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CCTV as a Service

The exceptional versatility and scalability of the CCTV systems supplied by Security Products (SP), a segment of the Building Technologies Division from Siemens, are helping Douglas Borough Council (DBC) in the Isle of Man to develop an innovative concept of delivering CCTV as a service to public sector users, such as schools, car parks, libraries, and the police. The revenue generated by this service will ultimately not only cover the cost of providing the packages, but also the Council's own costs in providing island-wide CCTV coverage for shopping streets and other public areas.

Innovative business model
Using CCTV in public areas, although not considered acceptable in all countries, is commonplace in the Isle of Man and the United Kingdom. The CCTV-as-a-service project, supported by the Council's Leader Councillor David Christian MBE and Borough Engineer Ian Clague MBE, was driven by Daniel Looney, Head of ICT for Douglas Borough Council, who was tasked with providing reliable CCTV coverage for the busy streets of Douglas town centre. He knew that, once the control room was set up, the facilities could be extended to other public sector users on the island. This would have the twin benefits of generating an income for DBC to cover its own CCTV operating costs, and allowing CCTV services to be provided to the other users at a far lower cost than if they had to install standalone systems.

When Daniel Looney approached Aidan O'Reilly of Eye-Spy Security, a local expert in CCTV system design and installation, to discuss his idea, the company quickly realized that to make it a reality, two key requirements would need to be satisfied:

the CCTV equipment used would have to be very versatile as it would need to work with existing cameras of various types, and it would also have to be easily scalable, so that its capacity could be expanded easily and cost effectively as the number of users grew.

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After careful consideration, Aidan O'Reilly determined that Vectis HX digital video recorders (HVRs) and Vectis HX NVS network video software from Siemens would provide by far the best solution. While designed with high-definition images up to 1080p in mind, Vectis HX HVRs are equally well suited to working with lower resolution images from older cameras, irrespective of whether these cameras use analogue or IP connectivity. Vectis HVRs also support the ONVIF open networking protocol, which is now used by a wide range of CCTV camera manufacturers. These features mean that systems based on Vectis HX HVRs are compatible with almost any type of existing camera, and are also fully future proofed to cope with the ultimate replacement of older cameras by modern HD types. Both Vectis HX HVRs and the Vectis NVS software use the latest H.264 video compression technology that makes extremely effective use of available disk storage capacity without compromising image quality, and both provide full support for IP connectivity. This is the key to linking users throughout the Isle of Man, which already has a gigabit fibre backbone, to the central control room and monitoring facilities. In addition, the software has powerful integrated video analytics that can be used to enhance the services provided to users.

As always, in providing CCTV systems for DBC, SP drew on its unparalleled knowledge of national and international standards and regulations to ensure that the equipment supplied and its deployment complied fully with local requirements.

The initial implementation comprises two 64-channel servers running NVS software, with a total of 49 Terabytes of storage, and comprehensive monitoring facilities in the central control room. The system receives images from 97 cameras in central Douglas. Many of the cameras are new Siemens HD types with IP connectivity, but where the existing analogue cameras were providing satisfactory images, typically in car parks, these have been retained.

Schools as pilot users
The first third-party users of the system are schools, and the DBC service is proving to offer much better value for money than would be possible with a standalone system. This is because, rather than flooding the school with cameras and installing expensive recording and monitoring facilities, DBC carefully analyses the requirements and installs cameras only in problem areas. Monitoring and recording

is provided at the central control room. This means that the school pays only a modest per-camera service charge and has no other on-going costs or capital expenditure. In addition, the image quality is considerably higher than that produced by the "budget" standalone CCTV systems that finances dictate many schools would otherwise have to adopt. Plans are now in place to extend the coverage of the system to Douglas promenade, and to sign up additional users across the island.

DBC will also be offering more advanced packages to users, which will optionally include automatic alarm generation based on the advanced video analytics of the Siemens systems and, for critical locations, full 24/7 monitoring by control room operatives. All of the packages include high quality recording to store images of the standard required for use in courts of law.

Positive comments

"We're delighted with the new installation and with the possibilities it opens up," said Daniel Looney, "and it's really making a big impression on all those who see it, with the image quality coming in for special praise. We use 720p, and we've been told time and again by visitors, many of whom have extensive CCTV experience, that our system provides the best images they've ever seen."

Councillor Christian said: "Our concept of providing CCTV as a service, which is the basis of our business model, is generating a lot of interest. Our users not only have a dependable and very affordable CCTV service, but also access to our ICT team's expertise to ensure that they get the best from it."

Working in partnership, DBC, Eye-Spy Security and Siemens have convincingly demonstrated that their model for CCTV implementation in the public sector is attractive and viable. Wider adoption of this model around the UK and beyond can, therefore, be confidently expected.

Safety and security for the TT motorcycle races

Initial response to the system has been very positive, as experiences during the period of the TT motorcycle races demonstrate. Held annually since 1907, the TT is a world-class motorcycle racing event that attracts entrants from all corners of the

globe, and brings thousands of spectators to the island. To help ensure the safety and security of these spectators, DBC arranged temporarily enhanced CCTV coverage for duration of the 2012 event. So impressed was the Isle of Man police force by the benefits that it has now asked for this part of the system to be made permanent.

This case study is available at http://www.siemens.com/download?PR00367

For further information on the Building Technologies Division, please see www.siemens.com/buildingtechnologies

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