

New Singapore robot could make building inspections a breeze

NTU's QuicaBot can inspect a building for defects faster and more accura...



🕒 PUBLISHED 2 HOURS AGO



Janice Heng (<mailto:janiceh@sph.com.sg>)

SINGAPORE - With laser scanners and cameras, a new robot can inspect a building for defects faster and more accurately than humans, saving time and manpower.

Invented by scientists from Nanyang Technological University and co-developed with national industrial developer JTC and local start-up CtrlWorks, the robot can move about by itself to scan a room for defects.

Usually, human inspectors use tools such as set squares and spirit levels to check whether walls meet at right angles and floors are even.

But the QuicaBot - short for Quality Inspection and Assessment Robot - uses a laser scanner to capture 3D data of the room and check for alignment and evenness.

It also has an inclinometer to check the slope of floors, a camera to detect cracks on walls or floors, and a thermal infrared camera to check for hollow tiles.

A regular inspection that takes one day with two human inspectors could be completed in half a day with one human inspector and the QuicaBot.

The robot took a year to develop and is supported by the National Research Foundation Singapore.

Having tested the robot on a small scale, JTC next plans to trial the robot on a larger scale, such as the JTC Space @ Gul project, set to be completed early next year (2017).

If that field trial proves successful, the team could then look at how to scale up for potential commercial applications.