kinesense
LE

Merseyside Police Volume Crime Case Study

Case Study Results
CCTV Collected: 20 hours
Reviewed & Reported: 4 hours
Time Saving: 16 hours (75%)

Merseyside's Visual Evidence Unit is set across two of the force's main sites in Liverpool, with eight Visual Evidence Technicians and sixteen Visual Evidence Officers, who support a variety of investigations from volume crime to major crime, and wherever technical advice on visual and audio material is required.

Whilst Kinesense LE has been used extensively by major crime and serious organised crime units who typically need to deal with hundreds of hours of CCTV and covert video on single operations, volume crime also demands a lot of police resources, and Merseyside Police is just one of many forces that have recognised the benefits of using Kinesense video analytics to speed up a much wider range of daily investigations.

A prime example of where Merseyside's VEU used Kinesense LE was following the discovery of a vulnerable person, found lying in a precarious position on the ground below the second-floor window of a shared accommodation. It was not known whether they had fallen or if somebody else had been involved, which could have changed the investigation from being an accident to an attempted murder and so investigators urgently needed to know if anyone had visited the victim or the property prior to the fall.

The VEU received a request to process 20 hours of video footage captured on two CCTV cameras, which overlooked the front and rear of the building, to create a timeline of ingress and egress as well as events leading up to the fall. The video files were from a well-known brand of DVR, yet they did not play directly in an 'everyday' player software, but using Kinesense LE, the officer was able to quickly ingest and make playable the large batch of contiguous video files, and organise them into a structured timeline so that event detection analysis could then be carried out.

Filters searching in all colours and direction were applied to cover the front door, to detect whenever it was opened, and to the rear gate to detect any further entry or exit to the property.

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The filters immediately highlighted only the activity in these two areas, which significantly reduced the amount of video which needed to be reviewed. The relevant key events were identified and tagged using the Person / Object system before being added to a video report for submission to the investigation team, where it was quickly concluded that nobody had entered the premises and thus it was to be classed as an accident.

In total the 20 hours of original footage was ingested, made playable, filters applied, reviewed, cut down to only 3 minutes of key evidence and made 'report ready' in just 4 hours, sparing the investigators the need to create extra requests further down the line. This saved investigators more than 16 hours, or 75% time compared to if this same video had been reviewed manually.

> Following the success within the VEU, Merseyside Police have now allocated user licenses to staff in the Firearms Investigation Team and they too have used it on the several investigations, reducing their viewing time dramatically.

"As a busy unit covering multiple cases, the ability to allow Kinesense to process and analyse the CCTV in the background freed me up to assist other investigations. Further, the ability to use filter regions to narrow down the search of activity and condense the results in to the just three minutes of video footage (from 20 hours) saved time for the investigators and reduced consumption of the force's e-resources."

Further quotes from other users with Merseyside's VEU include:

"The ability to import and consolidate multiple sequential files (from a single camera) into a single video stream is a huge advantage, as is the ability to download external players for files which won't run natively."

"The event detection and associated filtering system on any video makes it easier to determine any footage which may be of interest to investigators; further expedited by the object classification and detection (cars, bikes, etc.)."

The software can screen capture from external video players if it is unable to import the footage directly. In these circumstances and although screen capturing is not a popular option, it is very beneficial to have this backup option."

"Logging and disclosure reports are very good and have been used by us not only for transparency, but also to showcase our abilities as a unit to non-tech colleagues."

"The ease of use of the Annotations (spotlights, arrows, zoom, etc) for redactions and indications has been hugely beneficial as this has reduced working time on a specific job. Further, the ability to change whether it is a circle or a pixelation, etc makes it easier to make quick changes. Our investigation team have found it useful that we can enter the recording time and date, then adjust this information from a time calibration of the CCTV system. It's a bonus when we can add a newly generated timestamp when exporting the video from Kinesense."