CEU Kolding provides an open and creative educational environment with Xprotect® Business.

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- Svend Erik Rasmussen, Vice President at the Center for Education and Business.

The Center for Education and Business (called CEU Kolding) is located in the city of Kolding, Denmark. It is known as a pioneer in the Danish educational system. The complex covers three addresses on the edge of town, and is founded on the principles of freedom, flexibility and creativity. These ideals are mirrored in the school buildings' interior décor, which greets anyone entering with spacious rooms made of glass and pale wood with art on the walls. The ideas are further echoed in the school's conscious choice of advanced IT equipment used in teaching and its daily operations.

Yet everything has a price. The school's 900 PCs tempt both students and people outside the institution. Since the beginning of 2002, CEU Kolding has therefore been using Xprotect Business, network-based surveillance software from Milestone Systems. The solution installation includes 44 cameras that are connected into one of the country's strongest networks.

Video surveillance has an especially good preventive effect and for CEU has resulted in the school only experiencing one incident a month, which is considerably less than other big schools. The solution delivers much better picture quality than their previous analog system, and it is easier to find recordings for any occurrences. Both of these benefits provide a faster and more dependable identification process, which allows the school to take effective action: internal theft and vandalism lead to immediate expelling.

"The problems only involve maybe 1% of the students, who behave recklessly. But those are the ones we have to get our hands on, in order for the remaining 99% to be able to enjoy the school's lovely facilities freely and without limits, in accordance with our principles," explains Svend Erik Rasmussen, Vice President at CEU Kolding. "Xprotect Business helps us to achieve that objective."

Future safe

"We chose to be just as ambitious and innovative when it comes to our network and security matters as we are in the educational arena. The choice of Xprotect Business was made in connection with the school getting a new name, new buildings and new teaching methods – all in 2002. We have not regretted any of it," says Svend Erik honestly.

CEU Kolding selected the solution on recommendation from the Søren Jensen Engineering Consultants, who service the school as building managers, particularly during their construction.

"There was really only one serious option: Xprotect from Milestone Systems. They were the only supplier with a 100% network-based surveillance solution, which in my qualified opinion is the right choice if you want to have a system that works in the long run," claims Alex Jørgensen, the school's consultant from Søren Jensen Engineering.

At CEU Kolding there is total satisfaction with the new surveillance system, which is both simple and easy to operate, as well as user-friendly when it comes to upgrades. Image quality is very high, and specific recordings can be quickly and easily identified in the system. Storage tapes from the previous analog security system have been dumped and happily replaced by two NAS servers.

"We are saving both time and money – and if there is an incident, we have good evidence to solve the investigative work," reports Svend Erik Rasmussen.
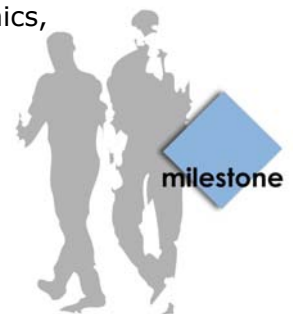
Pioneers in education

CEU Kolding is a medium-sized school that was similar to the majority of other education institutions in Denmark up to the mid-1990's. In connection with the school's plans to erect all new buildings, however, the management wanted to establish a different kind of place. They wanted flexible instructional facilities based on a foundation of openness.

On the 28th of January 2001 the school changed its name from Kolding Technical School to the Center for Education and Business ('Erhverv og Uddannelse' in Danish) or CEU Kolding when abbreviated. Simultaneously with the name change, two existing school buildings were renovated and a new one was also created together with a dormitory with rooms for those students coming from longer distances.

On an annual basis, CEU Kolding has 1,600 students, ages 16 to 60. The educational courses offered cover a wide spectrum from dentists and hairdressers to chefs, mechanics,

veterinarians, and graphic media designers. The institution also includes a technical high school.

In addition to the student body, there are 300 employees at CEU Kolding. And everyone has free access to the light, welcoming environment where nothing has been spared on the interior decor or Information Technology.

"We wanted to create a school with a feeling of consensus and responsibility with a positive, pleasant milieu. We broke down all the traditional principles about rooms with walls and closed doors for small classes – instead giving birth to an open environment where the various subjects can collaborate," explains Svend Erik Rasmussen.

A secure framework for freedom

The school's students and personnel have access to the school outside normal opening hours, being able to utilize any of the facilities between 7 a.m. and 11 p.m. The only thing they need is a personal access card. This free setup makes critical demands on the school's security arrangements, however, which created some problems with theft and vandalism. At one point, one classroom was destroyed at a cost of 30,000 Danish crowns, and expensive computers had also disappeared over time.

"CEU Kolding has quite a lot of well-equipped facilities that both students and teachers can use basically round-the-clock. We don't want to cut back on that freedom, so instead have chosen to install Xprotect Business to cover all the classrooms, meeting areas, hallways, and entrances. It has had a noticeable preventive effect," says Svend Erik.

Total elimination of theft is not possible according to Svend Erik Rasmussen. But one can limit it, and when it happens, be able to handle the investigation process more easily. In December 2002 the school was the object of 7 robberies at a total value of 250,000 Danish crowns. Simple searching on the digital video recordings showed that the thieves were known locally, and that they had stolen two of the PCs in just 40 seconds! The images were sent immediately to the police, who used them to solve the case and make their arrests.

No Big Brother

Svend Erik Rasmussen says that CEU Kolding does not have to be constantly physically monitored by management. The camera recordings are reviewed only when there are reports of an incident. They can compare the log files from the access cards with the video images to see if there were people allowed to be there or if it is a matter of break-ins. It is also possible to email image files to the local police. The solution will be connected directly to the school's security guard center later on.

"For now, we have had excellent results with using the system preventively. The number of incidents has fallen dramatically to barely one a month – and we are very satisfied w concludes Svend Erik.

From analog to digital

Video surveillance is not new at CEU Kolding. Previously, the school has used an analog system with 13 cameras, but in connection with putting up the new buildings it was decided to invest in a digital solution. The 13 analog cameras are included in the new solution, connected to eight video servers that convert the analog signals into digital data. Those initial camera investments are therefore not lost with the addition of the new components.

"Both the recordings and the operation of the old system were bad," recalls Svend Erik. "All the images were saved on tapes, and it was very difficult and time consuming whenever we had to find a specific recording."

Absolute recommendation

The school allied itself with Søren Jensen Engineering Consultants, who worked up a requirements specification for all the IT and network installations in the new buildings. The result is a multi-service network that is one of the strongest in the country. All data, telephony, and video is gathered in the same network – and there is plenty of capacity for new facilities.

"There is no doubt that a digital surveillance solution is the only right one for the school. The future is digital and not analog. We had planned the network, so the only thing left was to choose a supplier," states Alex Jørgensen, the consultant from Søren Jensen Engineering who handles the CEU Kolding business. "Xprotect from Milestone Systems was a natural choice because that company is the farthest ahead in development of network-based surveillance solutions. In addition, their solution is standards-based which gives both flexibility and savings."
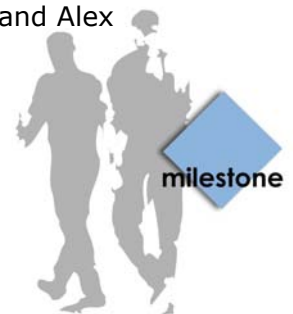
Saved lots of money

Alex Jørgensen is still connected with CEU Kolding and among other things has responsibility for updating the Milestone solution when new features are released. He is very pleased with the easy user interface, and that the software operates on standard hardware.

"The time is over for proprietary systems. We send video recordings via the normal network and store them on standard NAS servers. The school has saved lots of money from this," he reports.

Flexible upgrades

The 44 cameras CEU Kolding has set up are placed in two of the school buildings and in connection with the dormitory. The school has plans to expand the solution with six more cameras that will be installed in a third teaching facility, the agricultural division, 13 kilometers away from the main campus, via a rented fiber optic cable. This will make the new cameras' connections straightforward and simple.

Furthermore, Xprotect Business is so flexible and user friendly that expansions like this, as well as upgrades, take place with no problems. So both Sven Erik Rasmussen and Alex Jørgensen look calmly forward to extending the solution.

"It is one of the biggest advantages in choosing standard solutions over proprietary systems. We can freely pick camera models, just as we have had the freedom to choose the cheapest and best servers. That is exactly what a future-safe solution can offer," agree Svend Erik and Alex.

The solution

CEU Kolding has chosen Milestone Xprotect Business with a license for 50 cameras. The solution is connected with 30 Axis 2120 digital cameras. 14 analog cameras include 4 Panasonic Domes and 3 Panasonic WV-CL920s (all of which are set up outdoors) plus 4 Vantage and 3 Samsung SCC-342Ps. The analog cameras are connected to 8 video servers: 2 Axis 2400s (4 port interlaced), 1 Axis 2401 (1 port interlaced), and 5 Convision S1/V100s (non-interlaced). All recordings are stored on a NAS system. The daily recordings are kept on 2 Compaq DL380G2s and stored there for 6 full days on 2 Dell PowerVault 715Ns with 880 GB hard disc capacity altogether.

The network

The physical network is made up of structured cabling (AVAYA GigaSpeed), AVAYA LazrSpeed fiber optic cables between patchboards with rented fiber optic cables (single mode). The active equipment consists of 2 Cisco Catalyst 6006s with full redundancy and Cisco Catalyst 3548 and 3542 PWR. The digital cameras are electrically equipped via PDS cables.

For more information, see www.ceukolding.dk and www.milestonesys.com