

# A forceful presence in Stafford

The CBRNe World team travels a lot; there is no month of the year when they are not in some far-flung land at a conference, exhibition or exercise. While it is impossible to attend everything we do our darndest, so I hope when I say you need to go to the next FPED it is with an appreciation that we are well-placed to give such advice. FPED is a bi-annual event run by the US government (the DoD's Program Manager Force Protection Systems). Unlike other shows which charge either for admission or by the booth, FPED is sponsored by the DoD's Physical Security Equipment Action Group and co-sponsored by the US Department of Energy, DHS, Joint Staff, National Institute of Justice, National Nuclear Security Administration and the Technical Support Working Group (TSWG). If that seems a fairly exhaustive list, it gives you some idea of the level of support; the entire Stafford Airfield is hired for the full three days, parts of the USMC range at Quantico are taken over for afternoons and a fleet of support for everything from registration to traffic management is provided. FPED is a big undertaking.

What makes it important is the fact that it is free and attracts more than 8,000 visitors; this brings out a lot of the smaller and quirkier companies (as well as the multinationals) so it is fair to say I have not seen so many new companies, or new (to us) divisions of established companies since we first started attending events. Also, for those of you that don't feel a day is complete without your ensemble being ruffled by a blast wave, FPED ran an extensive live blast and ballistics demonstration – with a wide range of blast mitigation devices either proving their worth or being sent to their maker.

The explosive or counter-IED products on display included Polychromix's microPhazir, a second-generation handheld near-IR spectrometer – meaning that it doesn't use lasers and has a low chance of accidental ignition. MicroPhazir also holds a library that allows it to do drugs and toxic industrial chemicals. Spectrum San Diego showed its CarScan, a vehicle and truck inspection device. As opposed

to other X-ray devices the CarScan use dual energy K-edge switched technology to get their X-ray image; not only does this provide an ultra low dose of radiation but it also allows for the discrimination of organic material and also automatically gives it a size and mass.

iRobot provided demonstrations of their Warrior 700 series, a larger platform than those they are well known for. Clearly looking to steal market from Telerob and Foster Miller, the platform can carry a payload greater than 150lb, has a speed of just under 10mph, stair climbs and can carry a variety of payloads. Ara robotics were also whizzing their Pointman UGV around. Pointman is a first-look UGV with self righting and comes fitted with two cameras. The system was designed to be easy to decontaminate and to be hurled through windows, doors, etc.

Niitek, meanwhile, was showing its ground penetrating radar (GPR), Visor 1050, which can be used on medium-sized UGVs like Foster Miller's Talon. This offers GPR in a man-portable form and builds on the work they have been doing on their Probability of detection/False Alarm Rate (Pd/Far) algorithms. Ion Applications was demonstrating its EasyTec XP, an IMS detector for parts-per-trillion (PPT) sensitivity. Currently the handheld system is designed for explosives and pure gas, but they are hoping to do narcotics and CWA soon (though the battlefield environment might put paid to the PPT claim).

In terms of CBRN, Syagen were showing off their new Mass Spec, the Field Mate, as well as their "Guardian" explosives trace portal. Syagen claim this is the most portable, ruggedised Mass Spec, which is based on a quadrupole ion trap time of flight (QToF) analyser with a dual ionisation source allowing it a far higher repetition rate and dynamic range than other MS. Textron Defense System's Ground Systems Division was showing off its Adaptable Radiation Area Monitor (ARAM). This device, which is already in use by a number of US States such as New Jersey, is claimed to allow greater discrimination and direction finding than other similar systems while keeping throughput high. It comes in three

variants – RadTruck, RadPort and RadPack – all with different size and capability levels. Another new company (to *CBRNe World*) was Zephyr, which is showing off its Bioharness. This offers vital sign monitoring of first responders and military operators at a far lower weight and thermal burden than other systems. The system deploys over existing radio systems, allows for multiple users per system and is ideal for Level A responders and those who use cooling systems – such as EOD operatives.

ICX was showing a suite of new products under its Threatsense family. These were the Instantaneous Biological Analyser and Collector (IBAC) and the BioXC200GX. IBAC is a bio-luminescence detector which provides real time warning at what is suggested to be a fraction of the cost of comparable systems, while BioXC is a sampler with a small footprint that provides samples at 150lpm. ICX was also showing its new, very exciting, indicator under the Agentense division. This utilises enzyme technology to show areas of contamination on surfaces.

As an example of a small company with a nice system – that you wouldn't see outside of FPED – was Zistos with VRAD, their radiological video adapter. A video system company, they have linked their range of portable, high-fidelity cameras to radiological detectors to allow security personnel to identify individuals emitting radiation – a neat, practical and interoperable system.

The next FPED is scheduled for 2011, yet it is not a foregone conclusion since it is dependent not on commercial pressures but governmental budgets. It would be a pity if FPED was cut, there is no doubt it could be run cheaper – the amount of traffic managers was legion, and it is ripe for a commercial "buyer". The latter would, no doubt, be the end of the event – its charm is that it is free and has a "Come one, come all" mentality rather than the big corporate monoliths you see at AUSA or DSEI. If there was a criticism it is that the 8,000 estimated delegates were too few for a show this size, and hopefully 2011 will see an increase in marketing to ensure that this number doubles.