

## **IAFC Working Group Releases Digital Best Practices**

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*Mobile Radio Technology*

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Some digital-radio problems in fireground settings can be offset with proper procedures and training, the International Association of Fire Chiefs (IAFC) said yesterday while releasing a presentation on technical best practices for using portable digital radios.

IAFC last year formed a working group to study the problems firefighters were experiencing when using digital radios in the presence of loud background noise—not only from power tools like chainsaws often found at a fireground, but also from alert mechanisms included in a firefighter’s apparatus.

“We have to look at the protective envelope around a firefighter as a system,” IAFC working group Chairman Charles Werner said during an interview with MRT. “You have to look at how the different components work with the radios.

“The [best-practices] presentation is available for people to use immediately to deal with issues operationally in the systems that exist, and we wanted to get that out as quickly as possible.”

Indeed, the best-practices presentation notes that voice communications attempted on digital radios can be unintelligible when alerts from a personal alerting safety system (PASS) or a self-contained breathing apparatus (SCBA) are activated.

“One of the problems that was found was the low-air alarm on some of the breathing apparatus,” Werner said. “It used to be located on bells at the back of the tank, but now some of the new low-air alarms are in the mask. Those enhancements to the breathing apparatus came after the radios, but they create a new anomaly when there’s radio communication.”

From a technical perspective, the IAFC best-practices presentation recommends that firefighters use special kinds of microphones—speaker, in-throat and in-ear microphones—when practical to reduce the impact of background noise on digital-radio communications. The IAFC working group also recommends that system managers consider the impact of background noise when making their personnel deployments during incidents, work with manufacturers to optimize settings on existing equipment and get involved in development of new communications systems.

Copies of the IAFC best-practices presentation are available at [www.iafc.org/digitalproblem](http://www.iafc.org/digitalproblem).

In addition, training of personnel using is critical digital radios is critical, said Werner, fire chief for the city of Charlottesville, Va.

“In some departments like ours, it used to be that you had one officer who had a radio,” Werner said. “Now, every person that we have on apparatus has a radio. So, before, you almost always

had an experienced officer who was using a radio. Now, you have every single firefighter—from the newest recruit to the most senior person—having a radio.”

Use of digital radios for firefighters is relatively new, as budgetary realities have prevented many agencies from being able to use them, Werner said. In fact, most firefighters in the U.S. do not have any kind of radio, he said.

IAFC is expected to release a full report on its study and findings on the digital-radio problem later this month, hopefully in the next two weeks, Werner said. The report will provide a more comprehensive look at the testing done and offer short-term and long-term recommendations, including some suggestions to manufacturers that build products used by firefighters.

“One thing the report is not going to do is give you a thumb up or thumb down on digital,” Werner said. “It’s going to say that there are a number of aspects you need to look at, especially when you’re comparing an old system to a new system. You have to make sure you’re looking at apples to apples.

“If you’re looking at a new system that has different coverage, you may be looking at a dramatic improvement in your coverage area versus what you had, but now you’ve got to deal with background issues. You’ve got to weigh those factors as to what’s the best thing.”