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DHS Advice to Developers: Keep Buyers' Tight Budgets in Mind

By Rob Margetta, CQ Staff

Businesses looking to move from the defense market to homeland security take note: selling large volumes of high-priced gear won't fly when the buyers are state and local emergency squads.

The advice comes from David Boyd, head of the Command, Control and Interoperability Division at the Department of Homeland Security's Science and Technology Directorate.

"A lot of companies, if they really want to deal in this world, they have to figure out how to work with smaller customers," he said.

Boyd was one of many DHS S&T officials who spoke at the close of the National Defense Industry Association's 2008 Homeland Security Stakeholder's Conference on Thursday, providing advice for the business people in the audience to chew on.

Throughout the four-day event, Boyd and other officials who deal with the business aspect of the S&T Directorate had been pushing the idea of interoperable communications devices, highlighted by a one-year pilot program between DHS and Thales to develop a radio that would allow first-responders to talk across all bands and modes.

But, in his closing address, Boyd cautioned that design, marketing and pricing for interoperable communications gear and all other products aimed at emergency workers have to be planned with the end customers in mind, and those will largely consist of police, fire and emergency medical departments without much money to spend. And, he said, DHS will not subsidize businesses through direct funding or grants that would allow state and local agencies to buy big-ticket items.

"This is not the Department of Defense," he said. "We don't buy or direct purchases."

Instead of dealing with just one department, he said, sellers of emergency response equipment have roughly 60,000 different customers. And those customers don't have a nearly bottomless federal purse. Boyd said companies frequently approach him, saying they have brought a product under the $100,000 mark, a threshold that he said isn't nearly low enough for emergency response customers.

"For a typical police department, a police car is the largest capital investment they will make — $20,000," he said, adding that 90 percent of America's police department have fewer than 24 officers and most fire departments are volunteer. Most have tight work schedules, too, meaning that anything requiring extensive training will rack up overtime costs.

And, he said, many of those departments have bought bum technology before and are tough, skeptical customers. They are slow to migrate to new solutions, such as going from analog radios to digital.

"You have to be prepared to pilot the thing," he said. He added later that pilot programs to test technology, like the interoperable radio deal with Thales, are an aspect of product development that DHS S&T will fund.

State and local emergency departments are looking for equipment they can integrate into their systems that doesn't involve proprietary technology that can lock them out of modifying or upgrading later, Boyd said. Companies that offer "magic solutions" that require replacing entire systems and may one day have to be junked themselves will not find receptive audiences.

Furthermore, he said, companies need to produce gear that emergency responders will find useful and easy to add to their daily routines.

“The guys in the field are not going to use what they don’t use all the time,” he said. “These are the guys who make or break your product.”

The Six B’s

S&T divided its Thursday presentations into six “B” areas: Bombs, Borders, Bugs, Business, Bodies and Buildings. Boyd gave the business presentation. Briefings from other officials outlined technology solutions they want to see from the private sector, including:

• **Bombs:** Several of the sessions at the stakeholder’s conference focused on one of the most sought-after solutions in defense and homeland security: a “standoff” improvised explosive device detector that can sense bombs on people and vehicles from a distance, without swabs or other methods that require contact.

S&T Undersecretary Jay Cohen said a viable solution will take at least five years, and there will likely be a domestic IED attack in that time. But, he said, advantages of standoff detection include stripping terrorist groups that use suicide bombers of the ability to use martyrdom as an incentive. “All of a sudden, they’ve got a recruitment problem,” he said. “That’s how you win.”

Jim Tuttle, head of S&T’s Explosives Division, acknowledged that there is some classified data that DHS will not be able to provide to companies and universities working on solutions, but said they will give as much as possible.

“The key’s going to be that we can’t give away the vulnerabilities in the current system,” he said.

• **Borders:** While much border security technology has been aimed at the Mexican side of the equation, Capt. Dave Newton, acting head of the S&T’s Borders and Maritime Security Division, said DHS’s future needs involve looking north. Border security at an Arizona site involves conditions much different from one in Vermont or on the Great Lakes, Newton said. His division is looking for technology that can help surveillance pierce through foliage and work in areas with dense, challenging terrain, he said.

• **Bugs:** In this category, which involves chemical and biological threats, officials want more handheld detection devices, specifically those that can help border patrols find communicable diseases in livestock entering the United States, said Elizabeth George, head of the S&T Chemical and Biological Security Division. Additionally, she said, in the field of biological contamination detection, emergency workers need hardier reagents that don’t require refrigeration and have longer shelf lives, and better methods of determining the range of an outdoor biological attack.

• **Bodies:** Sharla Rausch, head of the S&T Human Factors Division, said the Transportation Security Administration wants its own type of standoff detection: an “invisible checkpoint,” a non-invasive way to screen travelers for security and identification purposes that doesn’t slow them down. Other priorities include real-time, positive identification solutions that use multiple biometrics, rapid DNA testing that can do the job within minutes, mobile biometrics screening and high speed, high fidelity, 10-fingerprint scanning.

• **Buildings:** S&T is looking for better building materials that don’t melt and have “super strength in extreme conditions,” according to Chris Doyle, head of the Infrastructure and Geophysical Division. Doyle also mentioned fireproof tarpaulins that could cover houses to protect from wildfires and better earthquake detection as possibilities that interest his division.

“There seems to be some very promising technologies out that could produce warnings for earthquakes up to 72 hours in advance,” he said.

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