

Technology Demonstrator Event

Thursday 26th and Friday 27th November 2009 10am – 4pm

25 Bank Street, Canary Wharf, E14 5LE

The Technology Demonstrator Event will showcase new and emerging technologies in the field of modelling, prediction and detection of abnormal crowd behaviour with the goal of reducing the vulnerability of crowded places to terrorist attack. Alongside these demonstrations of innovative solutions from across industry and academia, a number of presentations and discussion groups will be held, focusing on key challenges in securing our critical national infrastructure.

Admiral the Lord West of Spithead, the Parliamentary Under-Secretary for Security and Counter-terrorism, will officially open the event at 11am on Thursday 26th November.

Exhibitors:

The following organisations will showcase their tools and technologies from 10am until 4pm throughout the two day Event:

AOS	Imperial College London	Thales
Aston University	INSTINCT	Traffgo
BAE Systems ATC	Orbis	University of Glasgow
CAE	Presagis	University of Leeds
Crowd Vision	Roke	University of Nottingham
Detica	Secure Futures International	University of Reading
Fujitsu and Crowd Dynamics	SpaceSyntax and University College London	VenueSim and De Montfort University
Generic A.I. Limited	STFC and University of Sheffield	Vision Semantics Ltd
Global Security Challenge	Strathclyde University	

Presentations and discussion groups

The Technology Demonstrator aims to bring together innovative thinking across Government, industry and academia, providing an opportunity to harness new ideas and perspectives to improve security across our critical national infrastructure. The presentations and discussion groups that will be held across the two-day event include those listed below.

Places at these sessions will be limited, so please indicate in your invitation response which sessions you are interested in attending. The timetable will be scheduled according to demand, and will be distributed prior to the Event.

Government counter-terrorism strategy and priorities

The most significant security threat to the UK today comes from international terrorism. Innovative science and technology is vital to countering terrorism and supporting the Government's counter-terrorism strategy, CONTEST.

To respond effectively to the terrorist threat, Government needs greater understanding of the innovation community, informed influence over external innovation and greater coordination of investment in innovative ideas and solutions. This session will focus on the challenges in reducing vulnerability in crowded places and key opportunities for industry investment.

Risk-based targeting: balancing information privacy and security benefits

There are well-reported concerns regarding the balance between the benefits of security and the impact on privacy. This balance will shift depending on context: we are more willing to accept intrusive security when boarding a plane, for instance, than when we are passing through a shopping centre.

A risk-based targeting approach based on smart technology minimises intrusion on legitimate activity by focusing law enforcement on the small minority who may pose a risk to the safety and security of the public.

Testing the 'user pays' principle

One of the key principles of CONTEST is that the 'user pays', i.e. the cost of protecting the public will continue to be borne only by those parts of society that benefit from the service. This principle is already being applied in some crowded places, for example football stadium and nightclub owners are now responsible for meeting security costs at their sites.

This discussion group will seek views on how best to apply this principle more widely and assess different funding models. It will look at case studies on how countries around the world use different models to engage with and fund external security innovation. It will also consider potential commercial benefits arising from implementation of counter terrorist technologies.

Crowd psychology

This session will introduce the core principles of crowd psychology and the critical factors that come into play — such as spatial behaviour — and therefore need to be included in any model of how a crowd behaves. Real-life examples will illustrate how these principles have been used to understand crowd-police interactions and how crowds behaved during emergencies such as the 7/7 attacks on London.

Applications of immersive simulation and synthetic environments

Simulation technologies are primarily focused on the military and gaming industries. Recent developments in low-cost military simulation technologies can now be combined with more sophisticated behavioural engines from the gaming industry to add value to counter-terrorism activities.

But where can they deliver the greatest benefit? This discussion session will draw on the expertise and experience of counter-terrorism practitioners to review potential applications of simulation technologies and synthetic environments.

Cognitive modelling – studying and modelling human behaviour

As the use of cognitive modelling in synthetic environments becomes more advanced, so we can more accurately model simulations of crowd behaviour based on real-world emotions. In addition, there is now a greater body of knowledge about terrorist behaviour based upon observation of terrorists prior to and during their acts of terrorism.

This discussion session will look at how these principles can be combined to produce cognitive models of terrorists that are sufficiently accurate to be used in simulations of terrorist and crowd behaviour.

CCTV in crowded spaces

There are over five million CCTV cameras in the UK generating vast quantities of data. This data is impossible to monitor comprehensively using human resources alone. As a result, CCTV operators are normally reactive, rather than proactive, when trying to spot potential incidents.

This session will discuss recent developments in self-configuring software for dynamic scene understanding and analysing crowded space activity. These can enable more robust solutions for multi-camera tracking, behavioural profiling and anomaly detection. The session will also discuss other methods that may be used to identify potential problems, such as modelling predicted crowd flows prior to major events.

RSVP

Please respond to reserve your place, indicating on which day you would like to attend, via fax to +44 (0) 2087 115094. If you would prefer to respond by email, please use Instinct@detica.com, or by phone to the Event Manager, Caroline Holtham, on +44 (0) 7787 157885.

Attendee name:

Thursday 26th November

Friday 27th November

I am interested in attending the following discussion groups:

Government counter-terrorism strategy and priorities

Risk-based targeting: balancing information privacy and security benefits

Testing the 'user pays' principle

Crowd psychology

Applications of immersive simulation and synthetic environments

Cognitive modelling – studying and modelling human behaviour

CCTV in crowded spaces

Detica

BAE SYSTEMS

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Find out more:

Detica
Surrey Research Park
Guildford
Surrey
GU2 7YP

T +44 (0) 7787 157885
F +44 (0) 2087 115094
Instinct@detica.com
www.detica.com