



CASE STUDY

Slough opts for NVT UTP Hybrid Video™ transmission

As part of an overall review of the city centre's public space amenities, Slough Borough Council has recently taken the opportunity to replace its existing 'end-to-end' leased fibre-optic CCTV camera links, with a highly economical NVT UTP Hybrid Video™ Transmission solution.

Slough is currently at the start of a significant redevelopment around the town centre area known as 'Heart of Slough'. With a projected total of £450 million, the scheme will see adjustments to road and pedestrian infrastructure, a new bus station, and public library and retail facilities. Amongst updates to the many public space areas in the town, Slough Borough Council were keen to address deteriorating CCTV scene coverage issues that had become apparent in the original surveillance system, where years of tree growth in the green area of Slough's High Street had resulted in impaired surveillance coverage at many of the key camera locations.

To provide valuable assistance, the council commissioned security consultant Derek Maltby, Director of Global MSC Security. Derek recommended additional camera positions, and the repositioning of some existing cameras to maximise each unit's effective scene coverage. "The existing CCTV network consisted of cameras using a dedicated fibre link from the control room to each camera," explains Derek. "The cost of leasing multiple individual fibre links between each camera and the control room was proving very expensive year-on-year. To reduce this overhead, we recommended consolidating the system into one single fibre backbone, and linking the cameras to the backbone using NVT UTP video transmission. To facilitate this, our solution consolidated the system's video distribution into a newly installed CCTV sub-surface duct network (installed as part of the overall civil works improvements to the High Street) and belonging to the council."



This technical specification was passed to CDS Integrated Security Systems for implementation. Andy Williams at CDS takes up the story: "We had used NVT Hybrid Video™ transmission technology a number of times across a variety of different applications, and consider it the de facto choice for high-quality, cost-effective CCTV installations. So when NVT UTP was specified for this scheme, we had the utmost confidence that the product would provide the fibre-like image quality the council required, but at a fraction of the cost."

Each relocated camera now features a single-channel NVT NV-214A-M UTP video transmitter located in the base of the camera pole. From there, camera images are transmitted via a 20-pair UTP backbone cable to a street-side communications cabinet containing multiple NVT video receivers. The video signals are then interfaced to the fibre 'backbone' for transmission back to the control room.

Peter Webster, Slough's CCTV Control Centre Manager explains: "By utilising NVT's UTP Hybrid Video™ technology to connect each camera in the system to the fibre backbone, we are enjoying an economical solution that combines stunning camera images with highly competitive cost reduction benefits. We have reduced our reliance on third-party fibre links and anticipate ongoing annual savings in rental charges alone.

"The high-quality camera images we now enjoy in the control room are a vital tool in the general operation of the town centre, both during the day and at night. The daytime can see us involved in a wide variety of incidents; assisting the police with shoplifting crimes, street robbery and assorted types of vehicle crime, both theft from and theft of. When the night time economy takes over from the day, we shift our resources to the monitoring of areas around bars and clubs – typically the areas where high spirits can quickly turn into anti-social behaviour or acts of violence. Since its inception, the high-quality of the NVT UTP based imagery has assisted us in the identification and subsequent conviction of a number of offenders involved in incidents - both during the day and in the hours of darkness.

Slough Borough Council were also keen to reduce their carbon footprint as part of the High Street scheme and have installed an innovative street lighting energy management system which automatically dims the street lighting to a pre-set level at a certain time of the night according to a schedule. The CCTV Control Centre can over-ride this setting, returning all street lighting to its brightest setting using a single mouse click should they observe an incident.



“The stunning quality of the NVT images excel under all conditions, with crystal-clear footage allowing us to identify individuals and bring them to the attention of the police if necessary - all with the reassurance of clear evidential footage. Since the installation of the NVT Hybrid Video™ technology, visiting police officers have often commented on the improved quality of the images and the video evidence they receive from the CCTV Centre.”

Connecting each camera via a 20-pair UTP backbone also led to a smoother and less cumbersome installation process, versus that required by a traditional RG59/RG11 coax system, due to the UTP cable's significantly reduced dimensions. This proved critical during the installation period, when the reduction of civil works on Slough's busy streets was a top priority.

Additionally, NVT Hybrid Video™ UTP products also feature Ground Loop Isolation and Interference Immunity as standard. This helps to deliver crystal-clear images in the control room, even within the challenging environment of a modern town centre that features telecom, mains power, street lighting, traffic control systems, and a raft of other airborne interference sources; that would typically leave inferior systems struggling to provide consistent, interference-free images.

Deploying a NVT UTP Hybrid Video™ transmission solution, Slough Borough Council is benefiting from the best of both worlds; an easy to install, economical, flexible and expandable Cat5 cable network, coupled with analogue levels of unhindered camera control and evidential image quality. Peter continues: “I'm yet to see IP video that is of the same quality and performance as analogue. For example, a moving camera tracking a moving vehicle (a typical town centre scenario) results in a significant amount of IP camera motion blur and poses a big issue for evidential imagery. The Home Office's 'National CCTV Strategy' is committed to improving the use and effectiveness of public facing CCTV, and is telling us to improve our images - IP is simply not of the quality of analogue.”

By installing a 20-pair NVT Hybrid Video™ UTP network to the fibre backbone link, CDS have supplied the council with a future-proofed and easily expandable network, allowing any additional cameras needed to be simply added, capitalising on the multiple available spare UTP pairs. This inherent expandability can also be harnessed to further relieve the financial constraints of the existing 'end-to-end' leased fibre links, by converting more of the existing CCTV cameras to connect to the new central fibre 'backbone', via NVT UTP Hybrid Video™, a strategy under strong consideration for the future.



Network Video Technologies Ltd.
NVT House, 99 Waldegrave Road • Teddington • Middlesex • TW11 8LA • United Kingdom
Tel: +44 (0)20 8977 6614 • Fax: +44 (0)20 8973 1855
nvt.com • uksales@nvt.com