



NATO Defence Against Terrorism Journeys on Standoff IED Detection



Day One 7th November

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| 8:30 to 9:00 | Arrival and accreditation of Participants. |
| 9:00 to 9:20 | Welcome and opening of the Conference Sessions – Gen. Jose L. Ceballos - Underdirector for International Relations – Spain MoD

Opening remarks by Ms Mary Ungar (The International Institute) |
| 9:20 | Administrative remarks |

Panel 1: IED Detection based on Laser Spectroscopy

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| 9:30 | Introduction by the Panel Chair :
Dr. Javier Laserna (Málaga University) <i>Spain</i> |
| 9:40-10:00 | Dr. Gerhard Holl (WIWEB) <i>Germany</i>
“Trace Detection of Explosives with LIBS” |
| 10:00-10:20 | Mr. Carlos de Miguel (INDRA Systems) <i>Spain</i>
“Standoff Trace Detection with LIBS” |
| 10:20-10:50 | Coffee Break in the Exhibition Room |
| 10:50-11:10 | Dr. Wolfgang Schade (Technische Universität Clausthal) <i>Germany</i>
“Fibre coupled LIBS Sensor” |
| 11:10-11:30 | Mr. George Coyle (Northrop Grumman Corporation) <i>United States</i>
“Infra –Red Spectroscopy” |
| 11:30-11:50 | Discussion |
| 12:00 | Lunch |
| 13:15 | Opening of Exhibition |

Panel 2: IED Detection Based On Molecular Detection

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| 14:00 | Introduction by the Chair:
Dr. José Pedro Santos Blanco (RAMEM) <i>Spain</i> |
| 14:10-14:30 | Mr. Tim Corcoran (presenting for Andrei Miziolek/ARL) <i>United States</i>
“ST-LIBS: A Promising New Tool for Trace Explosives & Other Hazards
Detections at a Distance” |
| 14:30-14:50 | Mark Carl Meyer (CEIA) <i>Italy</i>
“Detection of Flammable Explosive Liquids Concealed in Commercial
Liquid Containers” |





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14:50-15:20 Coffee Break in the Exhibition Room

Panel 2: IED Detection Based On Molecular Detection (continued)

15:20-15:40 **Mr. Gonzalo Fernandez de la Mora** (SEADM) *Spain*
"Aroma: Serial DMA/AF Detector"

15:40-16:00 **Mr. Miguel Sanchez** (RAMEM) *Spain*
"NEDS New Explosive Detection System"

16:00-16:20 **Mr. Krister Liljegren** (Environics OY) *Finland*
"Detection of Peroxide Based Explosives and Their Precursors by
Chemical Handheld Detector"

16:20-16:50 Discussion

16:50 -17:10 **Lt. Col Alexander Zolotukhin** (Ministry of Defense) *Russia*
"Russian Experience of IEDs"

End of first day





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Day Two 8th November

Panel 3: Detection of Concealed IEDs

9:00 – 9:10	Introduction by the Panel Chair: Mr. Ian Raitt (Delt Fort Halstead) <i>United States</i>
9:10-9:30	Mr. Roger Appleby (QinetiQ) <i>United Kingdom</i> “Detecting IEDs Under Clothing”
9:30-9:50	Mr. Michael Kemp (Iconal Technology, Ltd) <i>United Kingdom</i> “High Frequency Inspection”
9:50-10:10	Mr. Lucas van Ewijk (TNO Defense, Security & Safety) <i>The Netherlands</i> “Concealed Weapon Detection”
10:10-10:30	Dr. Jonathan James (Thruvision, Ltd.) <i>United Kingdom</i> “Deployable Standoff Screening”
10:30-10:50	Dr. Arnold Schoolderman (TNO Defense, Security & Safety) <i>The Netherlands</i> ”Polarised Light Cameras : A tool to detect IEDs”
10:50-11:10	Discussion
11:10-11:30	Coffee Break in the Exhibition Room
11:30-11:50	Mr. V Patrick Adrounie (Lockheed Martin Corporation) <i>United States</i> “Integrated IED Detection Architecture”
11:50-12:10	Alexey Rezney & Anatoly Perederiy (Federal Security Service of Russian Federation) <i>Russia</i> “New Russian Devices for Explosive Detection”
12:15-13:30	LUNCH AND VISIT TO EXHIBITION

Panel 4: Detection of Non-Explosive Components of IEDS

13:30 – 13:40	Introduction by the Panel Chair: Mr. Vladimir Tkach (EMC -1) <i>Russia</i>
13:40-14:00	Mr Renald Ilyushenko (EMC -1) <i>Russia</i> “The Use of Non-Linear Junction Detector for Detection of IED”
14:00-14:20	M. Benoit Lefebvre (Bahia -21) <i>France</i> “Non-Linear Junction Detection”
14:20-14:40	Discussion
14:40-15:00	Coffee Break in the Exhibition Room





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Panel 5: Intelligent Scene Analysis and Detection of IED Delivery

15:00	Introduction by the Panel Chair: Dr. Andrea Cavallaro (University of London) <i>United Kingdom</i>
15:20-15:40	Mr. Dave Humphrey –(Virage Security & Surveillance) <i>United Kingdom</i> “Enhancing Effectiveness of CCTV in Detection of IEDs”
15:40-16:00	Mr. Fernando de La Torre (Carnegie Mellon University) <i>United States</i> “Computer Vision & Scene Analysis”
16:00-16:20	Mr. Kevin Kearney (Geospatial Systems Inc.) <i>United States</i> “Persistent Surveillance for IED Detection & Defeat”
16:20-16:40	Mr. Peter Tu (GE Research) <i>United States</i> “Intelligent Video Scene Analysis”
16:40 – 17:00	Discussion
17:00-17:10	Closure of Conferences Sessions by Gen. Antonio Cieza González. Under director for Research & Technology – Spain MoD
18:00	End of exhibition





Exhibitions

1. Miguel Sanchez Martín

RAMEM - Spain

DMA

Differential Mobility Analyzer and Ionization methods for material classification at security check points.

2. Wolfgang Schade

Clausthal University of Technology - Germany

Laser technology, Laser spectroscopy & Fibre technology.

Laser-induced breakdown spectroscopy (LIBS) coupled with Fibre sensors for mine detection.

3. Krister Liljegren

Environics OY – Finland

Chemical Warfare Agent / Toxic Industrial Chemicals detection.

ChemPro100 TATP + CBRN Handheld Detector for detecting Peroxide based explosives.

4. Mark Karl Meyer

CEIA - Italy

Liquid explosives detection.

The CEIA EMA-2 is a commercial Electromagnetic analyzer for the detection of flammable and explosive liquids concealed in a commercial container.

5. Peter Benwell& Penny While

Allen-Vanguard - UK

Bomb Disposal Equipment.

BombTec Defender D2 ROV for the removal of Improvised Explosive Devices.





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**6. James McDonough
Paul Ralph Shelley
Bernard Vincent Brower**

Geospatial Systems / ITT – USA

Aerial Video Surveillance.

Air based video surveillance system for the persistent surveillance of a wide area with real time dissemination of surveillance data.

7. Richard Barfield/Hans Stadler

Thruvision - UK

Terahertz Person Scanner.

Passive terahertz imaging of concealed objects including narcotics, contraband, plastics, liquids etc. ThruVision technology and products images concealed objects in real-time on walking people at a distance.

**8. Vance Briggs
Dave Humphrey**

Virage Security and Surveillance - UK

Integrated Video System for Security Surveillance.

Integrated security surveillance system which recognizes object characteristics such as size and colour and tracks object movement through crowded scenes.

10. Tim Schofield

ImageBase Technology - UK

Secure Transmission of Video Data.

Photophone is a software platform for the secure transmission of image and video data over a variety of media. BOMBIC is a secure database system which interfaces with Photophone and is used for IED Incident Reporting.





Demonstrations

1. Carlos de Miguel

INDRA - Spain

LIBS

Demonstration of the Ability to Detect Traces of Explosive Material Over Surfaces at Distances Above 30 Meters by Means of a Standoff LIBS Setup.

2. Timur Bagcaz

Institute of Mechanical and Chemical Industry - Turkey

Water Jet Disruptor

A demonstration of water jet techniques for IED Defeat.

3. Wolfgang Schade

Clausthal University of Technology - Germany

LIBS

Prototype of fibre coupled LIBS sensor will demonstrate the ability to detect mine casings and explosives at a distance.

5. Mark Karl Meyer

CEIA - Italy

Chemical Detection

The EMA-2 Analyser unit will be demonstrated using samples of commercial bottles filled with both innocuous and flammable liquids.

6. Miguel Sanchez

RAMEM - Spain

DMA

Sniffer detection of volatiles compounds and vapours.

