Speech Intelligibility for Emergency Communications Systems: Speech Intelligibility Planning and Assessment

Course Description

This one-day course Emergency Communications Systems (ECSs), which includes Mass Notification Systems (MNSs) focuses on the continued reliance on the use of voice as the primary messaging and communication strategy. This course introduces tools, options and requirements of NFPA 72, National Fire Alarm and Signaling code that planners, designers, authorities and users can use to affect the implementation of intelligible ECSs. The course focuses on planning, design and assessment tools. To provide participants with an in-depth understanding of the factors that affect speech intelligibility and to provide the knowledge and tools for them to plan, design and assess the intelligibility of Emergency Communications Systems.

Learning Objectives

Upon completion of the course participants will be able to:

- Define speech intelligibility
- List three factors that affect speech intelligibility.
- Explain how reverberation affects speech intelligibility.
- Describe at least one reason why speech intelligibility is not the same as audibility.
- Explain at least three characteristics that might be used to define different Acoustically Distinguishable Spaces.
- Review NFPA 72 (2010 or 2013), and locate requirements for designation of Acoustically Distinguishable Spaces.
- Understand how to calculate the expected free-field sound pressure level at any distance from the appliance.
- Explain how the sampling rate of a recording affects the quality of the playback.
- Cite at least two aspects of emergency command center location and design that affect delivered speech intelligibility.

Pre-requisite

Who will benefit: Experience Level Intermediate

FPEs, Code Officials, Plan Reviewers, Design Professional (Architects/Engineers)

Materials Needed

Participants should have a copy of NFPA 72, *National Fire Alarm and Signaling Code* and *Emergency Communications Audio Intelligibility Applications Guide*, NEMA Standards Publication SB 50-2008.

Course assessment

Participants will be assessed via a written test. A minimum score of 70% is required to obtain a Certificate of Completion.

Professional Development Hours

Upon completion each participant qualifies for 7 PDHs or .7 CEUs. A Certificate of Attendance will be awarded.