Fire Science and Technology Educators

Gorbett, Gregory E NFPA Journal; Nov/Dec 2004; 98, 6; ProQuest Career and Technical Education pg. 79

knowledge and experience, following the instruction given within the time available.

Knowing this reinforces the importance of fire and life safety education.

Rita and Guylène concluded that a proper response is more likely if people are given information before a fire through education, training, drills, signs, public information, and emergency action plans; during a fire by alarms, public address system messages, staff, wardens, the fire department, and the media; and after a fire through the media, postings, e-mail messages, and meetings.

It's important that we agree not to use "panic" terminology to describe behavior in fire and to stop perpetuating a myth that could lead someone to assume he or she will panic and be unable to make the right decision during a fire.

Five-Year Strategic Plan by PEG CARSON

The mission of the section's five-year strategic plan, which covers the period from 2003 to 2008, is to improve the quality of life by reducing the incidence of fire and preventable injury, death, and property loss through education.

Its goal is to provide a forum in which fire and injury prevention educators can exchange information and disseminate critical to the professional development of section members.

Its objectives are to expand membership by attracting and maintaining members representative of all fire and injury prevention disciplines; enhance section members' professional development; provide a vehicle for information and resource exchange and dissemination among individuals and organizations dedicated to fire and injury prevention; increase participation in, and input into, the consensus standards-making process to ensure that fire and injury prevention concerns and recommendations are reflected in published documents; and promote coalition building, partnerships, and cooperation among private-sector, non-profit, and government agencies to expand fire and injury prevention resources.

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Electrical

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HOT ISSUES

More than Codes and Standards

For those of us who think of NFPA strictly as a standards-developing organization, it's time to take another look. While our core mission remains the development of codes and standards to protect life and property, we've now assumed the additional role of information provider, partnering with new organizations to develop products and offer electrical information that can help electrical professionals on the job.

You've already seen new publications in a number of areas. Documents that explain the National Electrical Code® (NEC) include:

- User's Guide to the National Electrical Code®
- Analysis of Changes to the NEC, published jointly with I.A.E.I.
- Stallcup's Illustrated Code Changes
- Stallcup's Journeyman Electrician's Study Guide
- Stallcup's Master Electrician's Study Guide
- · Stallcup's Electrical Calculations Simplified
- Pocket Guide to Residential Electrical Installations
- · Pocket Guide to Commercial and Industrial Electrical Installations
- NEC Expert Video Series
- NEC O&A (coming in 2005)

References for designers, installers, maintainers, and inspectors include:

- Electrical Inspection Manual with Checklists
- NFPA's Electrical References
- NFPA's Illustrated Dictionary of Electrical Terms
- Successful Electrical Contracting
- · Stallcup's Generator, Transformer, Motor and Compressor Book
- · Stallcup's Electric Sign and Outline Lighting Book

And titles that help instructors train electrical workers and students include:

- NFPA's Residential Wiring
- Stallcup's Electrical Design Book
- · Stallcup's Grounding and Bonding Simplified

A new area of emphasis is titles built around the 2004 edition of NFPA 70E, Electrical Safety in the Workplace, and OSHA construction site and workplace safety regulations:

- Handbook for Electrical Safety in the Workplace
- Electrical Safety in the Workplace
- Working Safely with Electricity video
- The Electrical Safety Program Book
- OSHA-Stallcup's Electrical Regulations Simplified
- OSHA-Stallcup's Construction Regulations Simplified
- OSHA-Stallcup's Electrical Construction Regulations Simplified
- OSHA-Stallcup's High-Voltage and Telecommunications Regulations Simplified

To learn more, visit www.necdigest.org or www.nfpacatalog.org.

We also welcome advice and proposals from the electrical community. If you'd like to suggest an item or a title, contact Charles Durang at NFPA, One Batterymarch Park, Quincy, MA 02169. You may also call him at (617) 984-7557, or email him at cdurang@nfpa.org.

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Fire Science and Technology Educators

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HOT ISSUES

Fire Dynamic Simulator and **Smokeview Training** by GREGORY E. GORBETT

Computer fire modeling has changed dramatically since Harold "Bud" Nelson first used it to demonstrate the behavior of the 1986 fire at the Dupont Plaza Hotel in Puerto Rico. The latest computer fire model, the Fire Dynamics Simulator (FDS), is an asset to all fire-related fields, but one must have considerable training to use it and interpret the results accurately.

FDS, developed by the National Institute of Standards and Technology, is classified as a field model. It allows the user to observe the development of a fire using a computer-generated animation of the model calculations. The model's two programs, FDS and Smokeview, are used to model and visualize fire phenomena.

FDS is a computational fluid dynamics model of fire-driven fluid flow that numerically solves a form of the Navier-Stokes equations appropriate for low-speed, thermally driven flow with an emphasis on smoke and heat transport from fires. In other words, FDS software takes data, including room dimensions, heat release rates, fuel loads, and surface materials, and solves mathematical equations to give valuable output data.

Smokeview is the visualization program used to display the dynamic and static results of the FDS simulation.

FDS models are used to demonstrate the activation of fire protection devices such as smoke alarms, heat detectors, and sprinklers and to reconstruct industrial and residential fires. FDS is also used to explain fire dynamics to students and jurors alike.

FDS typically requires users to know more about computers and fire dynamics than previous fire models. Those using FDS must understand programming, fluid dynamics, fire dynamics, and thermodynamics, and must be aware of version updates and possible patches that may be released. Engineering-based math and science courses will enable users to understand the derivation of the equations and their resulting calculations.

As for hardware, FDS and Smokeview require a fast CPU, a good graphics card, and plenty of RAM to run the model. The minimum specifications for a computer include 1 GHz Pentium III processor and 512 MB of RAM, but the user may want to exceed these minimum specifications to speed up the models' run time.

FDS will soon be an integral component of all fire-related fields, and those who work in these fields should be aware of the models' fundamentals. Fire safety professionals will have to stay up to date with such models to understand opposing experts, competitors, and the standards that will be based on findings from FDS.

Gregory E. Gorbett is a fire and explosion investigator and analyst with John A. Kennedy & Associates.

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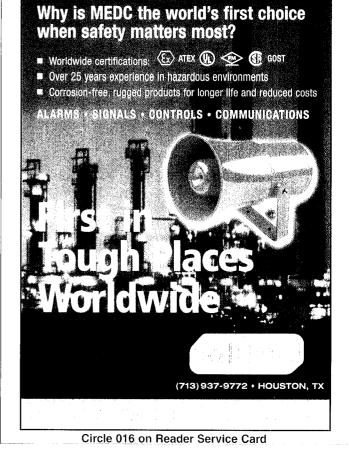
HOT ISSUES

Update from Great Britain by DAVID KENNEDY

Section Chair Terry Allen asked me to update you on activities in Great Britain.

At the moment, the fire service is recovering from a 2003 industrial dispute about pay, conditions of service, and modernization, during which firefighters went on strike for 16 days, leaving the military to provide a skeleton fire service throughout the nation. This caused much





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NFPA JOURNAL NOVEMBER/DECEMBER 2004

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