

Belgacom chooses AEOS to go “All IP”

In 2006, the Belgacom group – Belgium’s leading provider of telecommunication services – decided its various access control systems needed to be migrated to an IP-based system that would be consistent throughout the company. The group also wanted to introduce an integrated, higher-level security platform. Careful comparison led Belgacom to opt for the system that satisfied all their requirements: Nedap’s AEOS. Telindus, one of Nedap’s business partners in Belgium, is responsible for the implementation of the AEOS system.

As in many companies, access control at Belgacom has grown organically along with the company’s expansion. This resulted in the use of three different access control systems, each with its own database and two of which were not native IP-based. Nearly 300 buildings were using a VSK (Wesp & Foxnet) system with a total of 1,250 card readers. More than 450 buildings were equipped with an ID-Tech system with 1,600 card readers, while Belgacom headquarters in Brussels was using MAXxess. The only common denominator was that all three systems used Hitag 2 badges.

After events or alarms are handled, they are moved to the database where they can still be viewed at

Ripe for change

“The situation was definitely ripe for change,” said Marc Moris, Corporate Prevention & Protection Director at Belgacom. “Non-IP based systems are really a thing of the past. We wanted to migrate to a single, IP-based system that would be implemented throughout the company.” Standardization was to take place, starting with the replacement of the ‘ancient’ non-IP based VSK systems (1,250 badge readers).



Initially, Belgacom aimed at simultaneously introducing a higher-level security management platform to integrate all its security systems (access control, cameras, intrusion and fire detection). It was later decided to split this into two separate projects: Access Control IP Migration and Integrated Security Platform. Dividing the projects considerably accelerated the decision-making process and facilitated implementation. Belgacom selected Nedap AEOS for the IP migration and Entelec Skywalker as the (graphic) platform for integrating all of the company’s security systems. Both projects were to be implemented by Telindus.

No dinosaur

Belgacom’s main reason for selecting AEOS was the system architecture and in particular its scalability and flexibility. AEOS can work with an unlimited number of remote control units and -- in very large systems -- with multiple application and database servers to maintain its standard high performance. The fact that AEOS uses standard hardware modules and embedded software components is a major advantage. It means the system can be expanded infinitely as Belgacom’s needs change, without requiring Belgacom to buy any hardware or functionality until they are actually needed. Additionally, AEOS can handle a limitless number of badges. Moris: “Because of the phasing of the project and the possibility that that card technology will change in future, it was crucial that we find a system flexible enough to accommodate growth and change. We did not want to find ourselves

a few years from now with a dinosaur. We wanted to make absolutely sure that we could migrate to other card technologies or integrate biometric applications without having to replace all our card readers.” This was another requirement that AEOS could easily meet: it seamlessly integrates with most card technologies, such as Hitag, HID, Mifare and Barcode, using Wiegand, Omron, RS232 and similar communication protocols. Migration is simple and there is no need to replace existing cards and card readers. AEOS is also suitable for integration with biometric systems and offers a user platform for enrolment and verification of biometric parameters (fingerprints, handprints, face recognition, iris identification).

Fully compliant

“Another important consideration,” added Michael van der Heijden of Telindus, “was the requirement that native IP controllers could communicate peer-to-peer, independently of the server. Belgacom put a lot of stock in the redundancy and security of the system. They wanted it to be possible to use different servers for application and database. Plus they wanted communication over IP between the controllers, between controllers and server and web-browser-based clients.” AEOS controllers are the system’s distributed intelligence. The AEOS Processing Units (AEpus) store the user-defined local functionality, such as all the authorizations for the connected readers. Each AEpu can function as a stand-alone unit or be connected to the IP network to communicate peer to peer with other AEpus and IP-based devices independently of the server. In other words, truly native IP. “Our RFP included a compliancy matrix of course,” Moris continued. “This is an exhaustive list of all the functionalities for which Belgacom had minimum requirements. The vendors were asked to indicate whether they were fully compliant, not yet compliant but ready by the beginning of the project, partially compliant or non-compliant. AEOS scored tremendously well on this. They were able to answer almost all the questions regarding the access control system with FC, Fully Compliant.”

Customized functionality

Peter Rommens of Nedap Belgium added that the flexibility of the AEOS system again proved to be its greatest asset. “That and our willingness to develop customized functionality for specific clients, provided it is compatible with our philosophy of developing software that can be integrated into the general system and made available to other customers. In this case, we decided to prioritize Belgacom’s wish for advanced Alarm Handler functionality within our general development process. But I’d like to emphasize that this does not mean the alarm handler is solely available to Belgacom. On the contrary, it’s now completely integrated in the latest AEOS version. This approach has great advantages for our customers, because the new functionality is automatically included in the next upgrade. We purposefully avoid building customer-specific functionalities because they can create problems in upgrades.”



Roll-out

Implementation started in early 2007 with several pilot projects in smaller buildings. Telindus is currently rolling out the system. The system consists of five servers (an application server and a database server, two back-up servers for application and database, and a test server). So far, the hardware used includes 148 AP 4803 and 54 AP4003 controllers; 32 AP3002 and 21 AP 3004 controllers and existing card readers and Hitag 2 badges. In the long run, Belgacom will probably migrate to Mifare card readers and badges. The system is linked to HMR software (for importing personal data) and to Entelec Skywalker (a higher-level security management system).

With implementation well underway, Marc Moris is convinced AEOS was the right choice: "We are very pleased with the performance of the system and the support Nedap has offered. Their 'can-do' attitude is highly appreciated. They were willing to really listen to us. That new, advanced Alarm Handler functionality was initially developed because we had a need for it. We feel we have embarked on a valuable long-term relationship."

The Belgacom Group is Belgium's reference provider of integrated telecommunication services. The Group provides both private and professional customers with a comprehensive range of solutions in fixed and mobile networks. It offers a complete quadruple-play solution that integrates fixed and mobile telephony, internet and television. Belgacom invests in innovation and draws on the latest technological developments to anticipate its clients' needs.

At the outset – when the project was first put out to tender – Telindus was one of Nedap's Belgian business partners. Following the merger of Belgacom and Telindus, the Belgacom Group's ICT activities have been offered under the Telindus brand, which was renamed Telindus-Belgacom ICT in June 2006. In its 40 years of existence Telindus has evolved from a technology supplier to a solution integrator and sourcing partner.

