

COMMON GROUND

Fireground Compass Helps First Responders Find A Way Out



Photo courtesy of Halcyon Products, Inc.

In a large building or wildland fire situation, heavy smoke can quickly become disorienting, putting firefighters in danger. Battalion Chief Steve Nash of the Solon (OH) Fire Department knows that firsthand. “Our biggest fear is losing someone in those buildings,” said Nash. “So we had to come up with a method to prevent us from getting disoriented.” Firefighters have used inexpensive compasses in the past, but they cannot be easily seen in the dark and have no way to mark points of entry or the location of the Incident Command Post.

“I wanted everybody on fire ground to have the same relation on where the building sits, where command is located, and where team members are,” said Nash. He drew some ideas on paper and took them to his colleague, John Moore, at Halcyon Products. The company was already in the business of making better, safer products for first responders.

“About the same time I came up with the drawings, I found the TechSolutions Website (www.dhs.gov/techsolutions) through *Fire Chief Magazine* and made the necessary contacts,” said Nash.

TechSolutions is a new program of the U.S. Department of Homeland Security (DHS) Science and Technology Directorate (S&T). The TechSolutions Program was established to provide technology solutions that address mission capability gaps identified by active Federal, tribal, state, and local first responders ([see related article on page 2](#)).

TechSolutions assists with rapid prototyping of technologies that need additional development in order to get them ready for commercialization. Currently, the TechSolutions Program is developing solutions to many gaps identified by the first responder community, including the Fireground Compass.

Nash and Moore conducted focus groups with firefighters and solicited their thoughts and opinions on the product. “That helped us determine whether the idea was valid to some degree, directed us on product features, function and design, provided input on price points, and gave us a lot of feedback that led us to believe we were going in the right direction,” says Moore.

Nash and Moore had the prototype ready at a Technology Readiness Level of 6 (see chart below for an explanation of Technology Readiness Levels). TechSolutions provided additional funding to implement design changes based on first responder feedback, begin beta testing and accelerate the product to commercialization to get it into the hands of first responders.

TRL Level	Stage	Activity
TRL 9	Deployment	Actual application of the technology in its final form.
TRL 7-8	Operational Test & Evaluation	Prototype near, or at, planned operational system. Technology has been proven to work in its final form.
TRL 5-6	Technology Demonstration	Fidelity technological components are integrated with reasonably realistic supporting elements that can be tested in a simulated/relevant environment.
TRL 4	Technology Development	Components are integrated to establish that they will work together.
TRL 3	Research to Prove Feasibility	Active research and development is initiated.
TRL 1-2	Basic Research	Lowest level of technology readiness/invention begins.

(Common Ground continued)

The Fireground Compass is simple to use, combining a compass with rotating bezels. It has a “building bezel” with four points labeled A-B-C-D, which corresponds to the way firefighters label the sides of a building. The bezel rotates, and the compass is oriented north. As a result, all users have the same perspective. A separate “command bezel” indicates, with an arrow, either where Incident Command Post is, or where the user entered the building. “It’s very easy to get lost in a smoky environment and knowing where you are is the difference between getting out and not getting out. This device will get me situated so I can find where I entered the building, find my hose line, or find an exit door or window,” said Nash. The compass also has an LED light, making it easy to read in dark and smoky conditions. The compass is very large, making it easy for firefighters to use with their gloves on. “We wanted people to be able to utilize this with gear on, and not go into a building and take their gloves off,” Nash said.

According to Greg Price, the Director of the TechSolutions Program at S&T, the Fireground Compass is the first TechSolutions product designed by a first responder to go through the entire TechSolutions development path. Many more

products are in the works through partnerships with the federal inter-agency Technical Support Working Group and others ([see the ocular scanner article in this issue](#)).

Nash said, “Things are changing so rapidly with less and less manpower and more and more work, and I view it as my job to keep folks out of harm’s way as much as possible.” He hopes other first responder groups will consider the Fireground Compass. The compass will also be useful to law enforcement and is already being looked at by emergency response teams. Not all law enforcement agencies use the A-B-C-D method for identifying building entry points, but Halcyon products believes the A-B-C-D nomenclature will come to other disciplines soon through FEMA, which will allow these disciplines to benefit from the tool as well.

TechSolutions and Halcyon Products hope the product will be commercially available within the next few months. They also want it to be affordable for anyone who needs one.

For more information on the Fireground Compass, visit www.halcyonproducts.com, or see a product video at firstrespondertv.com/channelguide.aspx?channelID=18&episodeID=32.



THE RESPONDER KNOWLEDGE BASE

AEL and SEL Explained

The Responder Knowledge Base (RKB) recently posted the latest versions of both the Department of Homeland Security (DHS) Authorized Equipment List (AEL) and the InterAgency Board for Equipment Standardization and Interoperability (IAB) Standardized Equipment List (SEL). RKB is the only site that provides these lists in an interactive format. Both are viewable at www.rkb.us by clicking on the blue “AEL/SEL” tab at the top of the page.

The latest version of the SEL includes a greatly expanded Water Rescue section, as well as newly introduced training recommendations for most items. The AEL update now reflects items available for several new grant programs, including the Public Safety Interoperable Communications (PSIC) grant. The AEL index page on RKB also includes a downloadable AEL Change Log, so that grant managers who closely track AEL changes can stay informed.

What’s the difference?

There is a fair amount of confusion concerning the AEL and the SEL. While both lists look similar in that they include generic product types, neither list includes specific commercially available products by name, such as the Scott Aviation Products Chemical, Biological, Radiological, and Nuclear (CBRN) Self-Contained Breathing Apparatus (SCBA). Instead you will find an entry number 01AR-01-SCBA, entitled “SCBA, CBRN.”