V Festival:

ANPR contributes to success

The V Festival is one of the headline events in the UK's music calendar. It is unique in running at two venues at the same time, Weston Park in Staffordshire and Hylands Park in Essex, with Saturday's artists at each event playing the next day at the other venue. A hugely popular event with fans, the V Festival attracted a total of 150,000 to the two locations, with many camping for the long weekend.

But as is so often the case, many of the factors that make the festival attractive to fans also make it attractive to both petty and serious criminals. The direct responsibility for policing at each venue lies with the respective local police forces, and in the case of Weston Park this means the Staffordshire Police. Based on a number of years' experience of the event, a broad action plan starts weeks before the festival weekend to ensure a peaceful and happy time for the music fans.

In July the police sent letters to 300 previous offenders at festivals saying: "stay away from the V Festival if you're coming to commit crime – we know who you are". In the build-up to the weekend a competition organised jointly by the Festival Organisers and Staffordshire Crimestoppers canvassed public support in maintaining security at the festival. During the festival there were CCTV systems covering the site and monitored through a control room, sniffer dogs carried out random searches, and officers both in uniform and undercover mingled with the festival crowds. In addition, given that 28,000 cars were expected at the event, Automatic Number Plate Recognition (ANPR) was used as an essential part of the total policing operation.

With so many cars at the event, ANPR is a highly effective way of screening all visitors. DC Cliff Hough of Staffordshire Police explained the way ANPR was used in the total policing operation. “There were people at the festival from all over the country, including a small number of people who we are very interested in, mainly for illegal substances. We have information on the vehicles these people are linked with and their movements. ANPR enables us to swiftly check all the cars attending the festival against a database and identify in seconds the vehicles of interest. In fact we use a number of different databases – there is the national database, our own Staffordshire Police database, and those of some other forces who have a particular reason to be here. We get two main results from this surveillance. Firstly, immediate results. We identified two stolen cars very early on in the weekend, and we have had further such actionable matches throughout the weekend. Secondly, we gather intelligence that we place in the big picture of surveillance of some of our high profile targets. From both points of view our force, and the other forces here, find ANPR very effective.”

For such a powerful and sophisticated technology, the installation of an ANPR system is in fact very straightforward. The police brought their own laptop already set up with the software and the databases, so the missing element was the ANPR camera.

ANPR is a challenge for a camera, with its requirement for sharp clear images of registration plates that may be dusty or smeared with grease, or may be excessively shiny. The vehicle may be moving at speed, may have full headlights on, the atmosphere may be misty, and it may be day or night. The Derwent REG camera chosen for the V Festival is designed to address all these problems. The Derwent REG camera uses IR lighting and the latest optics and filter technology to deliver quality images under all conditions down to zero lux, and with no focus shift between daytime and IR operation.

The camera was set up on a post at a height of four metres, between the entrance to the park and the parking area, together with the integrated infrared floodlight that illuminates the field of image. The REG 25 camera is designed to read number plates at 25 metres, at which distance it captures images with the number plate filling the percentage of the total picture required for recognition by the ANPR software. As the cars streamed by, the camera captured an image of every passing number plate, day and night, using the infrared illumination. The images were then sent 1200 metres over Cat 5 cable to the laptop PC, where the number plate was "read" by the ANPR software, converting the image into the short string of alphanumeric values that form the car registration. Each registration was instantly checked against the databases stored on the PC. In the event that there was no match, the system is set to move to the next number. If there is a match, an alarm tone alerts the operator. There is then the option for the operator to access further external databases for more information if required – the temporary control room at Weston Park had wide area connections.

All this has taken place in at most a few minutes while the car is still in the queue for the car park, and if there is good reason, it can be intercepted and dealt with by officers in radio contact with the control room.

Some installers are a little wary of tackling ANPR, but Andy Perry of Custom Technology Solutions is enthusiastic. "It really is a straightforward installation task, and we set it all up very quickly as we have done in previous years. The REG 25 camera is plug and play, we run cable behind fences, the power is straightforward and we use NVT because of the long Cat 5 runs. Like any system it needs some attention to set up the images correctly, but that is not difficult. Connection to the laptop is also simplicity itself. There were particular issues because of the nature of the event – a last minute change of layout meant we had to dig a trench, we needed to be aware of the possibility of wet weather, and we had a cable chewed by sheep – but nothing we couldn't handle. I know some installers are put off by the high tech image of ANPR, with its PC and software connections, but I can assure them that there is nothing to fear.

"The other aspect that has to run smoothly when working to this timescale is delivery. At Custom Technology Solutions we use Norbain for most of our supplies, as we did for the REG camera and the V Festival, because their delivery reliability is second to none, as is their technical support. We meet our promises to our customers because we can rely on Norbain to meet their delivery promises."

At the end of the festival Superintendent Kevin O'Leary, one of the event commanders, summed up a very successful operation: "The Festival has the reputation of being among the safest on the summer calendar and we make every effort to keep it that way. The weekend passed off with very few problems, and the ANPR system was a major contributor to that effort. It's unobtrusive yet provides very thorough screening of every vehicle which is just right for an event like the V Festival."