The 'Prometheus' scanner that can 3D capture a crime scene in minutes

- Zebdee is a 3D handheld scanner that maps scenes in almost real-time
- It creates interactive models that can be annotated, tagged and rotated
- The technology has previously been used to map famous landmarks
- Police officers in Queensland were the first to use Zebedee to fight crime
- It maps crime scenes quickly and easily without disturbing the evidence
- Technology is similar to the mapping drones used in 2012 film Prometheus

By VICTORIA WOOLLASTON

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Crime scenes can be notoriously difficult to examine without disturbing the evidence, yet one police service in Australia has come up with a novel solution.

Officers from Queensland are using a handheld 3D scanner to perfectly record computer models of indoor and outdoor scenes of crime.

Called Zebedee, because of the way it moves like its namesake in The Magic Roundabout, the scanner has previously been used to produce models of famous landmarks and shipwrecks, yet this is the first time the technology has been used to fight crime.

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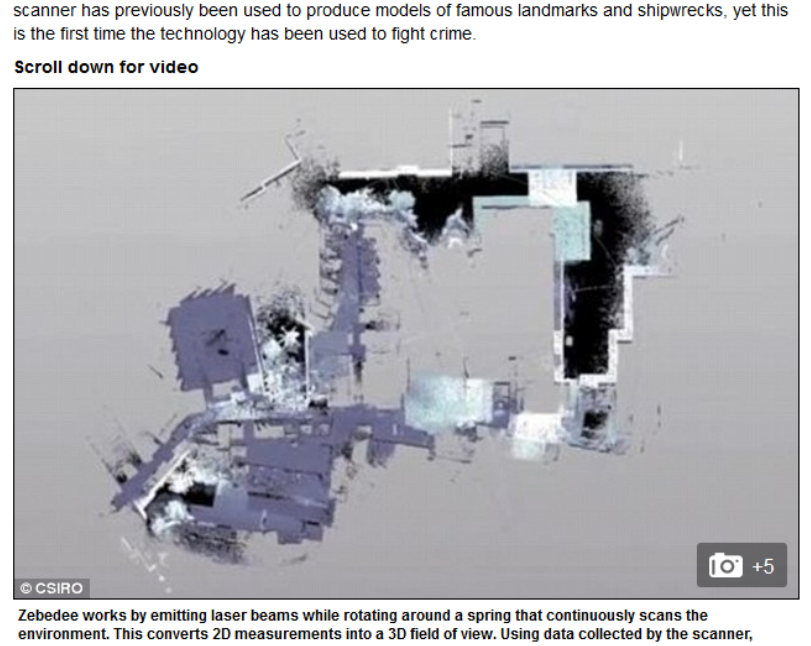
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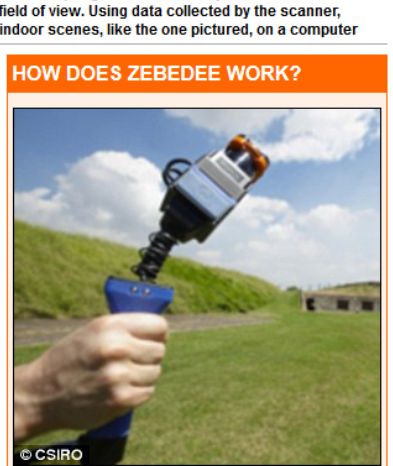
Zebedee works by emitting laser beams while rotating around a spring that continuously scans the environment. This converts 2D measurements into a 3D field of view. Using data collected by the scanner, police in Queensland have been able to quickly recreate indoor scenes, like the one pictured, on a computer

'The benefits of [Zebedee] will reduce interference at a scene, save time and allow access to previously hard to reach areas such as step declines and bushland,' said Queensland Police Service Commissioner Ian Stewart.

HOW DOES ZEBEDEE WORK?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Zebedee works by emitting laser beams while rotating around a spring that continuously scans the environment.

This converts 2D measurements into a 3D field of view and is capable of collecting over 40,000 range measurements in just one second.

Using data collected by the scanner, police investigators can quickly recreate the scene on a computer in 3D.

They can locate and tag evidence, pinpoint particular areas of interest and rotate the room or landscape to view it from any angle.

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'This cutting edge technology is allowing us to adapt to a new environment of ongoing change and improvement.'

Crime scenes are renowned for being difficult to investigate due to the delicate nature of preserving evidence. Equally, outdoor crime scenes including dense forests, caves, or other vast areas can be time consuming to examine thoroughly.

Using Zebedee, also known as ZEB1, police can now easily access these hard to reach places and map confined spaces where it may be difficult to set up bulky camera equipment and tripods.

It also means less disturbance of the crime scene and scans can be uploaded in almost real-time.

Zebedee works by emitting laser beams while rotating around a spring that continuously scans the environment.

This converts 2D measurements into a 3D field of view, and its capable of collecting over 40,000 range measurements in just one second.

Unlike wheeled mobile systems, Zebedee can operate on stairways and rough terrain and the system is also accurate in areas without GPS.

Amazing hand-held 3D scanner maps the world around you

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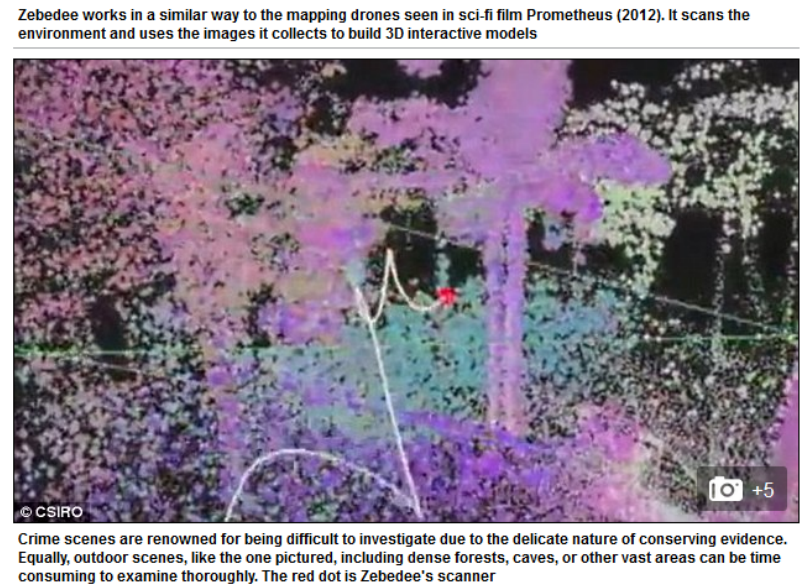
Zebedee works in a similar way to the mapping drones seen in sci-fi film Prometheus (2012). It scans the environment and uses the images it collects to build 3D interactive models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Crime scenes are renowned for being difficult to investigate due to the delicate nature of conserving evidence. Equally, outdoor scenes, like the one pictured, including dense forests, caves, or other vast areas can be time consuming to examine thoroughly. The red dot is Zebedee's scanner

Using data collected by the scanner, police investigators can quickly recreate the scene on a computer in 3D.

They can locate and tag evidence, pinpoint particular areas of interest and rotate the room or landscape to view it from any angle.

The technology was created by Brisbane-based firm Commonwealth Scientific and Industrial Research Organisation (CSIRO) in 2010.

Zebedee has previously been used to capture world heritage sites in a bid to preserve them. It was recently used to scan the complex interior of the Leaning Tower of Pisa, for example.

It is now available commercially and its makers are working on ways it can be used in forestry, mining and classroom learning.

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Zebedee has previously been used to capture world heritage sites in a bid to preserve them. It was recently was used to scan the complex interior of the Leaning Tower of Pisa, for example, pictured

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The Queensland initiative was a joint project between, from left to right, CSIRO's Dr Jonathan Roberts, Science, Information Technology, Innovation and Arts Minister Ian Walker, Sergeant Kylie Blumson, pictured holding Zebedee, and Police, Fire and Emergency Services Minister Jack Dempsey

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Andy, Portlaoise, Ireland, 1 year ago
The sheep will be very relieved.
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LBBA, Perth, Australia, 1 year ago
Been around for years. At least 7 years. And the scanner has to be moved around as to avoid the doppler effect
Click to rate 3 0

scepto1, london, United Kingdom, 1 year ago
probly a bit longer i fist see somthing like this in a movie in the late 90s probly earler if you cound scanners and stuff like that from star trek and probly bin in the pipe for a long time
Click to rate 0 3

Laughing Gravy, Wirral, 1 year ago
Nothing like Minority Report!
Click to rate 18 1

trethspekrlove, Los Angeles, United States, 1 year ago
Yeah i bet there are people who can predict the future. true story.
Click to rate 1 1

Jono2012, Southport, United Kingdom, 1 year ago
not a bad idea the question is who going to pay for it??
Click to rate 2 5

Bob, ukip land, United Kingdom, 1 year ago
be in use for several years now DM, Armchair journalism , someone bored in the office DM, had to surf the internet?
Click to rate 18 2

Wolfshead, Coventry, United Kingdom, 1 year ago
Yes and it says so in the bloody article. Used to map world heritage sites & ship wrecks but this is the first time it's been used for crimes scenes. Now get up out of your armchair and realise that this also has value in other areas, such as fire fighting. The more agencies get involved, the more money will go in to development. I dare say that within a few years these will produce photo quality images
Click to rate 0 0

helena118, London uk, 1 year ago
Collision investigators do use this technology in the UK already. However, still have to close the road or the 'scene' will be full of other vehicles.
Click to rate 11 1

SteveW, Manchester, United Kingdom, 1 year ago
They may be using it, but are they using it to the full? Rescue, scan, clear the road, get the traffic moving. Instead we have major roads closed for many hours after rescue is completed, with consequent gridlock in surrounding areas and people unable to move.
Click to rate 6 0

victord, bournemouth, United Kingdom, 1 year ago
And it takes them all day
Click to rate 4 1

jaffacakefuel, London, 1 year ago
Still won't stop crime. Can see after what's occurred. Stick more cops on the streets. Simple solution
Click to rate 4 6

cp, Kent Europe, 1 year ago
Expensive solution ....
Click to rate 4 2

Steve in Texas, Roscoe, United States, 1 year ago
Cp: Actually, when you figure it all .... the crime itself, police response, insurance increase, attorneys, courts, fines, incarceration, probation, work training, housing assistance .... the cop on the street is a deal
Click to rate 4 0

Andy HB, Hebden Bridge, 1 year ago
Zebedee works in a similar way to the mapping drones seen in sci-fi film Prometheus (2012 er no it doesn't....the thing in the film wasn't real you see DM
Click to rate 13 5

jamesc111, Hampshire, United Kingdom, 1 year ago
Minority Report was a film. I've just written a short story featuring microwave toy slippers and, frankly, I expect to be credited when a scientist works out how to do it, or indeed if it can be done. Nonetheless I said it first.
Click to rate 6 3

ENGLISH1ST, EXETER, United Kingdom, 1 year ago
This is not new at all. Look at Crime 360 and it shows the machine the Americans use to sweep the crime scene 360 degrees. Should be on youtube.
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