Securing Sochi's Winter Olympics:
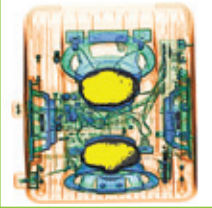
potentially a bumpy ride

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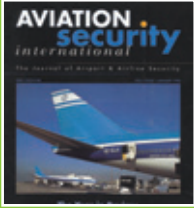**TECHNOLOGY CONCEPT TO DEPLOYMENT**

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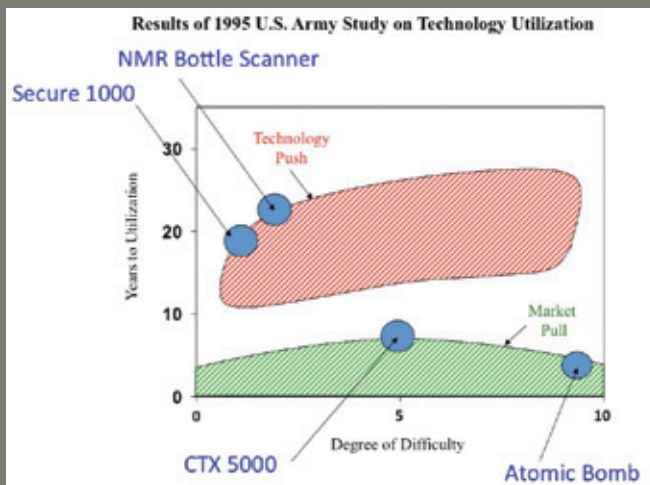# A Personal View

Expressed by Steve Wolff

Apple's Macintosh computer celebrates its 30th birthday this month. I often joke that, if the computer industry developed and deployed technologies at the rate our industry does, we'd still be using Pentium computers or one of those early Macs on our desktops – and good luck waiting for mobile phones or tablets to appear! The innovations that have succeeded in our industry tend to take up to 20 years to get from concept to lab prototype to deployment.

One example is the Secure 1000 whole body X-ray, which was briefly deployed at, and then withdrawn from, US and UK airports. The system (now owned by Rapiscan) was first developed in 1991, but it was not until 2009-10 before significant aviation security deployment had occurred. The device has now been superseded, despite – indeed because of - its superior image quality (perceived as being too invasive), by L3's ProVision millimetre wave body scanner.

Bottle scanners should arrive just ahead of the 10-year anniversary of the UK liquid bomb plot, but to illustrate my point further, Quantum Magnetics (now part of Morpho Detection) developed the first bottle scanner (based on magnetic resonance) back in 1988!

My old boss at Quantum recently shared an excellent chart with me, which I include below, highlighting the results of a 1995 US Army Study comparing the time to market for two different development strategies: 'technology push' and 'market pull'. Dwelling on this over the holiday season, along with this editorial deadline looming, got me thinking about our challenges and how we might speed up our innovation-to-deployment process.

'Technology push' is synonymous with the 'build it and they will come' philosophy that is common for new technology development but is a costly, inefficient way of defining and developing security solutions for our industry. To evolve towards a 'market pull' approach, several changes are needed.

> **"...how we might speed up our innovation-to-deployment process..."**

underwear bombs) and improves passenger facilitation, but also evolves to counter those threats that we are finally starting to seriously discuss. These include suicide bombers internally concealing IEDs (either by simple insertion or via more risky surgical implantation) or internally smuggling IED components for later removal and assembly on the aircraft.

Second, we should move away from the feast-or-famine purchase cycles towards a long-term, clearly defined, step-by-step deployment timetable that highlights how technologies and processes would be changed or standards upgraded and how requirements will evolve. The European Union uses this approach in its HBS and LAGs strategies, but it remains piecemeal. This would help all stakeholders plan for the future. From a finance perspective, it could allow governments and airports to set aside funding for development and deployment of new systems and small companies would be able to make a stronger case for private sector financing of new technologies. This is key because VCs need to be comfortable that their investments might yield market successes, otherwise they'll just follow the herd into funding the next social media start-up. 'Technology-push' requires faith and patience (not to mention luck); it's a gamble. 'Market-pull' gives private investors the ability to judge a potential funding decision based on possible market returns, leaving governments (and taxpayers) to pay less for R&D. Developers and vendors would benefit from a more predictable business rather than the disruption of ramping up and down between 'boom' and lean years.

Third, we should consider revenue models for offsetting operating costs. TSA now has advertising on their trays, but why stop there? TV monitors would be useful before and at the checkpoint to educate passengers on what to do and they could simultaneously generate revenue from advertisements and sponsorship messages. Right now, monitors would be useful at PreCheck (TSA's Trusted Traveller programme) lanes. I recently saw almost 50% of PreCheck passengers remove laptops and liquids from their bags and take off coats and shoes, thereby missing the whole point of PreCheck. Advertisers, including airport shops and restaurants, will have access to a bored, captive audience and the ability to be associated with, or concerned about, security and helping passengers. This has been done for years at Hollywood events (e.g. Golden Globe awards and the Oscars).

Finally, we need to get our testing strategy in order. Product testing can be dramatically shortened by concurrent lab- and field-testing to ensure that a field-tested product (rather than an untested prototype) is sent to Certification. This would minimise the number of redesigns and re-certifications needed to get to a working, usable product.

A 'market-pull' strategy would dramatically speed up new technology and process implementation in our industry, add stability and make airport security more responsive to the threats we face. I generally like having a fast computer on my desk and the latest handheld mobile technology at my fingertips; meanwhile, my 6-month old iPad is already obsolete.

Ten to twenty years is a long time to wait for new solutions to address our security woes. Terrorists use 'market-pull' approaches, so why don't we? ■

Results of 1995 U.S. Army Study on Technology Utilization

First, regulators and end-users need to define various stages of a long-range vision: a step-by-step evolution of the end-to-end security process that prioritises the changes needed, defines and communicates performance standards, desired process modifications and corresponding technology needs. The IATA Checkpoint of the Future (recently renamed SmartS) is such a concept, though IATA and TSA's current approaches are only a subset of the short- and long-term plan presented in the initial reports (disclosure: I was a co-author). What remains lacking is a vision that not only addresses prior threats (like liquid and