

**S**tafford General Hospital has selected Axis Communications for the provision of network cameras and video servers in order to extend and update its surveillance system. The selection of a networked surveillance solution rather than a traditional analogue-based Closed Circuit Television (CCTV) system has saved the hospital more than £42,000\* in installation costs alone.

A total of five Axis video servers have been deployed to enable 14 existing analogue cameras to be attached to the network. In addition, seven new Axis network cameras have been deployed across the campus so far.

**Upgrade**

The decision to upgrade from a CCTV-based security system to IP was made in discussion with network installer Plexnet. Plexnet estimated that extending the CCTV system to include new buildings within the hospital's campus would have cost £42,302\* more than networking the new surveillance equipment through the existing 1 Giga Bit (GB) Ethernet



cabling and established 11 Megabit (MB) wireless links to outlying buildings.

Stafford Hospital had already installed a 1GB backbone with two Cisco 6500 core switches linked by a 2GB connection. Twenty Cisco edge switches support Virtual Local Area Networks (VLANs) supporting 2,500 regular hospital staff. All this equipment was installed two years ago as the hospital geared up for central NHS IT initiatives such as Integrated Care Records Service (ICRS) and the establishment of Picture Archiving and Communications



**IP surveillance installation delivers 56% saving over traditional analogue CCTV at Stafford General Hospital**

Systems (PACS), all designed to digitise patient records for easier and more cost efficient storage and distribution of patient records via computer.

Stafford Hospital's security is managed within its 30-strong portering and security services department which uses DV Networks' discover e system to view and store images taken from the 21 cameras now deployed in the main hospital building and Technology Park based a kilometre away from the main building. An additional 19 new cameras will be deployed as the hospital's surveillance system is extended across its car parks this summer.

**Great example**

Dominic Bruning, managing director, Axis Communications (UK), explained: "Stafford is a great example of IP being selected over CCTV to utilise existing network infrastructure. The savings at the installation stage are significant and are escalating as the project is extended. IP surveillance also offers Stafford the ability to better manage recording, storage and movement of MJPEG images from the system to the police when incidents occur."

The fact that the main building and its environs were already fully networked and had extensive bandwidth resources at their disposal was undoubtedly a significant factor in the decision to network the new surveillance solution. But the selection of IP surveillance was not only due to cost advantages - the smooth running of Stafford Hospital was also a key factor.

Cabling management is a huge issue in all hospitals because of the vast infrastructure involved in running a hospital. Cabling, pipe work and ducting is needed for telephones, heating, water, electricity, air conditioning, air filtration, telecoms and computer networks. All this is housed in the roof voids of hospitals between the ceiling and the floor above. Because all



this cabling takes up a great deal of space in these voids, there is a premium on space for any additional cabling that is subsequently required.

Set against this backdrop, IT staff decided that when they rewired the hospital as part of installation of a new computer network in 1998 all data communications would be tied onto a dedicated tray system attached to the roof above the lighting units.

Stafford Hospital, although built in the 1980s, is not blessed with a huge amount of space for extra cabling. Use of existing networking infrastructure was very popular with the hospital's IT department as well as its facilities managers. Using coaxial cabling for the surveillance system would have meant creating a completely new carrier system which itself

would have been a major job requiring teams to work overnight to minimise disruption to hospital staff and patients. Night working can double the above conservative installation costs, pushing up overall costs considerably and adding to the overall disruption that any extension of the existing CCTV system would cause.

An additional area of significant savings came with the need to put a surveillance camera into Stafford Hospital's occupational health unit based 400 metres across the hospital's car park. A traditional CCTV installation would have demanded laying cables under the ground across a busy car park with the attendant costs detailed above, in addition to the disruption that would undoubtedly have been caused. But this unit like the Technology Park already had an 11MB wireless link back to the main building's network. This link could be deployed for the network camera that has been installed in this unit, at virtually no extra cost.

**Support**

Stafford General Hospital employs more than 2,500 regular staff and has 450 beds. Its 900 staff are supported by IT staff from the local Health Informatics Service (HIS). HIS staff provide desktop, networking and server support.

*\*Estimated cost of internal and external cabling for the planned CCTV upgrade was £75,302 as against actual installation costs before security equipment of £33,000 producing a saving of £42,302. The saving of 56 per cent is calculated by taking £42,302 divided by £75,302. Plexnet is the source for these figures.*

