

To Leave or Not to Leave – That is the Question!
Notification and Information Technology

1. Introduction – Notification and Information Technology
 - 1.1. Covering what we have for technology and why
 - 1.2. How advances in technology can help
 - 1.3. What we need for technology

2. Where are we? How did we get here?
 - 2.1. Audible notification
 - 2.1.1. Ring the town bell. Yell fire!
 - 2.1.2. All we did was to yell – make noise – no information
 - 2.1.3. Old alarm systems made noise with mechanical devices
 - 2.1.4. Evolution resulted in more reliable electronic devices – but at a higher frequency
 - 2.1.5. Building construction for privacy combined with new appliances reduced audibility
 - 2.1.6. We responded by putting in more appliances
 - 2.1.7. Are we making some system too loud?
 - 2.2. Visible notification
 - 2.2.1. Strobes and flashing lights added information – that noise is a fire alarm
 - 2.2.2. Strobes are now used to alert the hearing impaired and others where audible signaling is impractical or impossible
 - 2.3. Common Cause
 - 2.3.1. What is common is that we have always intended these signals to cause complete evacuation.
 - 2.3.2. So, we give them one bit only
 - 2.3.3. Rely on training to know what to do

3. Our Changing Ways – Where are we going?
 - 3.1. Our training is insufficient for several reasons
 - 3.1.1. Real emergency training and preparedness requires more than a fire drill every now and then
 - 3.1.2. False and nuisance alarms cried wolf – but we have solved those problems, or at least know how
 - 3.1.3. Fire alarm testing causes desensitizing unless done properly
 - 3.2. Buildings are more complex and so too are egress strategies.

- 3.3. Occupant capabilities vary greatly
 - 3.3.1. Backgrounds
 - 3.3.2. Experience
 - 3.3.3. Training
 - 3.3.4. Cultural
- 4. Our Changing Technology
 - 4.1. Audible
 - 4.1.1. Speakers
 - 4.1.2. Multichannel
 - 4.1.3. Provide specific information
 - 4.2. Visible
 - 4.2.1. Not just for the hearing impaired
 - 4.2.2. Not just strobes – BLS, beacons, pathway directivity lighting
 - 4.2.3. Not just one bit – use the “Bat Signal” or an annunciator, cable TV
 - 4.3. Tactile
 - 4.4. Olfactory
- 5. Where do we go from here?
 - 5.1. The problem has been and continues to be identified in research done by others – including those on this panel as well as John Hall, Guylene Proulx and others.
 - 5.2. Potential solutions have been hypothesized and some tested and shown viable.
 - 5.3. The fire alarm industry must be part of the solution
 - either lead, respond, react or *get out of the way*
 - 5.3.1. Do it yourself
 - 5.3.2. Partner or permit people who know how to communicate (sound and communications industry, telecommunications industry) to show or provide solutions
 - 5.3.3. The fire alarm industry is not a detection and signaling industry. They provide sensing and occupant notification systems, or better yet, occupant relocation strategies and systems.
 - 5.4. We don't need to reinvent the industry. That brings the legacy stalemates and stale approaches that have brought us to the impasse manifested by the constant chanting: “That's the way we've always done it!”, “But that's not in the code!”, or “UL won't allow that.”
 - 5.5. You can't lead when you stand behind the status quo!

6. That opens a whole new world of opportunity.
 - 6.1. A signaling system does not necessarily provide occupant notification with relevant information and therefore may not provide fire protection.
 - 6.2. A system that provides a complete occupant relocation strategy does provide protection.
 - 6.3. A system that separates occupants from fire and its products provides fire protection.
 - 6.4. The mission is not to provide a bunch of reliable noise makers connected with wires that are monitored to know if they break. The goal is to provide reliable occupant notification, relocation, and separation from a fire.

7. The whole fire prevention and protection community must work together to achieve new meaningful results.
 - 7.1. The researchers need to better define what works and does not work
 - 7.2. Engineers must learn, apply new strategies, coordinate all fire protection and fire prevention
 - 7.3. The fire service must recognize that times and strategies change.
 - 7.3.1. It might be best not to evacuate.
 - 7.3.2. It might be best to use the elevator.
 - 7.4. Code authorities must look for performance not compliance to prescriptive requirements.
 - 7.5. The fire alarm industry has to be willing to try new strategies and to look outside their clubhouse for solutions.
 - 7.6. When it all comes together, the educators will have an easier job.
 - 7.7. Fire prevention and protection will be holistic
 - 7.8. Fire prevention and protection will be engineered for high availability and thus high reliability
 - 7.9. Total fire safety will be engineered to work for a wide range of occupancies and occupant behavior.