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## Keeping the Bad Guys at Bay

**The University of Nebraska-Lincoln adopted the latest in access control technology to protect its Biological Process Development Facility. See how this campus keeps unauthorized personnel from the vaccines and therapeutic countermeasures the school develops to combat biological warfare agents.**

- by Kim Rahfaldt

Officials at the University of Nebraska-Lincoln (UNL) Biological Process Development Facility (BPDF) take their building security very seriously. Indeed, they should, considering some of the strains of botulism they work on at the school's Othmer Hall have been successfully weaponized by rogue states, such as Iraq in 1990. Because the campus researches and develops vaccines and biotherapeutics to counter these types of biological agents for the U.S. Department of the Interior, Pentagon and the biotech industry, it is imperative their materials and research don't get into the wrong hands.

The high value of the BPDF's equipment and data is another reason why security is a top priority. More than \$4 million worth of equipment and priceless proprietary client documentation are housed in the facility. The BPDF also maintains cell lines from past and current clients with an estimated value of \$20 million.

Leaving nothing to chance, UNL recently installed a state-of-the-art security management system to protect the BPDF's research findings, lab experiments and materials.



### Facility Officials Wanted Advanced Technology

Enter Mike Meagher, Ph.D., who is a Donald and Mildred Othmer Distinguished Professor of Chemical Engineering at UNL, as well as the founder and director of the BPDF. When he began searching for an improved method of protection for the building, it came to his attention that a Torrance, Calif.-based AMAG Technology access system had been successfully deployed to secure a parking structure on the UNL campus. It was recommended that Meagher look into a similar system for the BPDF.

As a result, he chose AMAG's Symmetry Homeland security management system (SMS), which is an enhanced version of the standard Symmetry SMS, designed for government agencies using smart cards. Meagher also chose AMAG because of the company's extensive government experience — AMAG products protect several government agencies, including the Pentagon. With references like these, Meagher knew he could trust the Symmetry Homeland SMS to protect his facility's assets, documentation and staff.

Additionally, a highly advanced security system would help the school compete with other institutions for government grants and federal monies, says Senior Security Consultant Matt McCoy of Omaha, Neb.-based Security Equipment Inc. (SEI), the firm responsible for the installation of the new system. "It was their desire to have a secure facility using the most modern and encrypted technology available. The Symmetry Homeland SMS [formerly SEIWG] was especially attractive to them because of the funding they receive from the Department of Defense and other government entities. The fact that AMAG could comply with that specification was key."

### Access System Is Scalable to Meet UNL Requirements

The new access control software allows Meagher's staff to establish control and monitor access of any door on any floor of Othmer Hall. As more labs are added, the system easily expands.

"I needed a computer-based system that can grow with me," said Meagher. "Because of the nature of the work we do, security has to be under my control." Smart cards were also chosen because the BPDF wanted to be ahead of the competition in terms of technology.

Approximately 55 people have access to the BPDF, including graduate students and employees. Meagher has entrusted his Quality Assurance Staff with the responsibility of controlling their access and issuing their cards. His own IT department oversees the administration of the security management system, monitors cameras and maintains an up-to-date database.

Cardholders are charged a fee to issue replacement access credentials so they are less likely to lose their smart cards. If a card is lost, it can easily be deactivated. This benefit, along with the system's ease of use, provides Meagher the flexibility he requires.

Another example of flexibility is how the system manages contractors. For instance, a contractor can be allowed access to the lab to perform work. After the contractor's preassigned time has expired, his or her access is automatically terminated by the SMS. This function provides peace of mind and a simple way to control facility entrances.

### Security Cameras Monitor Activity, Staff Access

CCTV technology also helps Meagher and his employees manage access. Small Silent Witness cameras are located at the three main

floor entrances monitoring all activities. A camera also monitors a second-floor room used for crucial storage. An additional lab on the first floor is also monitored via CCTV.

The cameras record all entrances and exits so the BPDF IT staff knows who is coming and going at all times. Images are transferred via an Integral digital video recorder to the server. If a problem occurs, it's easy to investigate and determine who was in the labs and when they were there.

### **Biometric Devices Eliminate Need for PIN Codes**

All entrances to the third-floor labs, main elevator and freight elevator use a biometric fingerprint reader. Meagher chose the biometric reader technology because he was concerned about personal identification number (PIN) information getting into the wrong hands. "I didn't want to worry about a card getting stolen and the person getting a PIN number," says Meagher.

A good security practice is to periodically change all cardholder PINs, however, Meagher did not have time to administer the changes. Doing away with PINs eliminated worry and the possibility for human error. "Having the biometric scanner makes it so much easier," he says. "No one loses a fingerprint."

Once inside the BPDF, students can enter labs to perform their work based on the access rights programmed into their smart cards.

The all-important IT department is located in a room within the third floor lab. The security system and server sit within that room, and an additional smart card reader is stationed at the door to control access.

### **Campus' Clients Impressed With Facility's Security**

According to Meagher, the security system works well and has a great ability to track activity. It is difficult, however, for him to measure in dollars what the return on investment (ROI) is for the Symmetry system. A "sense of security and well-being" is the best way to measure the ROI.

"My clients are impressed with the system ... it provides a comfort to know their ongoing work is happening in a secure, restricted area," says Meagher.

The BPDF is expected to expand its security management system on the first floor and the entire lower level in the next few years.

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