Mass Notification Topics

- Definition
- History
- Who and Why?
- Mass Notification and Code
- System Requirements
- Solutions
Mass Notification Definition

- Mass Notification
  - Capability to provide real-time information to all building occupants or personnel in the immediate vicinity of a building during emergency situations
  - From UFC 4-021-01
Mass Notification - History

- **Khobar Towers attack** – Saudi Arabia
  - June 1996
    - Twenty deaths, 372 wounded
    - Alert guard started evacuation
    - Dozens survived in stairwells away from blast

- **Khobar Tower Report** – July 1997
  - Issued by Secretary of Defense William Cohen
  - Lapses in force protection
  - No plan in place to minimize loss of life
Mass Notification History

- **Civilian Incidents**
  - Ecole Polytechnic – Montreal 1989
  - Murrah Federal Building, Oklahoma City – 1995
  - Columbine HS – 1999
  - Dawson College – Montreal 2006
  - Virginia Tech - 2007
Mass Notification: WHY
Mass Notification – Why

- School Safety
  - Evacuate/Lockdown /Shelter in Place
- Inclement Weather
  - Tornadoes
  - Floods
  - Hurricanes
- Public Security
  - Terrorist Threats
  - Attacks
- Public Health
  - Bioterrorism
- Military
- Power Outage
- Systems Loss
  - Banking
  - Stock Markets
  - Commodity Trading
  - Currency Trading
- Municipal/Regional /Provincial
- Food or Water Contamination
- Amber Alerts
Mass Notification Systems and Codes

- No regulatory approvals required
  - No ULC / UL or FM MNS tests

- NFPA Mass Notification Task Group
  - NFPA 72 2010 edition Chapter 12
Mass Notification Systems and Codes

NFPA 72 2010 edition

- Task Group – Emergency Communication Systems
  - New Chapter 12
  - Means for first responders to alert occupants
  - Chapter 6 voice related sections will move to Chapter 12
In combination systems, fire alarm signals shall be distinctive, clearly recognizable, and, with the exception of mass notification inputs, take precedence over any other signal even when a non–fire alarm signal is initiated first and shall be indicated as follows in descending order of priority unless otherwise permitted by this Code:

- Signals associated with life safety
- Signals associated with property protection
- Trouble signals associated with life and/or property protection
- All other signals
Mass Notification Systems and Codes

NFPA 1221

- Standard for Installation, Maintenance, and Use of Emergency Services Communications Systems
  - Primary purpose is police and fire emergency communications centers
  - Also has a Chapter 12, Public Alerting Systems including outdoors
Mass Notification: Survey
**Mass Notification Survey**

- Please rate the potential for the following three mass notification system configurations.

| Single buildings (e.g. K-12 schools, senior living facilities, office space) |
| High-rise and campus style installations (e.g. universities, mass transit hubs, industrial facilities) |
| Wide area solution for global communications (e.g. government agencies, large corporations) |
Mass Notification Survey

- Single Buildings
- High-rise and campus style installation
- Wide area solution for global communications
Mass Notification: System Requirements
Mass Notification Requirements

- UFC 4-021-01 Guidance (DOD only)
  - It is most economical to combine the fire alarm into the Mass Notification system
  - Manufacturer with >5 years experience in voice systems
Mass Notification Requirements

- May be local or global
- Timely
- Notify occupants that an emergency exists
- Trigger large scale alert to reduce risk of injury or casualties
- Pre-recorded and live emergency messages should be available
Mass Notification Requirements

- Operate from one or more locations

- Capable of interfacing to wide area systems
Mass Notification Components

- Telephone systems
- Amber or colored strobes
- Cell phones and pagers
  - Audio
  - Text
- Radios and wireless devices
- LED or graphic signs
- Computer pop ups, e-mails and instant messaging
- Horns, giant voice/big voice
Giant Voice

- Giant Voice Components
  - Speakers – 100+ dB
    - Range of 1 – 5 miles
Mass Notification: Solutions
Mass Notification: Solutions

- Standalone Applications
- Campus-Wide Capability
- Voice over IP
Standalone Capability

- Powerful Standalone Mass Notification System
- Fiber Capability Allows Many Miles of Coverage
- Telephone Option delivers Distributed Two-Way Communication
- Amplifiers can be located throughout a campus
- Giant Voice capable
Campus Wide Capability

Input Devices

Output Devices
VOICE OVER IP  Mass Notification

New York City  Internet  Washington, DC

TCPIP