

Where the Spies Shop

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Jul 10, 2002 5:00 PM |

Where the Spies ShopHomeland Security Expo features smart cars, jet-copters, tooth phones, and other tools for subterfuge and defense. Stephen Chiger, Medill News Service

WASHINGTON--Now showing in our nation's capital: a secret agent-style truck with a retractable laser turret, a million-dollar gyroplane, and a phone you can store in your teeth.

Sound like a movie set? It was all on display at the Dirksen Senate Office Building here Wednesday, where small businesses showed off homeland defense products to a huge prospective client: the U.S. government.

Some 50 companies, each with fewer than 500 employees, participated in the first Small Business Homeland Security Expo at an unusual venue for a tech show. The coordinator was the Public Forum Institute, a group seeking to foster interaction between the government and the private sector. Senators John Kerry (D-Massachusetts) and Christopher Bond (R-Missouri)--both top members on the Senate Small Business and Entrepreneurship Committee--co-chaired the event. Organizers estimated attendance at 1000.

Exhibited technologies ranged from existing products to ones in development, but all claimed to have potential for homeland security use. "My distant cousin 007 would have his mouth watering," Bond quipped.

Most but not all show wares were high-tech: Allied Materials and Equipment hawked an anti-anthrax skin lotion, and Phillips Environmental Products showed off a toilet kit that uses bioactive powder.

Secret Agent Wares

One showstopper was the SmartTruck, a defense-oriented vehicle outfitted by Integrated Concepts and Research. The truck is equipped with retractable grenade launchers, oil slick and road tack dispensers, a smoke screen device, and an on-board, touch-screen computer with fingerprint authentication.

The display truck, a souped-up Ford F-350, is in its third year of development by ICRC in a program sponsored by the U.S. Army, according to electrical engineer Hans Steiniger.

Not all of the vehicle's extensive list of features will be put to use, he noted. "I think what's going to happen is that bits and pieces of this vehicle will make it into the army's fleet," Steiniger said.

Also on display was the Hawk 4 Homeland Defender Gyroplane, a jet-helicopter hybrid from Groen Brothers Aviation, which sales manager Al Waddill described as the only of its kind in existence. It needs only half the fuel of a helicopter and will be more stable in flight, said James Mayfield, Groen Brothers chief operating officer. Its top speed is 150 knots, comparable to helicopters of the same size, he says.

The two-passenger gyroplane, now being introduced commercially, carries a steep price tag of between \$700,000 and \$1 million. However, government agencies including the Drug Enforcement Administration and the Coast Guard have already expressed interest, company representatives said.

Talk to the Tooth

More gee-whiz was the tooth phone, which turns your teeth into a combination receiver and speaker. The product is suited for hands-free communications under bio-chemical hazard suits and in high-noise environments, said Barry Mersky, who is both a dentist and the chief executive officer of developer ES Comms.

Although ES Comms exhibited a working model at the Expo, Mersky said his company is two years away from developing a working wireless model. He also took pains to point out that his tooth phone is distinct from a British competitor's product, which an ES Comms representative says is only in the concept stage.

The tooth phone uses a material called Terfenol-D, which changes shape in response to magnetic fields. Etrema Products, which holds the patents to the material, demonstrated the SoundBug, which uses Terfenol to turn any flat surface into a speaker. In an Expo demo, SoundBug enabled music to play from a tabletop.

SoundBug could be used to emit loud sounds from the sides of ships or submarines, disabling potential saboteurs, according to Jonathan Snodgrass, Etrema vice president. The SoundBug is available now, priced at between \$30 and \$50, Snodgrass said. He predicted that its next-generation successor will enable hands-free cell phones.

Another audio application on display was the Fast-Talk system, called "the world's first audio search engine," by Chris Birchfield, vice president of business development for vendor Fast-Talk Communications. The device, commercially available now, can find words and phrases in audio files with 98 percent accuracy, Birchfield says. Because it relies on sounds instead of spellings, the device is blind to language and can search audio documents ten times faster than speech-to-text devices, he added.

The Fast-Talk system's base price is about \$60,000 Birchfield said. Government agencies have already snapped up a few for homeland security use—but he wouldn't divulge which ones.

Other devices on display included:

- BioGate, a biometric authentication system developed by Janus Associates for use with Microsoft Windows networks.
- Ion Track Instruments' Entryscan, an approximately \$100,000 walk-through device (funded by the Federal Aviation Administration) for detecting narcotics and explosives particles.
- A geo-spatial locator developed by Parco Merged Media to track people and objects in 3-D environments.
- VirtualPerimeter, a remote video networking system by LiveWave.
- The IR-160 Thermal Imager, developed in part by Infrared Solutions.

Window Shopping

Many of the scores of government officials attending the event were actively looking for new security products.

"The Defense Department is growing increasingly reliant on the business community, both large and small," said Michael Wynne, deputy undersecretary for acquisition and technology in the Department of Defense. As many as 50 to 100 contracts will be awarded in the next few months, he said. Currently, 86 percent of the Pentagon's prime contractors are small businesses, Wynne added.

The Public Forum Institute organized the event to give small businesses greater access to government, said Jonathan Ortman, president of the nonpartisan, nonprofit organization.

"My experience is that most of the ideas come from small businesses," Ortman said. "Microsoft, when it started, was also a small business with an idea." The idea for the exhibition developed in conjunction with the sponsoring senators, he said.

"Senator Bond and Senator Kerry advised us that they were thinking of doing something with small businesses, so we combined our efforts," Ortman said.

A trade show at a senate office is not unheard of, but it is rare, said Dayna Hanson, a spokesperson for the Small Business Committee.

"[On] September 10 of last year, I'm not sure any of us would have contemplated this kind of an exposition," noted co-sponsor Kerry. He said he regretted having to limit participation to 50 vendors, when interest unexpectedly turned out to be much higher.