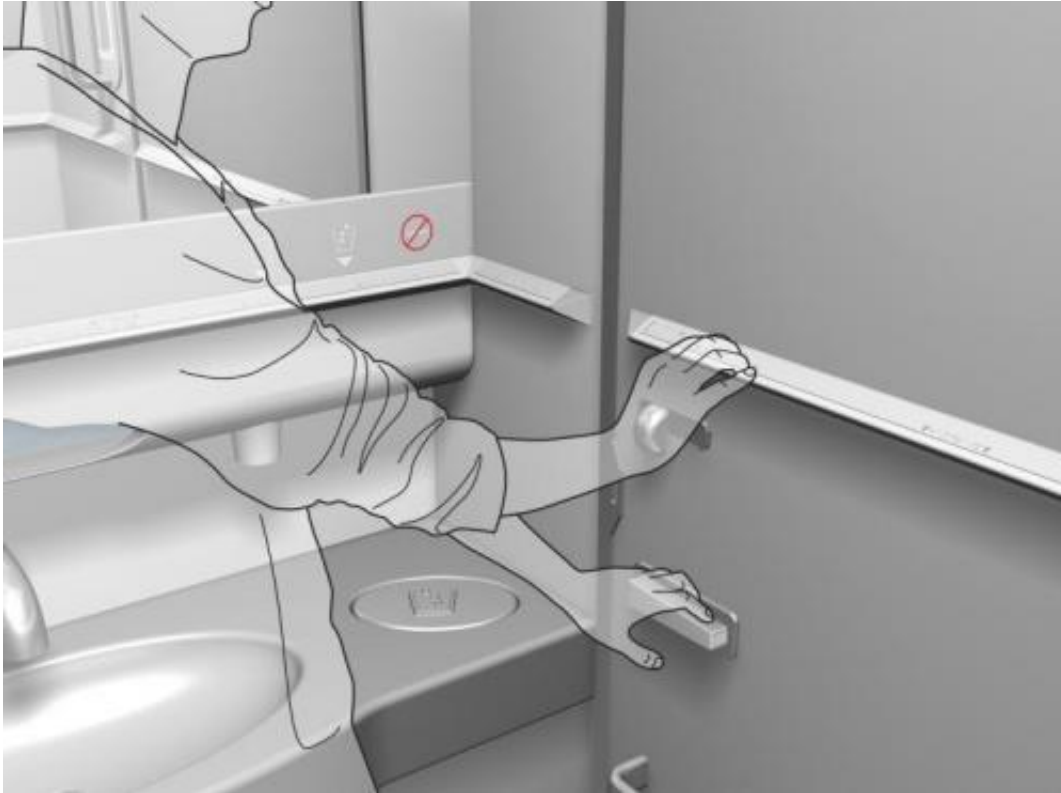


The Hong Kong Polytechnic University has designed a new aircraft lavatory called BrailleWise, giving visually impaired people greater independence and comfort when using toilets on airplanes.

Braille is a tactile writing system used by the blind and those with serious

[vision impairment](#). It was invented in 1824 by Louis Braille who went blind as a toddler after an accident. Even though he could not see, he was desperate to read. Drawing inspiration from a military night writing code, the 15-year-old school boy developed a set of raised dot alphabets that allowed him to read and complete his education.

Just as the Braille inventor, people with visual disability work hard to adjust to a life without sight. In total darkness and unknown places they can hardly orientate. Every day they face much discomfort when getting around, using public transports and toilets. Therefore, the School of Design at The Hong Kong Polytechnic University has recently designed a new aircraft lavatory especially for them by providing an organized system for reading Braille and other tactile information. This unconventional design is called BrailleWise, which gives good indication to quickly find and use lavatories on planes. With BrailleWise, the visually impaired people can now enjoy greater independence and comfort when using toilets.



Braille toilet signs are not a common sight on plane and even if they exist, they can only be found next to an amenity. But BrailleWise goes about it differently. Beams are put up around a lavatory compartment showing simple directions. A beam with signs in Braille letters for all functions will show the visually impaired users where they can find the amenities such as toilet rolls. The tactile signs on the beam show the names of the amenities along with upward or downward arrows pointing to their actual locations.

Once in a cabin lavatory, a visually impaired person can instantly feel the presence of the Braille beams at waist level. Running his/her fingers down the beam, a user can quickly locate a wanted function such as the toilet bowl, the flush handle and the wash basin. With good bearings, one

can move around freely and independently with greater confidence without relying on a guide. He/she does not need to feel around and risk touching the toilet seat anymore, which is often covered in filthy stains.

Travelling and sightseeing are great ways to connect with people. The leader of Public Design Lab in School of Design, Prof. Michael Siu, wanted to make public toilets accessible and comfortable so that the visually impaired people would face less struggles on the go. "Using the toilet in public places is not that straight-forward for the visually impaired. Finding their way around in unfamiliar territory is a big challenge for them. That's why they would usually avoid using public toilets by not eating and drinking. But it is not healthy," said Prof. Siu, who has been working with his fellow researchers and the Hong Kong Blind Union since 2000 on products that cater to the special needs of the visually impaired. "Their disability shouldn't take away their social life and exclude them from society," said Prof. Siu.

The modern, chic-looking design blends seamlessly into the décor of the cabin lavatory. It means a lot to the [visually impaired](#) who work very hard as self-supporting and contributing members of the society and want minimal obstructions to the people around.

BrailleWise is a simple and economical solution that can transform any public toilet into a barrier-free space in no time. Many design awards have already gone to this invention, including the Diamond Award in the 2012 Successful Design Awards in China and GOOD DESIGN Award in the United States. BrailleWise also received the Runner-up Prize at the Crystal Cabin Award 2012 held in Germany, the only international prize for aircraft innovations, alongside world-renowned aviation companies as winners including Almadesign, B/E Aerospace & Teague, C&D Zodiac, Lufthansa Systems and TTF Aerospace. This prestigious award is a seal of approval that BrailleWise maximises autonomy and well-being for disabled air passengers through excellence in design.

Provided by Hong Kong Polytechnic University

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