

Chapter 1



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Introduction to Physical Security and Electronic Surveillance System

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Access Control System

Access Control System - Smart card, RFID, Biometrics

Access Control System Architecture

Smartcard



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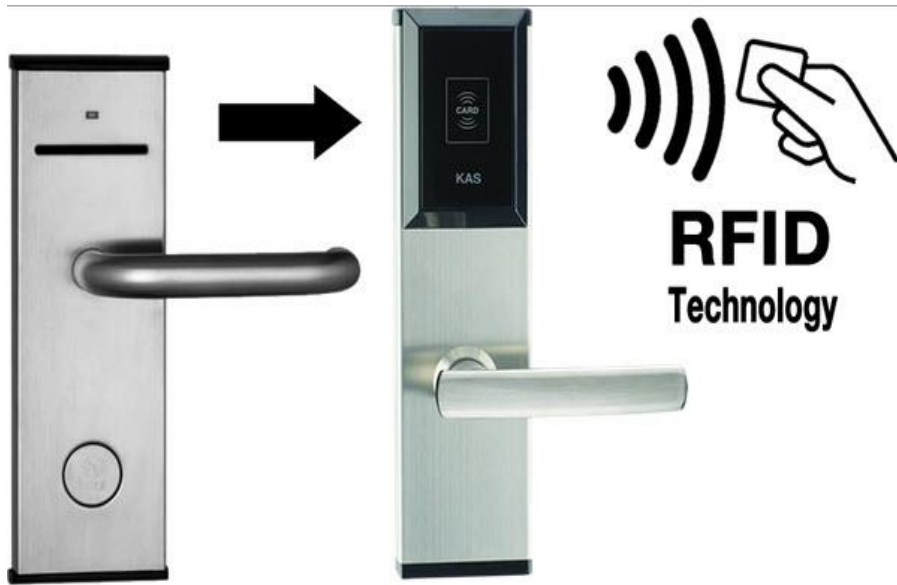


Verification
of identity
using
Identification card



RFID – Radio Frequency Identification

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Near Frequency Communication NFC



Biometrics

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Fingerprint Recognition



Face Recognition



Iris Recognition



Fingerprint Recognition



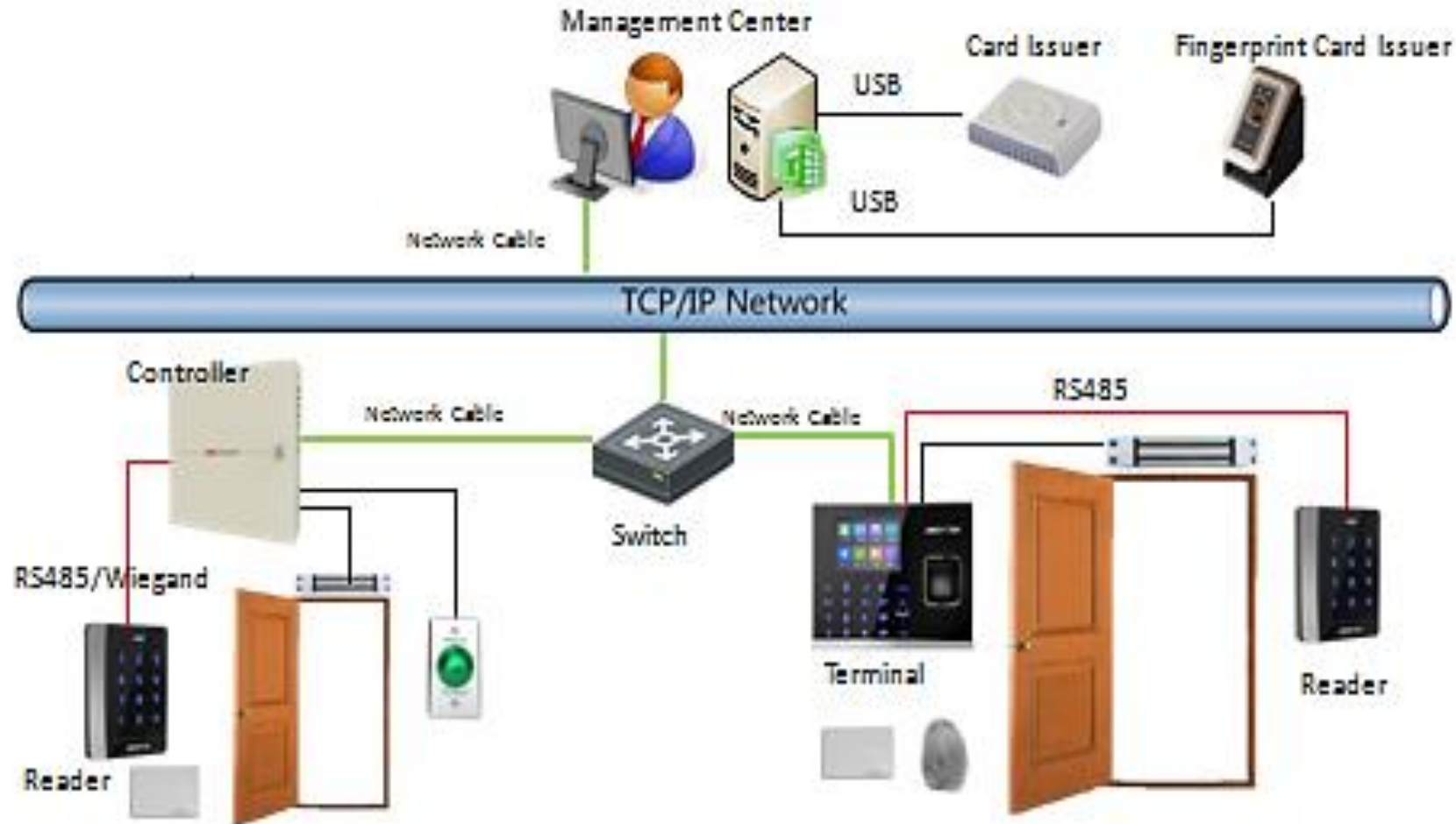


ACCESS CONTROL SYSTEM ARCHITECTURE



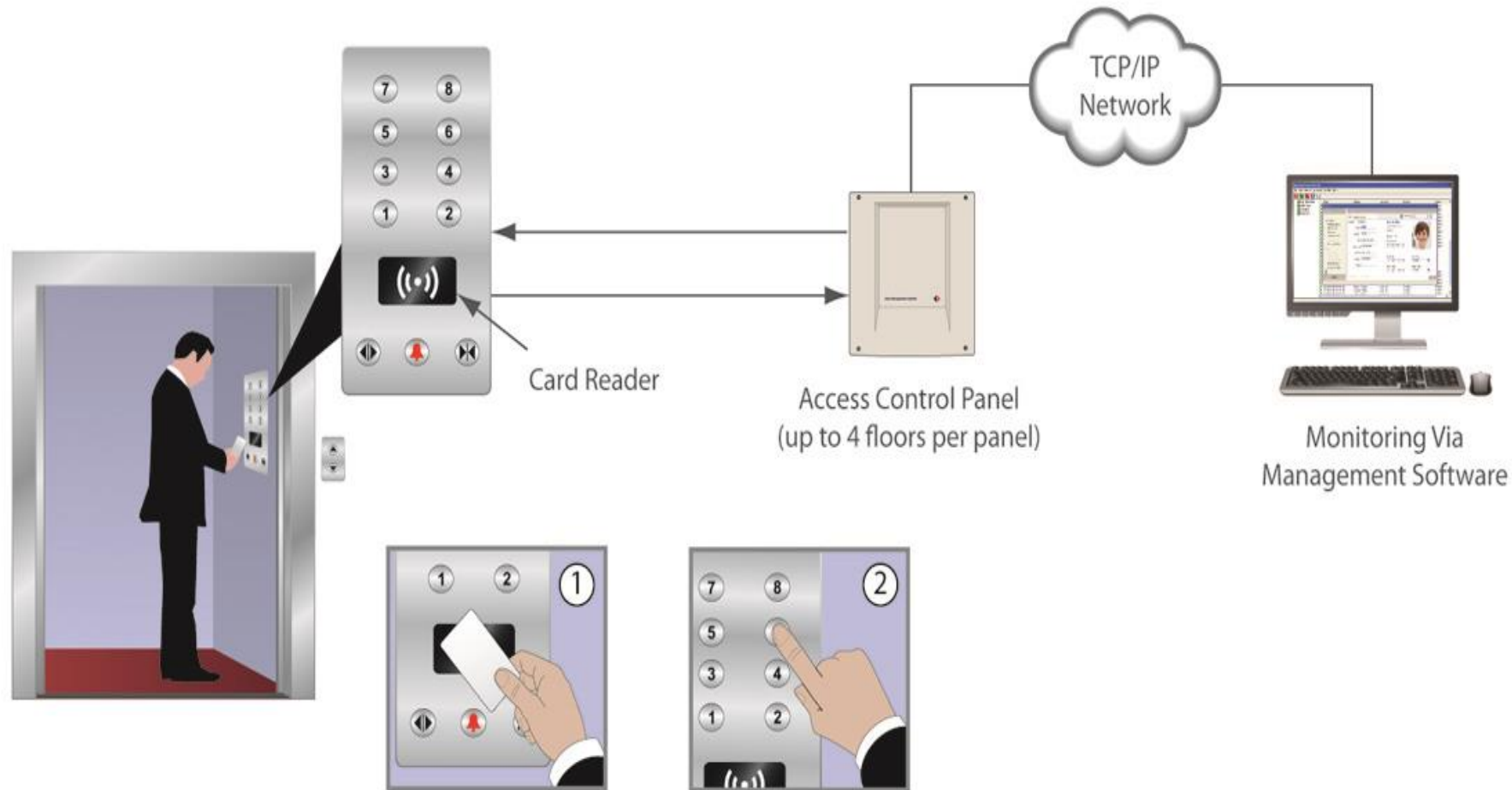


ACCESS CONTROL SYSTEM ARCHITECTURE





ACCESS CONTROL SYSTEM ARCHITECTURE



ACCESS CONTROL SYSTEM ARCHITECTURE



Internet
of
Things





Monitoring System



Monitoring System

- The monitoring system consists of 2 types :
 - a) Manual – The monitoring is scheduled based on human talents and time allocation.
 - b) Automation or called as Electronic Surveillance – The process of monitoring is done by computer and CCTV to gather incidents at the location.



Manual Monitoring System

Surveillance....

- In previous time, surveillance is close to monitoring towards people or a place to prevent criminal cases from happening.
- For example, the neighbor take turn to observe the neighborhood at night or day in order to make the living area is safe from danger.
- Another example is police who monitor the public area based on the schedule and person-in-charge.
- On the other hand, dog or goose for example has been used for watching the unauthorized person from entering the respective area.

Manual Monitoring System

- As time goes by, the watch dog and Neighborhood Watch are no longer applicable in the neighborhood or organization due to time consuming and people getting busy.
- In fact, the culture of taking care for each other has lost along the way. Due to these problems, electronics surveillance system has taken by the traditional surveillance system to monitor the incidents or crimes.

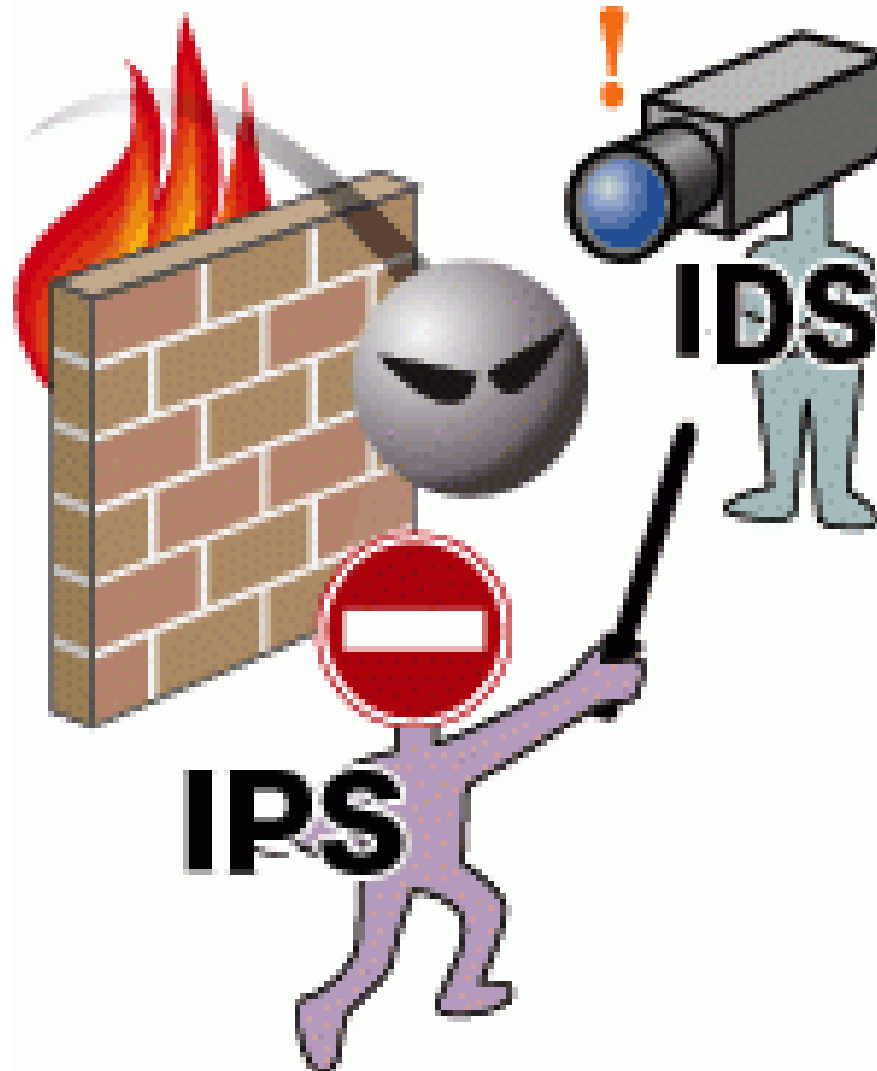


Electronic Surveillance

- Electronic surveillance is the art of monitoring of home, business and individual using variety of devices such as CCTV, legal wiretapping, cameras, digital video equipment and other digital or audio-visual components from criminal activity.
- Electronic surveillance system consists of CCTV, intrusion detection (IPS or IDS), access control system and security data center.

Electronic Surveillance

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Electronic Surveillance

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- However, limitations and vulnerabilities in the physical security system and electronic surveillance system welcomed attacks and threats from various forms.



Detection and Prevention System

Detection and Prevention

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- Intrusion Detection System (IDS)
- Intrusion Prevention System (IPS)
- Firewall
- Virtual Private Network (VPN) 



Light System



Light System

- In physical security, lighting contributes to deter or detect intrusions or criminal activities at the area.
- The lighting produces a clearer view and assist the CCTV camera to capture a better quality of video in identifying the person who caught in crime.
- Light gives a safety feeling to the employee or user of the infrastructure from the darkness.
- The best position of locating the source of light is important for capturing the image of the thief.

Thank You



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