

## Forensic applications

The Maptek <sup>™</sup>I-Site<sup>™</sup> 3D laser imaging system is a combined laser scanner, survey and digital photography instrument. It is capable of acquiring very detailed scenes in 3D for accurate interrogation and analysis.



Laser scan of staged scene - data in the scene can be viewed from any position and angle

Unlike a photograph, I-Site technology captures everything in true three dimensions, allowing a complex scene to be quickly and accurately recorded.

The purpose-built panoramic digital camera within the Maptek<sup>™</sup> I-Site<sup>™</sup> 4400 allows simultaneous acquisition of laser scan data and 360 degree high resolution textures. An incredible 37 megapixel image can be rendered over the 3D point cloud.

The I-Site 4400's high speed laser scanning system is fast, reliable and compact and has been designed for the rugged Australian environment. The package includes the powerful Maptek<sup>™</sup> I-Site<sup>™</sup> Studio software for processing and modelling laser scan data.

The I-Site 4400 records the (x,y,z) coordinates of every individual point as well as the laser reflective return, plus the true passive colour of objects (under normal lighting conditions).

Up to 2.5 million points can be acquired from one vantage point, allowing the calculation of distances, areas and volume to be achieved much faster.

Coupled with the scanner's long-range capability of up to 400 meters, large scenes can be acquired in a very short time.

Up to 2.5 million points can be acquired (at 4000 points/second) from one vantage point, allowing you to calculate distances, areas and volumes much faster than any other method.

The acquisition detail allows for identification of small objects such as knives, bullet casings and even broken glass.



## Highlights

- Captures images in three dimensions
- Simultaneous acquistion of laser scan data and high resolution images
- 360 degree high resolution textures
- 37 megapixel imagery







Scan data with a surface model

Unlike a photograph, I-Site captures everything in true three dimensions, allowing a complex scene to be guickly and accurately recorded.

The Maptek<sup>™</sup> I-Site<sup>™</sup> Forensic software is accompanied with tools for editing, registration, manipulation, viewing, modelling and interrogation of laser scan data.

Scan data viewed from acquisition, in true colour

I-Site 4400 applications in the police environment include:

- Counter terrorism contingency planning
- Plane, train and car crash investigation
- Scene investigation and preservation
- Forensic investigation
- Infrastructure recognition and route planning for hostage situations
- Building and vehicle surveillance
- Broad area surveillance

The 3D image can show a laser scan of a staged scene. Data in the scene can be viewed from any position and angle, allowing you to place yourself in the eyes of any person looking at anything within the scan data.

Investigating the crash profiles of vehicles involved in road accidents is another application of laser scanning. The photographs above show the I-Site 4400 being used at a crash investigation site. A useful feature of the I-Site laser scanning system is that the scan data can not be deleted.

The I-Site 4400 is a ground based, eye safe instrument that significantly reduces the time spent at a scene.

The accompanying I-Site Forensic software includes tools for editing, registration, manipulation, viewing, modelling and interrogation of laser scan data.

The point cloud data can be filtered to produce CAD drawings. Fly throughs, walk throughs and log files are other specialised features for customising presentation of the data.

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