New Level of Security Intelligence at the Edge

CEM Systems, a brand of Tyco Security Products, recently launched one of the security industry's most intelligent edge devices, emerald, to give more convenience to end users. Tyco Security Products shared their original ideas to invent this new product.

If you look at the evolution of mobile phones, it isn't difficult to see the mega trend of intelligence. We use mobile phones not just for receiving phone calls. As our mobile phones get smarter, we are able to receive emails, watch videos, listen to music, and do multiple jobs with our phones. That is the so-called "intelligence at the edge," said Jason Tan, Regional Sales Manager of South East Asia at Tyco Security Products. Traditionally, an edge device refers to the device that is farthest from the server, or heart of the system. An edge device has always been defined as intelligence with an internal database to ensure security 24/7 365 days a year. Edge devices are typically IP devices, and they can be wireless, referring to an IP camera, an intrusion sensor/panel, a portable card reader or an IP reader.

INTELLIGENT EDGE DEVICE

With this edge evolution, users also start to expect that card readers are not just opening and closing doors. "We are seeing more information moving to edge devices [at the door]. A card reader is no longer a deadbolt. It will allow immediate access to up-to-date security information at the door and the applications to modify it — fully pushing intelligence directly to the edge," said Tan.

Users also want an access control device to comply with their corporate policy and optimize their daily business operations. To realize the new level of security intelligence at the edge and provide more convenience for users, "emerald — an intelligent access terminal" was developed. With its sleek design and state-of-the-art LCD touch screen, emerald offers card reader and controller functionality, a fully integrated Voice over IP (VoIP) intercom, and a range of remote server-based applications, all in one single, powerful terminal.

Different from traditional access control, being a server, client-based system, "emerald offers the ability to securely run server applications at the door, which are normally only available on a client PC. These are called Remote Applications," added Tan. They

▲ With LCD touch screen, emerald, an intelligent access terminal, offers card reader/controller, VoIP and remote applications all in one single powerful terminal.

include controlling the doors, checking the alarms, and other management functions, which could give users a lot of flexibility and convenience.

MULTIPLE REMOTE APPLICATIONS

Using a secure web portal and Secure Socket Layer (SSL) security, multiple remote server-based applications are able to run on the terminal. These Remote Applications are web-based applications and services hosted on the AC2000 central database server and accessed directly and securely at the door. They transform emerald into a security intelligence point and are available to users that are granted access by the system administrator.

Administrators can define app groups, such as card holders, security personnel, engineers, system administrator, etc. The card holders under each group have their assigned apps and authority to use the terminal. emerald provides great benefits for each app group.

CONVENIENCE AND BUSINESS TOOL

With emerald, people start to see more meaningful feedback from card readers. "The traditional access control system doesn't give clear feedback. It won't tell users if the system is working or not working, or if they have the right to access the room, or if the system sees the wrong PIN. When users are stuck at the door, then they are just stuck there. But with the next generation intelligent edge device, they can talk to the control room via the integrated VoIP intercom, just like standard intercoms. That brings a lot of convenience to the customers," said Tan.

Another advantage comes from its powerful management functions; for example, the users can change their own PIN without contacting the system administrator, but simply do everything on the terminal. It also provides "room booking" application which allows reception and individuals to quickly review scheduled visits and see the current occupancy of a room. Meanwhile, the clear display of company advertisements and health and safety information turns emerald into an important business tool.

OPTIMIZING DAILY OPERATIONS

The device displays critical system information and also allows maintenance engineers to locally diagnose devices and change network information remotely. "In the past, the installation required two engineers — one at the door end and the other at the server end to configure the system. But now, emerald saves a lot of engineering time by only having one engineer do most

▲ The Remote Applications display real-time security information and statistics on the terminal, which brings a lot of convenience to the customers.

of the programming at the readers and then the server," said Tan. It also applies to the system administrator, who can see immediately at the reader who let the door open and card details for individuals to determine access levels and card expiry dates. The Remote Applications display real-time security information and statistics such as card status, scheduled visitors, top system alarms, and most recent alarms on the terminal in different graphics, such as a chart or pie chart.

▲ **Jason Tan,** Regional Sales Manager, South East Asia, Tyco Security Products

ENSURING HIGH SECURITY

emerald can be used at any site where traditional access control readers are used such as schools, hospitals, airports, ports, and casinos; anywhere that requires the highest level of security to ensure the safety of those inside the building. With features such as an integrated VoIP intercom and scramble keypad, security can be heightened at restricted areas, such as hospital pharmacies and air traffic control towers, or increased if the site is on high alert.

ENERGY SAVINGS

With a built-in mini PIR sensor, the terminal also enables the control of equipment such as lights and PIRs to reduce energy and costs. This enables the LCD screen to automatically light up when a person approaches or go into the low-power consumption mode when it doesn't detect people at the door.

FUTURE DEVELOPMENTS

In the design of emerald, the SIP/VoIP protocol was utilized to achieve integrated VoIP intercom functionality and a secure web portal was chosen as the platform of choice to enable remote server-based applications to run on the terminal. Intelligent devices like emerald go beyond securing premises to empower users and improve overall business needs and increase operational efficiency.

In the future, "we will add more new features to emerald, such as people finding. Eventually, Tyco is expecting to build an open platform where customers and third parties can write their own apps. emerald brings unlimited opportunities to the customers," said Tan. ■

For more information, please check the company's website: *www.cemsys.com/emerald/* or email *tycosp-apac@tycoint.com*