

Trends in safety and security

„There is no dearth of ideas for innovation“

Interview with René Jungbluth, Head Solution and Service Portfolio, Building Technologies Division, Siemens

Mr. Jungbluth, at Security 2014 Siemens is promoting itself with the slogan “Investments in fire safety and security pay for themselves every day.” Can you tell us more about that?

Today fire detectors and video cameras are commodities. They are permanent fixtures in many buildings and support smooth business operations – unnoticed by most of the building’s occupants. But research and product innovation are constantly moving forward. Now we can intelligently combine technologies, for example fire safety with alarm systems or security and building technology. Modern information technology thus permits holistic safety and security approaches, allowing building operators and occupants to focus completely on their core business. For our customers, this pays for itself day in and day out.

Is the willingness of building operators to invest affected by the fact that fire safety is regulated by law, but security is not?

Fire safety is regulated by law in most European countries. Operators are aware of the need to invest in this area, at least when it comes to new construction. But things are different in the security field. It’s our job to make the customer aware of possible weak spots and demonstrate the necessity as well as the economic sense of comprehensive safety and security solutions.

To what degree have physical security and IT security merged in modern building technology?

Not all customers are yet aware of the relationships between physical and IT security. The CIO is usually responsible for IT security, whereas the facility manager takes care of building security. Organizationally they are often in separate

departments with separate budgets.

The fact is that building security is increasingly IT-based. For example, access control and state-of-the-art video surveillance systems are communicating more and more over the IP protocol, which allows data transmission over standard IP networks. While fire detection requires a dedicated network, there are no comparable regulations for access control and video surveillance. But because the security industry depends on standardization, it is pushing toward IT industry standards. Personally, I think that the security industry is currently underregulated.

What is easier: IT experts taking on facility tasks, or facility experts taking on IT tasks?

In a traditional corporate building of a medium-sized business, the facility manager is often the driving force. In international companies, however, where safeguarding sensitive data is a main concern, it is the head of IT who is the decision-maker. We at Siemens have a major advantage here. As users of holistic IT-based safety and security solutions across numerous locations, we know first-hand the many challenges our customers face. This allows us to advise our customers in facility management as well as IT matters, and as a manufacturer, to build a bridge between physical security and data security.

How do international companies with subsidiaries around the world currently address security?

In today's business world, different security systems are typically used. For the most part, they are managed separately at each location. These isolated solutions are often implemented without considering the enterprise-wide security concept and the impact on operations. Employees may need different ID cards for access to different locations and applications, which slows down processes and increases vulnerability to risk.

This is where our One Card concept comes in, which manages all identities and authorizations through a standardized, centralized software approach. Cardholder data is collected just once and automatically synchronized with the company database in real time. That saves time and money and allows the customer to establish an enterprise-wide security culture and enforce security policies. This Physical Identity Access Management will play a significantly greater role in the future.

Let's stay with access control systems where data from different systems has to be managed. How does that work?

You must have the expertise to implement interfaces between the systems and to capture the extensive access control information. That's the only way to centralize the data on a uniform, cross-location platform. That brings us back to the IT world. I'm sure that enterprise-wide security, especially in critical infrastructures, will move much closer toward IT security in the future.

The industry currently favors "intelligent" security. What does Siemens understand that to be?

In the past, and to some extent even now, the different security systems – access control, intrusion detection, video surveillance – have been viewed and operated as separate disciplines. Intelligence means developing comprehensive scenarios for these disciplines that offer real added value to the customer.

Let me give you an example. An access control system reads the badge of an employee who works on the seventh floor. The lighting and room climate is then adjusted based on the employee's workstation profile – just for his or her workstation, not everywhere. In this case, intelligence connects security with comfort. For example, if a fire alarm goes off late in the evening, the lights are turned on, and not just at the emergency exits, but everywhere along the escape routes.

For this type of intelligent security, we have developed Desigo CC, an open platform that integrates the different disciplines in the building. By enhancing the functionalities of existing disciplines to boost the comfort and security of people in the building, we create added value for our customers. And we do that without the need for additional investments.

How open is the building technology industry to that kind of innovation?

Actually our industry tends to be conservative. Integrated management of multiple disciplines is not yet the norm. But increasing IT penetration – just think of the ubiquitous smartphone and everything it can do – also helps our industry become more modern. It helps as well as demands it.

"Big data" is a hot topic in IT. Is that true in building technology as well?

At Building Technologies big data is important right now, primarily in the field of energy efficiency. We collect data for our customers from their properties, weigh it

against benchmarks and pinpoint potential for optimization. The demand for this service is high. I currently don't come across the issue as much in security. Thus far we have not received any customer requests for data aggregation in the field of security.

How important are services in the security field?

Security as a service begins with developing an optimal security concept for the customer. First I need to know what is important to the customer, and then I need to conduct an overall risk analysis. Then I need to have the expertise to assess which measures might help minimize these risks and which of the current technical solutions will be useful in achieving this goal. Siemens has both the consulting expertise and the solutions. Yet cost-efficiency is always at the fore.

Another type of service is inspecting and auditing existing installations. Recently we performed an audit of the fire safety and extinguishing systems of an international customer. Our challenge was to reduce the various systems in multiple countries with different regulations to a common denominator and verify whether they met the company's general security standards – an extremely complex task. For the customer, the result was very valuable.

Another completely new service for building operators is our evacuation simulation. We analyze the possible escape routes in existing buildings or new construction. This analysis illustrates what would happen if a fire were to break out somewhere in the building. How can people exit the building quickly? Can the staircases accommodate enough people? Where are the bottlenecks that might be mitigated through construction measures? The simulation can also be used as a virtual training tool for first responders.

What fire safety innovations can we expect in the near future?

Alert handling will improve. Decades of experience are built into our current detectors, which make precise fire detection possible. Now we're exploring what do to with alarms. How can a building's existing sound and intercom systems be used to notify employees or visitors of an emergency? How can the systems involved be networked intelligently? For example, we employ mass notification to quickly notify large numbers of people in an emergency situation. In Europe, this topic is still on the sideline, in stark contrast to the USA. There, very few requests for proposal call for fire safety as a separate discipline.

Does that mean something needs to happen to raise awareness or are the laws inadequate?

Legislation is one thing. Then there's the individual responsibility of the CEO. He or she is obligated by the company owners and society to take all necessary measures to protect people and assets.

This awareness does exist. Our job is to demonstrate how to achieve the desired level of protection. You can assume, for instance, that most of the people will be in the buildings during the day, whether it's their place of work or a shopping center. You can take advantage of that by linking the existing fire safety system to a voice alarm system and highlighting the escape routes as the situation demands, using the existing lighting. This helps people behave correctly in an emergency, even if they are not familiar with the escape routes in a public building.

We recently tested this type of model on behalf of the European Commission. A public police alarm was transmitted via smartphone to the people in a building as well as issued through Desigo CC.

We develop the software-based solutions for situational mass notification and emergency evacuation in house and then collaborate with partners for the peripheral components so we can offer a total, coordinated solution.

Overall, how eager is the security industry to innovate?

There is no dearth of ideas for innovation, but not every innovative idea is practical. You always have to ask yourself if an idea will truly benefit the customer, how it can be implemented technologically, and whether it is cost-efficient. Especially in security, new product development cycles often take years; this has to be brought in line with feasibility and implementability.

The fact that in most commercial buildings multiple parties are involved can also curb innovation. There is the investor on the one hand, and the operator on the other. Which one is more likely to invest in innovative technologies? Investors are rarely prepared to do so because they usually don't profit from it. Yet operators will only invest if they can pass on the additional investment as an added value to the building occupants. This works only if the innovations benefit customers directly.

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