

Standards: Who Needs Them?

An OLES initiative to
identify standards needs
in the responder community

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- **Does this equipment work?**
- **Does this equipment solve the right problem?**
- **How do I test this equipment?**
- **How do I use this equipment most effectively?**
- **Will this equipment work with my current equipment?**
- **How do I comparison shop?**
- **Should I buy this?**
- **If this equipment fails in the field, whom do I report it?**

These are the questions that face the law enforcement, fire, emergency medical services, and overall responder community every day. Standards are valuable resources to help make those tough decisions, but knowledge of their existence and accessibility varies greatly in the responder community. There are many types of standards—some are physical, such as standard reference materials, some are measurements, such as the kilogram, and others are consensus based guidance documents. No matter which type, a standard is simply what a community follows as guidance. Responders need standards to choose and operate safe equipment, to train employees properly, and develop the most effective standard operating procedures (SOPs). Equipment, training and SOPs are the ‘fire triangle’ for the responder community. If one of these is missing or deficient, safety and effectiveness are placed in jeopardy and lives may be lost.

Unfortunately, there is little understanding about who establishes standards, and which standards are being used in the responder community. Thus, the National Institute of Standards and Technology (NIST), through its Law Enforcement Standards Office (OLES) implemented a small pilot to gather metrics and insights related to these questions¹.

OLES worked with ASTM International, IEEE, and the National Fire Protection Association (NFPA) to provide participants with access to all of their standards in order to better understand awareness and topics of interest. The participants were able to view all of the NFPA standards and OLES paid for any downloaded standards from ASTM

International and IEEE. OLES promoted the pilot through email announcements to the Interagency Board (iab.gov), to Lessons Learned Information Sharing (LLIS.gov) and Chemical, Biological, Radiological & Nuclear Defense Information Analysis Center (CBRNIAAC) newsletter subscribers. The pilot was also announced on responder community websites such as the Responder Knowledge Base (www.rkb.us). The pilot was launched on an SAI Global, Inc. internet platform on Aug. 2, 2011 and the standards were available for free through Oct. 31, 2011 to anyone with a government (.gov) or military (.mil) email address.

¹ This effort was supported by the Standards Services Group within the Standards Coordination Office of NIST.

For the pilot, a responder was defined as anyone supporting the homeland defense or homeland security areas. The pilot generated the most interest within the Department of Defense (DoD) responder community. Over the course of 3 months, the pilot attracted 297 registered users, 114 of them within DoD, 34 within the Department of Homeland Security (DHS), 28 from local governments, and 23 from state governments. The remaining users were scattered across Federal government agencies ranging from the U.S. Department of Education, to the U.S. Department of Agriculture, and the United States Postal Service.

There were a total of 612 downloaded standards. The most popular standards on the pilot (by a large margin) were related to radiation detection. The two standards downloaded the most were *ANSI N42.33—Portable Radiation Detection Instrumentation for Homeland Security*, with 19 downloads; and *ANSI N42.34 – Performance Criteria for Handheld Instruments for the Detection and Identification of Radionuclides*, with 15 downloads. *NFPA 101: Life Safety Code* was popular, as was the *Standard on Protective Ensembles for First Responders to Chemical, Biological, Radiological, and Nuclear Terrorism Incidents*. Interest was also shown in the following topics:

- Radiation detection, including personal radiation detectors, cargo and vessel detection, mobile and transportable radiation detectors, and test/calibration methods
- Other homeland security-related equipment including active interrogation systems and response to hazardous materials/weapons of mass destruction incidents
- Protective clothing, including respirators, gloves, eyewear, test methods, and terminology
- Internet Technology-related standards, including Ethernet, telecommunications, software acquisition, software safety plans, and unit testing.



Frequent Search Terms Used

OLES received significant feedback on the pilot program. Comments included the usefulness of a single interface to access many different standards organizations, suggestions for improving the user interface, recommendations for establishing a permanent program and general appreciation for the pilot concept.

OLES plans on offering a follow-on pilot that would allow wider participation and would capture more metrics on which standards responders need. In particular, the follow-on will include state and local responder organizations who do not have government or military email addresses.

Overall, the pilot was a success with identification of a path forward to try to help the responder community conduct their work safely and efficiently. The pilot was also successful in offering a large variety of standards for everyone participating.

Certain commercial equipment, instruments, or materials are identified in this paper. Such identification is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology, nor is it intended to imply that the materials or equipment identified are necessarily the best available for the purpose.