

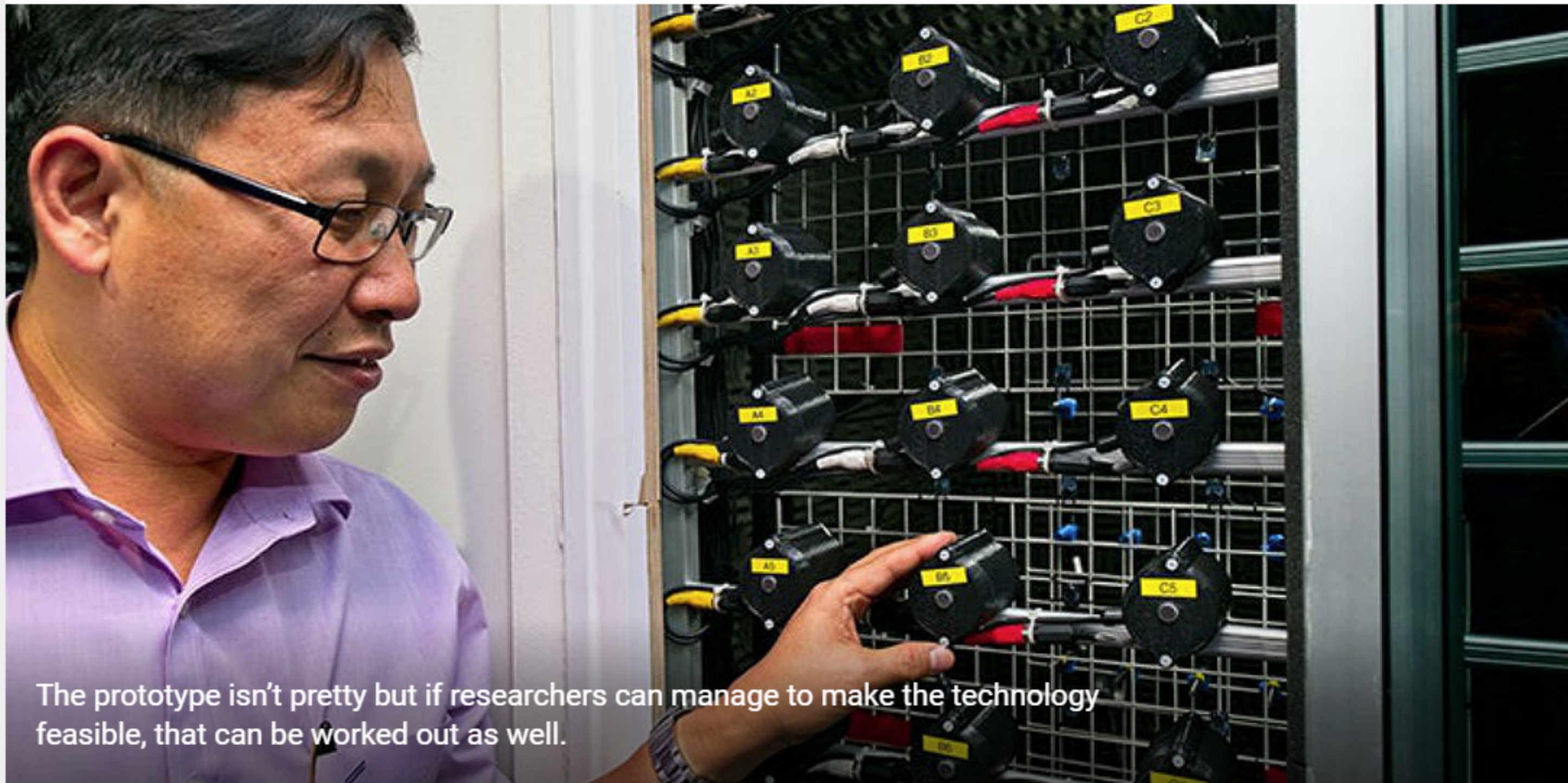
Tired of city noise? Noise-canceling windows might be the answer

SCIENCE / TECH



By Alex Hernandez

Posted on May 2, 2018



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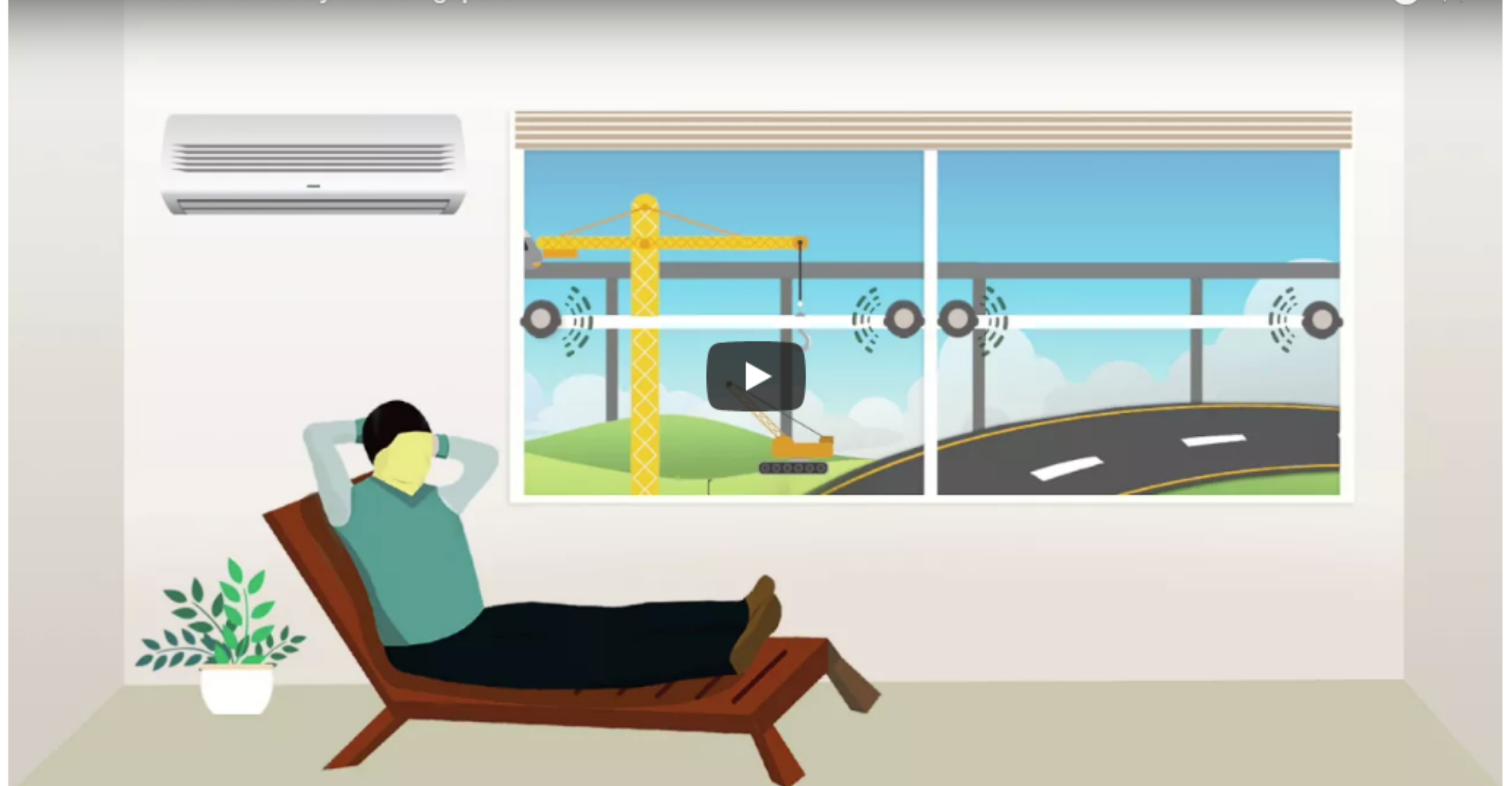


If you're a city dweller who is tired of the constant sounds of city life you may be thinking. How can I get some peace and quiet? Noise-canceling windows might be your answer. Noise-canceling technology is used in headphones and is what inspired researchers at Nanyang Technological University, Singapore (NTU). Researchers at NTU have developed a system that can be mounted on windows and cut out the noise coming from outside. Noise-canceling technology works by countering incoming sound waves with their own.

These devices use a microphone to listen to the incoming noise before algorithms analyze the waveform and generate an inverted version that is then emitted through speakers. When the two sounds converge, the ambient noise from outside is dulled, saving the listener from the honks of traffic or the endless hammering of construction sites.

"Compared to noise cancellation headphones, what we have achieved is far more technically challenging as we needed to control the noise in a large open area, instead of just around the ear," says Gan Woon Seng, lead researcher on the project. "Our innovation not only computes the right amount and type of 'anti-noise' to emit, but also does it faster than the detected noise can reach inside the building."

Noise reduction device by NTU Singapore



The prototype isn't pretty but if researchers can manage to make the technology feasible, that can be worked out as well. It's an interesting idea and one that I'm sure many city dwellers would welcome in their homes.

"We are currently finding ways to improve the technology further so that it can be used not only at window grilles with large openings, but also provide a cost-effective solution that can be easily installed and replaced," says Gan. "Ultimately, we aim to integrate this technology into window grilles that can help mitigate urban noise pollution conveniently."

What do you think of this noise-cancelling tech? Let us know in the comments below or on [Google+](#), [Twitter](#), or [Facebook](#).