



Australian Government

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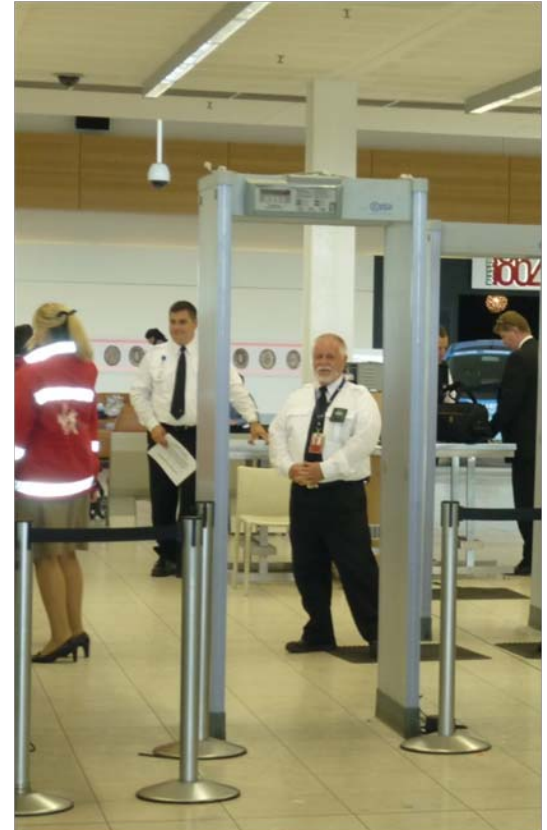
Body Scanner Demonstration Parliament House March 2012

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Current Screening Process

- walk-through metal detector
- X-ray machine for baggage and personal items
- random selection for explosive trace detection
- Random selection for a frisk search (international only)



Threat to aviation

- Aviation remains a key target for terrorists.
- A successful terrorist attack against aviation in Australia would have significant consequences.
- Terrorists will continue to develop new methods and materials to avoid detection at screening points.
 - December 2001 – Richard Reid shoe bomber
 - August 2006 – Liquid explosives plot
 - December 2009 – NW 253 ‘underwear bomber’



NW 253 incident

- Abdulmutallab attempted to detonate the device mid-flight.
- Device concealed in his underwear.
- No metallic components
- Not detected during security screening processes (including a frisk search)



Why body scanners?

- Aviation security screening traditionally focuses on metallic items
- Body scanners can detect a range of both metallic and non-metallic items on a person or within their clothing
 - Ceramic knives
 - Improvised explosive devices with no metallic components
 - Liquids and gels



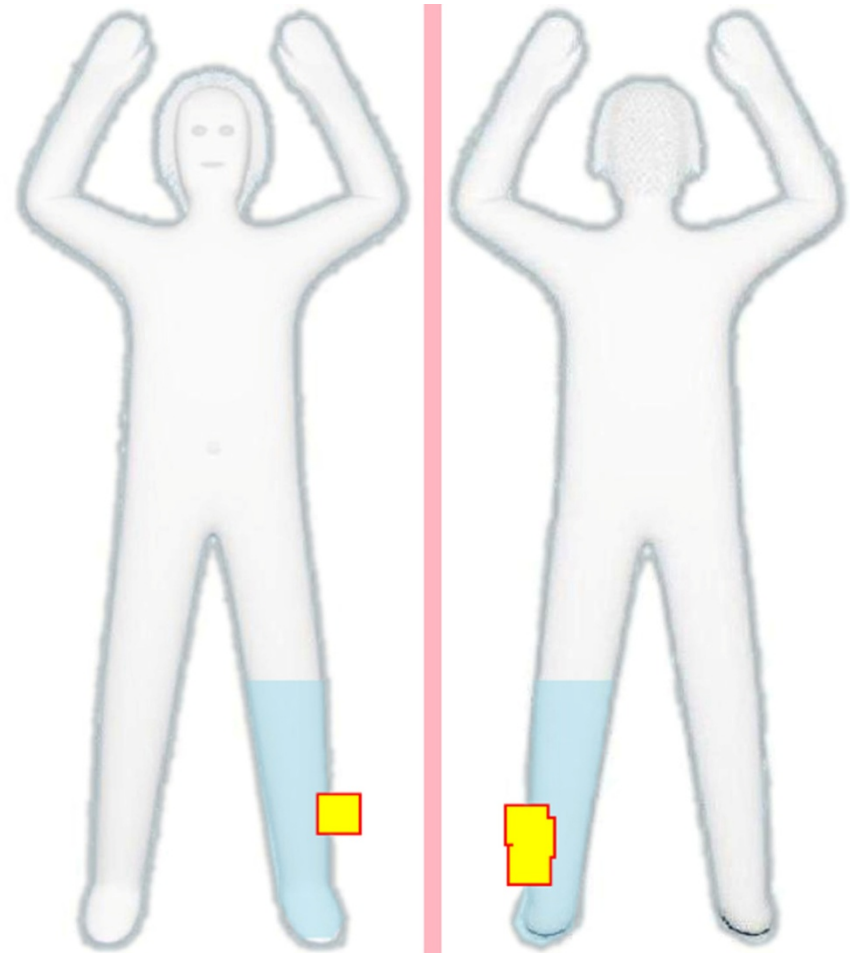
Technology

- Privacy
 - Automatic threat recognition
 - No data from individual images stored
- Health – millimetre-wave only
- No scan, no fly
 - Any alternative would be less effective and more intrusive



Body scanner alarms

- The body scanner pinpoints the locations of items.
- Faster resolve process than a walk-through metal detector





Millimetre-wave Body Scanner

The millimetre-wave body scanner is an aviation security screening device being introduced at Australia's international airports to complement the existing walk-through metal detectors. Body scanners represent an improvement in screening technology as they are able to detect the presence and location of both metal and non-metal items.

Technical

The L-3 ProVision millimetre-wave body scanner works in three stages:

1. A weak beam of radio waves is transmitted at the person being scanned from two rotating masts containing transmitting and receiving antennas inside the body scanner. This takes no longer than 2 seconds.
2. The energy reflected by the body or any other object on the body is received by the machine and analysed by the unit's software (automatic threat recognition algorithm) to detect anomalies, such as those produced by items located on the body or inside clothing.
3. When an anomaly is detected, a small box indicating its location is superimposed on a generic human drawing or 'stick figure' that is displayed on a monitor for analysis by screening staff.

Scanning time

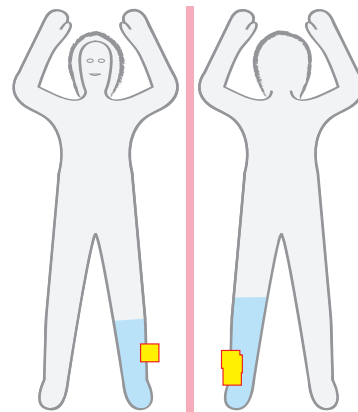
The body scanning process will take approximately seven seconds; two for the scan and five seconds for the results of the scan to be generated and viewed by security staff.

Privacy

The L-3 millimetre-wave body scanner uses a generic human drawing with no identifying features to identify areas on the body requiring further examination. No individual scans will be stored.

Health and safety

Millimetre-waves are part of the radio frequency spectrum utilised by many every day devices such as mobile phones and



wireless network devices. There is no evidence to suggest that millimetre-wave body scanners are a health risk for the travelling public or operators.

Exposure levels

People scanned by the L-3 millimetre-wave body scanner are exposed to exceptionally low levels of electromagnetic energy. These levels are thousands of times lower than that of a single phone call.

The frequency used in the millimetre-wave body scanner means the penetration into the human body will be lower than from most other exposures encountered in daily life.

Implanted medical devices

The body scanner will not be able to detect internal medical devices such as pacemakers and metal joints. Due to the very low power level of the body scanner, there are no safety concerns in relation to medical implants and devices such as pacemakers.

Exemptions

Infants and small children will not be required to be scanned. People with any illness, injury or disability that prevents them from being able to stand still with their hands above their head will be screened using alternative methods. People reliant on external medical equipment such as colostomy bags may still be able to use the body scanner.

For further information visit: travelsecure.infrastructure.gov.au or email bodyscan@infrastructure.gov.au

