



Customer Case Study: CCTV speed assessment

The brief

The Eurofins Forensic Services team were approached by a Police Collision Investigation Unit, in relation to a road traffic incident. The details of which are that a Citroën Saxo was in a collision with a DAF Road Sweeper, causing death by dangerous driving.

Our actions

We were instructed to review the incident imagery with a view to determining the speed of the incident vehicle. However, although two images of the incident vehicle were found, it was not possible to determine the exact position of the vehicle in the first image due to its position being almost completely obscured by foliage. An estimation of the incident vehicle's position could however be determined. It was therefore decided that, to provide an indication of the speed of the vehicle, a reconstruction would be undertaken. As a result, the DVR was prepared for the reconstruction. This involved the cloning of the original hard drive inside the DVR and the supply of a secondary hard drive, to be fitted inside the DVR, on which the reconstruction imagery was to be recorded. A reconstruction was undertaken and imagery recorded.

Our findings

Both the incident imagery and the reconstruction imagery were examined and found to refresh at a rate of 3 images per second. Both the incident imagery and the imagery for the reconstruction vehicle passing at a given speed were aligned so that the refresh rate was coincident for each of the two sets of imagery. This process was repeated, comparing the incident imagery against the various speeds at which the reconstruction imagery was recorded.

The benefits of using Eurofins Forensic Services

Prior to receiving our instructions from the Prosecution, the Defence had approached another forensic service provider based in the UK, who produced a report providing a speed assessment of the incident vehicle. However, their speed assessment was conducted using police compilation footage that they report to be 'updated with 4 different imagery every second'. Using this figure of 4 images per second, the other forensic service provider gave a speed assessment of 'approximately 54.6mph'.

Since the original frame rate of the imagery from the DVR had been assessed to be 3 images per second, the police produced disc was therefore found to be inaccurate, in that the imagery displayed from this disc indicates a refresh rate of 4 images per second. Therefore the Defense Expert's assessed speed of 54.6mph for the vehicle prior to the collision is unreliable. An exhibit was produced by Eurofins Forensic Services that correctly represented the imagery updating three times per second. With access to this material the other Service Provider amended their calculations and adjusted their assessment to approximately 60mph. This figure was consistent, to within 1 mph, of our speed assessment of 59mph. Consequently both experts came to an agreement that the speed of the incident vehicle prior to the collision was 59mph \pm 1mph.

The outcome

Although an indication of the exact speed of the incident vehicle could not be ascertained from the incident imagery alone, the imagery comparison undertaken between the incident vehicle and the Police reconstruction vehicle illustrates that the vehicle driven was travelling in excess of 59 MPH.

This case demonstrated the importance of having an imagery expert examine the original imagery.

Sentencing at Chelmsford Crown Court resulted in:

Charge: Causing death by dangerous driving

Sentence: Three years detention in a young offender institution.

Disqualifications from driving for 6 years with an extended re-test to be taken.

Understanding what's not there

Eurofins' forensic imagery team are experts in the use of imagery and audio in the legal context, and provide the widest range of enhancement and analytical products.

Eurofins Forensic Services has some of the UK's most highly capable and qualified experts, whose extensive experience of CCTV systems and imagery allows them to give you the reassurance you need. Important when findings come to be used to support or defend prosecutions in court.

Our experts have experience in dealing with a large number of speed assessment and road traffic collision investigations. Please ask for further information on this topic. Our highly qualified experts are available to discuss your specific requirements and advise on specific cases.

CS 4482 0118

CCTV
For your personal safety and security CCTV cameras are in constant operation
Evidence can be used in a Court of Law



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