

O20. Capturing Forensic Evidence in the 3D World

JON SKELTON

Business Development Manager (Forensics), Topcon Europe

Jon.skelton@topconsokkia.eu

Criminal investigations rely heavily on forensic science techniques ranging from the routine identification of fingerprints to complex use of DNA evidence. These are normally recovered from items found at a crime scene. The exact location of evidence at a scene can be very important, but at the time it is often difficult to determine what may become crucial at a later date. The forensic personnel at a crime scene need to capture everything in detail to “freeze” the scene in time. Captured data can be used later to reconstruct the scene, perform measurements and test witness evidence. Current practices utilise digital photography and manual measurements but these are slow and selective.

This presentation addresses the current problems and examines how a 3D laser scanner can be used at a crime scene to capture forensic evidence. Laser scanning technology is mature in a number of sectors but it is still not widely used in the UK in the forensic field.

Topcon Europe has undertaken some initial research with a UK University to determine:

- the applicability of laser scanning at crime scenes.
- methods to enhance the scanned data quality of objects with poor reflectivity.
- the process of incorporating laser scanning technology into forensic science courses through a partnership approach.

It has already been demonstrated that considerable time savings can be achieved through using a laser scanner at a crime scene. A high degree of detail of the area can be captured which would be impossible using current methods. Work is continuing on how the scanned 3D data can be utilised and one area of interest is the positioning of witnesses to test fields of view.

This presentation will explain:

- the partnership approach taken in this case
- how new technology is making an impact in the forensic field
- why forensic science courses should consider incorporating laser scanning technology.