

# Emergency Communication Systems

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- Identify features of emergency communication systems.
- Explain why mass notification systems are used.
- Determine the application of mass notification systems.



# ECS

- A system for the protection of life by indicating the existence of an emergency situation and communicating information necessary to facilitate an appropriate response and action
- Use of ECS both inside and outside buildings has become more common place
- Public increasingly demands actionable information in real time
- To basic categories
  - One-way
  - Two-way



# ECS

- NFPA 72 Chapter 24
- New as of 2010
- Before, everything fire hardened
- Need ability to have security override
- Protection of life
- Not just for fire
- Message must be intelligible
  - Can use nonlisted if needed



# ECS

- If someone is constantly in **FCC**, can be used for other things
- Must have message templates for all scenarios
- **Alert tone (2 cycles) before message**
- Layer 1: inside building, authorized users send out message
- Layer 2: outside building, authorized users send out message
- Layer 3: notification through individual measures



# ECS

- **Layer 4**: notification by public measures
- Risk analysis: fire and non-fire, survivability of system
  - Consider all potential scenarios



# EVACS

- In-Building Fire Emergency Voice/Alarm Communications Systems
- Automatic response
- Normal alarm system use
- Can override fire alarm with mass notification
- Can do relocation/partial evacuation
- Evacuation signal not required in exits
  - Can have mass notification signals there



# In-Building MNS

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- Manual or automatic
- Live message does not automatically give priority
- Can send different messages to different buildings
- Manual activation boxes cannot be red
- Strobes marked with Alert



# Wide-Area Mass Notification Systems

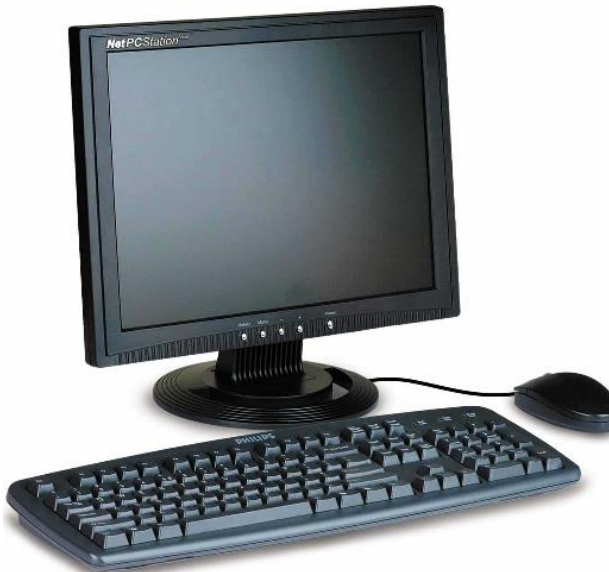
- Multiple levels of password protection
- Door latch to high powered speakers monitored
- 3 days of standby power
- Can tie in with regional





# DRMNS

- Distributed Recipient Mass Notification Systems
- To targeted recipients
- Multiple delivery methods



# Two-way ECS

- Two-Way Emergency Communication Systems
  - Two categories
    - Those anticipated to be used by building occupants
    - Those anticipated to be used by firefighters, police or other emergency service personnel
  - Used to not only communicate but to exchange information related to instructions, condition of persons, condition of surroundings, etc.
  - Includes
    - In-building wired communications
    - Two way radios (may require FCC license)
    - Area of refuge systems
    - Stairway systems
    - Elevator landing systems



# Visual and Audible Messages

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- Messages combining text and voice
  - Place visual monitor in conspicuous location
  - Ensure proper contrast between text and background
  - Use pictorials with text
  - Text is easier to read when written with a mixture of upper and lower case letters rather than using all capital letters
  - Display text simultaneously with voice message
    - This can also be used for bilingual messages
  - Limit the use of flashing words or visual messages



**EVACUATE**  
Proceed to the nearest





# NFPA 72 – Annex G

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- Guidelines for Emergency Communication Strategies for Buildings and Campuses
- Contains message templates for different emergency scenarios
- Not required

