IDTECK

CASE STUDY

Total Security Solution for
Bio-Health Technopolis in Korea

1) About Osong Bio-Health Technopolis

- **Innovative Bio Cluster of 4,632,000㎡ Land Mass**
  (Organized by Minister of Health and Welfare of Korea)

- **Accommodates Approximately 14,200 People**

- **Primary Development** (~2010 System Implementation Completed)
  : Six government organizations and 58 major pharmaceutical and medical related BT businesses

- **Secondary Development** (~2011 Construction Scheduled to Complete)
  : National Bio Bank of Korea

- **Tertiary Development** (~2013 Construction Scheduled to Complete)
  : BT Graduate University , Bio Medical Science Research Institute, Secondary Osong Complex

KOREA CENTERS FOR DISEASE CONTROL & PREVENTION

KFDA 식품의약품안전청 Korea Food & Drug Administration

KHIDI 한국보건산업진흥원 Korea Health Industry Development Institute

NiTR National Institute of Toxicological Research

MINISTRY OF HEALTH & WELFARE

NIH 국립보건연구원 National Institute of Health

2) System Requirements

① Prohibition of Unauthorized Users and Different Access Levels for Employee Required!

- Access control of building entrance , elevator control and different access level setting according to user

② Special Access Control System Required for Air Sealed Clean Room!

- Limit access to special areas such as laboratories and experimental facilities

③ Special Access Control System Required for Preventing Information Leakage and Bringing in Dangerous Materials into the Site!

- Increase the security level by implementing speed gates and metal detectors in areas where highest level of security is needed

④ User Access Event Record Integration with Video Footage Required!

- Keeps a video recording of all the events that takes place within the site along with access control event data to effectively cope with emergency situations

2) System Requirements

⑤ Quick and Efficient Vehicle Management Required!
- Vehicle access control and parking management for vehicles coming in and out of the site

⑥ Fire Detection Alarm Required for Securing Employees and Facilities!
- Activates fire alarm and automatically opens all gates to minimize causalities and damage in an event of fire

⑦ Perimeter Security Required for Preventing Break-Ins and Trespassing!
- Seamlessly prevents trespassing of unauthorized personnel into the site

⑧ Residence Hall Room Management and Light, Heat/Air-Condition Automation System Required!
- Automatic control of lighting, heat/air-conditions, etc to provide safety as well as energy efficiency

⑨ Integrated Monitoring System Required to Oversee Security Status of the Whole Site!
- Allows administrators to take immediate response to events via real-time integrated monitoring

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3) System Planning and Key Points

① Prohibition of Unauthorized Users and Different Access Levels for Employee Required!

• Access control of building entrance , elevator control and different access level setting according to user

Solution

▶ **Different Access Levels Implemented to Secure Bio Data**

• **Building Entry Gate Control**

: Issued visitor card to limit access to certain areas

• **Elevator Control**

: Integrations with elevator controller (ELEVATOR384) to limit access to certain floors

• **Separated Entry Point Control**

: Installed Smart Card reader, Smart Card/PIN reader, and fingerprint identification reader

to all the entry points of different areas

: According to the importance of the area, applied different identification modes:

Card, PIN, fingerprint identification (SR10E, SR30, SRK505, FINGER006SR)

: Employees with disabilities are allowed access with only PIN even if they forget the

access card (SRK505)

: Prohibits entry to certain areas according to different access level of the employees

• **Real-Time Monitoring of Access Control Events to Deal Immediately with Irregular Activities**

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3) System Planning and Key Points

② Special Access Control System Required for Air Sealed Clean Room!
- Limit access to special areas such as laboratories and experimental facilities

Solution

▶ **Special Access Door for Management of Clean Rooms (Door Interlocking System)**

- **Installed 111 Units of Door Interlocking System for Special Facilities (i.e. Toxic Material Testing)**
- After granting access on the first door, the first door must be completely closed, in order for the user to grant access on the second door
- Seamlessly prevents the act of tailgating
- Installation of disinfection and sterilization devices in the area between the two doors
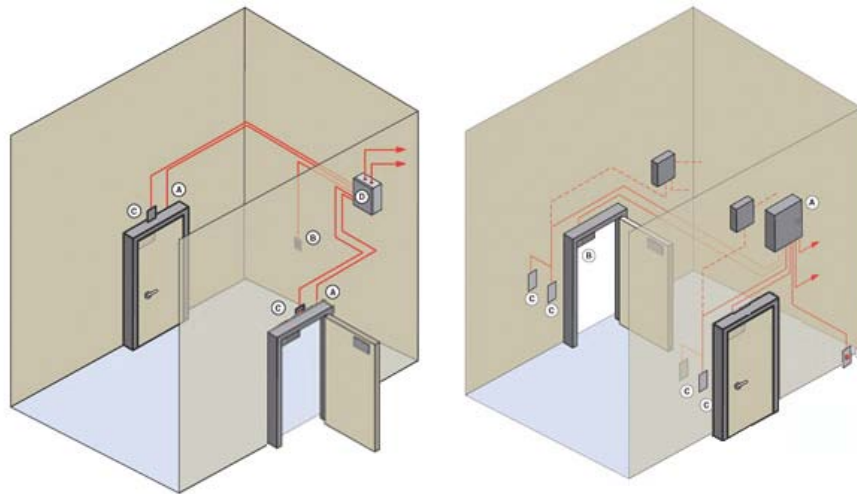
Highly efficient system at low cost
(Using the IN/OUTPUT of iTDC Controller)

3) System Planning and Key Points

③ Special Access Control System Required for Preventing Information Leakage and Bringing in Dangerous Materials into the Site!

· Increase the security level by implementing speed gates and metal detectors in areas where highest level of security is needed

Solution

▶ Speed Gates Installed in All Building Entrance Points

· Allows access only to the authorized users and visitors

▶ Metal Detectors Installed in Areas Where High Level of Security is Needed

· Searches for dangerous weapons and arms from being brought in to the site

※ Speed Gate

※ Metal Detector and Speed Gate

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3) System Planning and Key Points

④ User Access Event Record Integration with Video Footage Required!

· Keeps a video recording of all the events that takes place within the site along with access control event data to effectively cope with emergency situations

Solution

▶ **Total of 543 Units of Camera Integration with Access Control (Software)**

· Allows administrators to take sudden measures as they can check the video footage of the user during the alarm event occurrence

3) System Planning and Key Points

⑤ **Quick and Efficient Vehicle Management Required!**
- Vehicle access control and parking management for vehicles coming in and out of the site

Solution

▶ **RF245 Long Range Readers for Regular and Visiting Vehicle Management**
- Issued IDA245 Active Cards to regular vehicles for quick entry and exit
- As for visiting vehicles, visitor pass is issued for entry and exit

▶ **Bollard Applied to Deny Entry of Unauthorized Vehicles**

※ RF245 Long Range Reader

※ Bollard

3) System Planning and Key Points

**⑥ Fire Detection Alarm Required for Securing Employees and Facilities!**

· Activates fire alarm and automatically opens all gates to minimize causalities and damage in an event of fire

Solution

▶ **If the Fire is Detected, Regular Entry Doors Open Automatically and Doors for Special Facilities (Laboratories) Lock Automatically to Cope with Dangerous Situations**

· To minimize the damages and casualties, the regular entry doors and office doors open automatically in an event of fire

· To protect the facilities and prevent toxic materials from leaking out, the doors of special facilities (Laboratories and Experimental Facilities) close and lock automatically in an event of fire
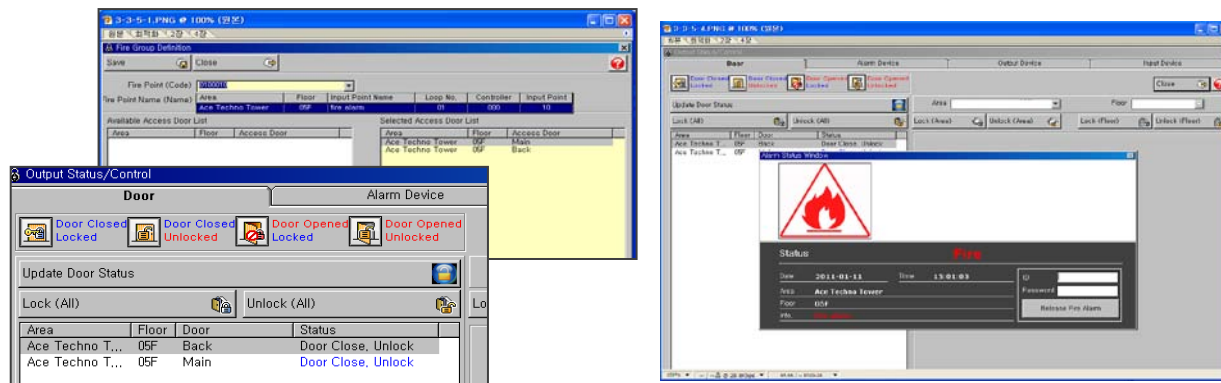
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3) System Planning and Key Points

⑦ Perimeter Security Required for Preventing Break-Ins and Trespassing!

· Seamlessly prevents trespassing of unauthorized personnel into the site

Solution

▶ **Microponic Sensor Fence Installed along the Mountain Area (1.7 KM – 1.1 Miles)**

▶ **Infrared Sensor Fence Installed along the Drive Way (2.3 KM – 1.4 Miles)**

▶ **CCTV Integrated with the Fence to Record Videos of Area where Sensor is Detected**

3) System Planning and Key Points

⑧ Residence Hall Room Management and Light, Heat/Air-Condition Automation System Required!

• Automatic control of lighting, heat/air-conditions, etc to provide safety as well as energy efficiency

Solution

▶ Light, Heat/Air-Condition Automation System

• When SMART Card Is Identified as the User Enters the Room, the System is Configured to automatically turn on the lighting and heat/air-conditioning of the room

• When SMART Card Is Identified as the User Leaves the Room, the System is Configured to automatically turn off the lighting and heat/air-conditioning of the room

▶ Real-time occupancy monitoring of residence hall rooms from info desk

3) System Planning and Key Points

⑨ Integrated Monitoring System Required to Oversee Security Status of the Whole Site!

- Allows administrators to take immediate response to events via real-time integrated monitoring

Solution

▶ **Integrated Monitoring System to Oversee the Security Status of the Whole Site in Real-Time**
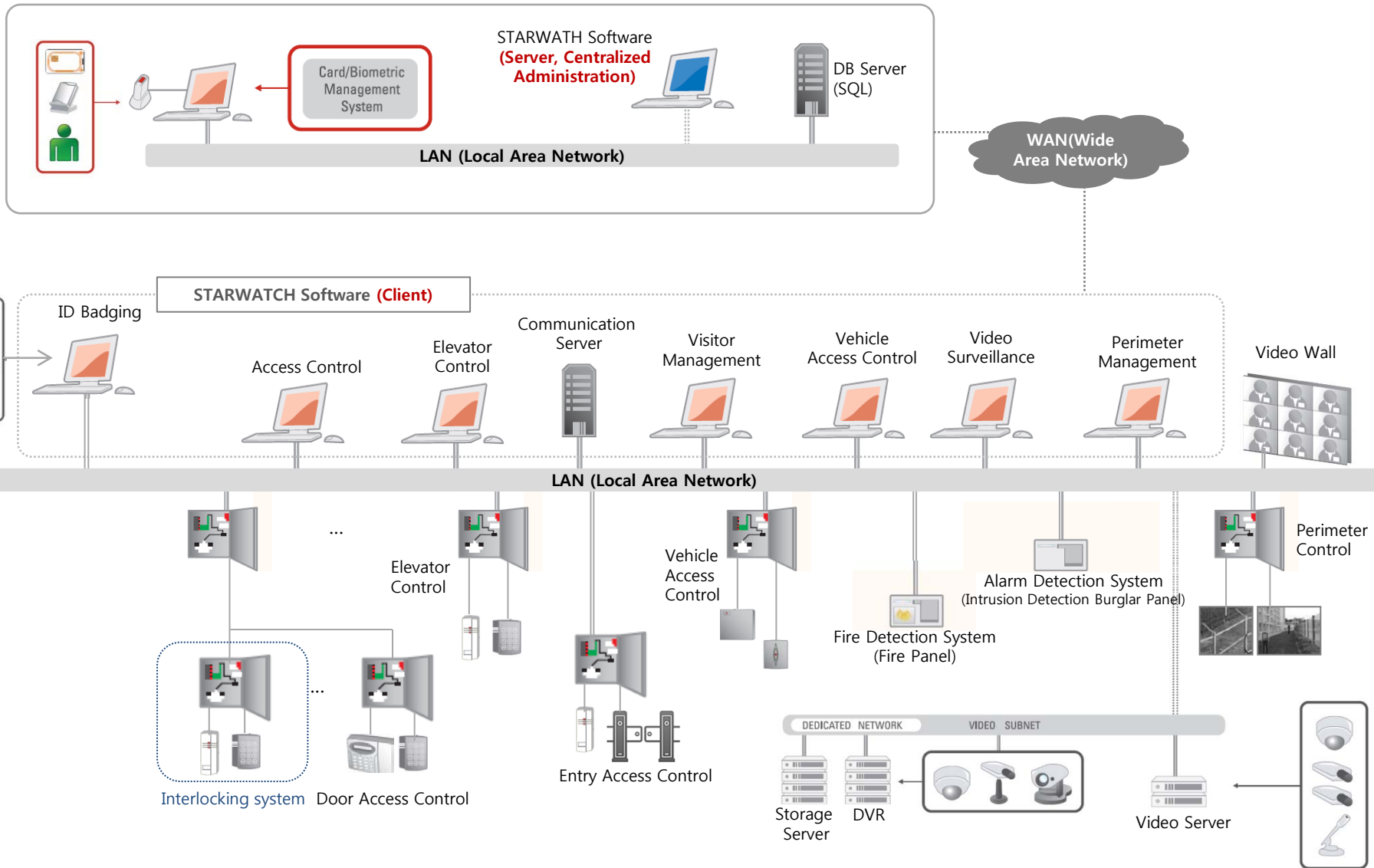- 1 Jumbo Screen 200 Inch Monitor + Several 50 Inch Monitors
- LED Bulletin for Input / Output Monitoring

▶ **Access Control and Video Surveillance Integration System for total of 18 Buildings of the Site**
- Total Security Solution implemented in total of 1,088 entry points

4) System Configuration

STARWATH Software
(Server, Centralized Administration)

Card/Biometric Management System

DB Server (SQL)

WAN(Wide Area Network)

LAN (Local Area Network)

ID Badging

STARWATCH Software (Client)

Access Control

Elevator Control

Communication Server

Visitor Management

Vehicle Access Control

Video Surveillance

Perimeter Management

Video Wall

LAN (Local Area Network)

Elevator Control

Vehicle Access Control

Alarm Detection System
(Intrusion Detection Burglar Panel)

Perimeter Control

Fire Detection System
(Fire Panel)

Interlocking system   Door Access Control

Entry Access Control

DEDICATED NETWORK   VIDEO SUBNET

Storage Server   DVR

Video Server

5) Applied Products

Category	Product	Image	Description
Access Control Panel	**iTDC-SR** (290 Units)		▶ **Dynamic Control of Four (4) Doors** • Integrations with Video Surveillance, Alarm, Fire Alarm, BAS, BMS and Other Security Systems • Supports Various Access Control Features for Strengthened Access Control Management
Management Software	**STARWATCH iTDC PRO II** (Server/Client)		▶ **Professional Access Control Management S/W** • Real-Time Monitoring of Event Status and Various Data via Integrated Monitoring Features • Intuitive Monitoring Using Graphic Map
Card Reader	**SR10E** (100 Units)		▶ **Applied in Outdoor Entry Points / Gates** • Suitable for Outdoor Installation (Epoxy Molding / IP66)
	SR30 (813 Units)		▶ **Applied to Entry Doors and Office Doors** • Quick Entry and Exit Using Card Identification
	RF245 (20 Unit)		▶ **Applied for Vehicle Access Control Management** • Long Range Card Identification for Quick Entry and Exit
Card + PIN Reader	**SRK505** (165 Units)		▶ **Applied for Employees with Disability** • Allows Entry Using PIN even if the User Does Not Have the Card ▶ **Identification Mode** • SMART Only / SMART + P/W (4 Digits) / PIN (4~6 Digits) Only
Card + PIN + Fingerprint Reader	**FGR006SR** (10 Units)		▶ **Applied in the Areas where Highest Level of Security is Required** • Various Identification Mode Provides High Level of Security ▶ **Identification Mode** • SMART Only / Fingerprint Only / SMART + P/W (4 Digits) / SMART + Fingerprint / SMART + P/W (4 Digits) + Fingerprint

5) Applied Products

Special Door	**Speed Gate (Turnstile)** (5 Group)		▶ **Access Control for Building Entrance**
	Metal Detector (5 Units)		▶ **Applied along with Speed Gate (Turnstile) at the Building Entrance to Detect Arms or Dangerous Weapons**
DVR	**PC Based DVR** (36 Units)		▶ **Digital Video Recorder for Camera Recording and Storage**
Camera	**IR Dome Camera** (303 Units)		▶ **Regular Surveillance Camera Applied in All the Buildings**
	Speed Dome Camera (32 Units)		▶ **High Performance Camera Applied in Perimeter Security and Parking Lot Security**
	CCD Color Camera (13 units)		▶ **CCD Camera Applied in Wide Hallways**
Perimeter Security	**Microponic Sensor Fence** (1.7km)		▶ **Perimeter Security for the Mountain Area of the Site**
	Infrared Sensor Fence (2.3Km)		▶ **Perimeter Security for the Drive Way of the Site**

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6) Project Result

① Implementation of Cost Effective Total Security System

- Using the iTDC controller, they were able to implement access control and video surveillance integration, vehicle management, and perimeter security at an affordable cost

② Additional Total Security Project within the Site until 2013 for 3.2~3.7 Billion Dollars in Sales

- With Successful Implementation of Total Security System at Osong Bio-Health Technopolis, IDTECK will be implementing additional security project within the site
- National Bio Bank of Korea Project and On-going Second Osong Bio-Health Technopolis project, the total estimate in sales is expected at 3.2~3.7 Billion Dollars

Primary
Osong Bio-Health Technopolis Completed in 2010

Secondary
National Bio Bank of Korea, Expected to be Completed in 2011

Tertiary
Second Osong Bio-Health Technopolis, Expected to be Completed in 2013