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SECURITY AND DEFENSE

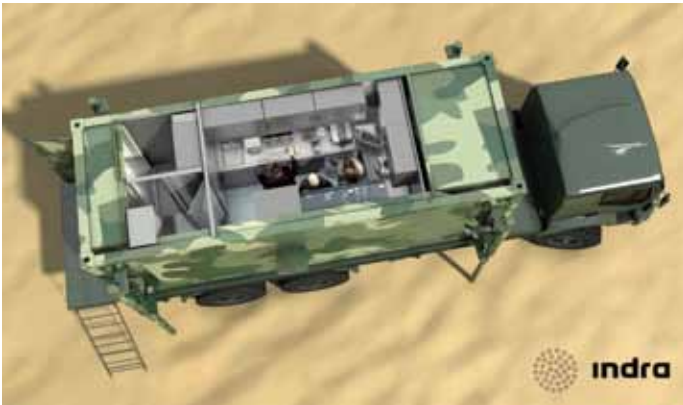
DEPLOYABLE FORENSIC C-IED LABORATORIES

Security and Defense in five continents

indracompany.com



DEPLOYABLE FORENSIC C-IED LABORATORIES



MOBILE FORENSIC C-IED LABORATORY



MODULAR FORENSIC C-IED LABORATORY

OUR LABORATORIES ARE AVAILABLE IN A NUMBER OF DIFFERENT CONFIGURATIONS DEPENDING ON THE CUSTOMER'S PRECISE REQUIREMENTS.

Introduction

IEDs are the major source of casualties on current operations and are likely to remain the weapon of choice for adversaries in asymmetric warfare. Preventing IED attacks is a major priority for Armed and Security Forces, additionally being able to protect population, first responders and military forces against IED attacks is essential.

One of the key elements to defeat the IED system (IED supply chain) is the intelligence and evidence gathered at the scene of a terrorist attack.

Deployable Forensic C-IED Laboratories are intended to analyze the intelligence and evidence gathered at the scene of an IED event quickly, but in a judicially clean manner to both give a commander quick actionable intelligence and support subsequent exploitation.

Deployable configurations

Depending on the concept of use established by the users two deployable configurations are available.

- **Modular configuration.** This solution is based on a semi-permanent infrastructure approach. The modular configuration is composed by eight fielded ISO 20 feet containers linked to each other through tunnel tents. This configuration has been devised to provide flexibility and can be adjusted to meet precise requirements.
- **Mobile configuration.** This configuration is based on a containerized solution. The housing is composed of a ruggedized ISO 20 feet Shelter ready to be fitted onto any standard logistic mobile platform. This solution is suitable for applications demanding an immediate on site response across a wide area.

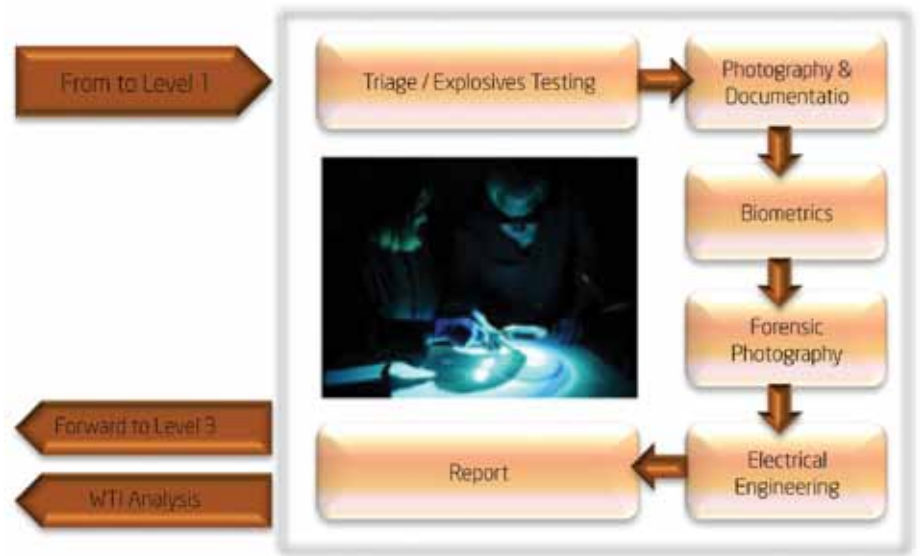
Applications

ED exploitation is the investigation of IED incidents to establish; the technical and tactical information from the attack and identify the IED supply chain. All exploitation related activities are designed to contribute to the other key operational activities of the C-IED effort of predicting the activity of the IED network, preventing further IED incidents, detecting IEDs when they are emplaced, being able to effectively and safely neutralize them and mitigating the effects of those IED.

These solutions are devised to be operated in both civil and military environments. Some typical users for such systems are:

- C-IED/ EOD Military special units
- C-IED Security forces (Bomb squads)

CONCEPT OF USE & CAPABILITIES



Concept of use

IED exploitation is the investigation of IED incidents to establish; the technical and tactical information from the attack and identify the IED supply chain. IED exploitation is achieved through a number of activities which try to technically, tactically and forensically characterize the components involved and recover trace material of involved with the construction of IEDs. Deployable CIED exploitation laboratories provide the commander at a local level with quick

actionable intelligence concerning the IED incident which can be quickly followed up to allow a local commander to get inside their adversaries attack cycle. The deployable exploitation process is intrusive but non-destructive and supports follow-on deeper exploitation. Exploitation labs can also be used to investigate other crimes and will allow local commanders to act quickly and seize the initiative from their adversaries.

Initial triage is executed to ensure safety of personnel and facilities (Small CBR & Explosive samples could be handled). After investigation a deployable exploitation report is released to inform of any new enemy TTPs and identify links to other incidents.

General Common Capabilities

System Safety approved by NATO Level 2 Analytical Lab Capabilities

- Triage Devices, Materials, Artifacts and Traces (DMAT) on receipt where they can be initially inspected (CBRNe, X-ray) and prioritized.
- Detailed visual examination and high quality image capture and processing.
- Latent fingerprint recovery and matching.
- Recovery of biometric material.
- Chemical/ Explosive analysis (extract trace chemical/ explosive samples).
- Media Data Recovery and Electronic components assessment.
- Characterization of weapon systems and explosive charges.
- Tool-mark identification.

IT Solutions

- Lab Information Management System (LIMS): Inter-comparison across incidents, Custodian chain guaranteed, no data missing, holistic DMAT tracking, automated reporting.
- Full IT network connectivity (Int. LAN/ Ext. Secure WANs).
- Fire fighting system.
- Platform security system.

System Throughput

Capable of supporting an operational tempo of up to:

- 2 cases a day (mobile configuration).
- 5 cases a day (modular configuration).

Capable to host up to :

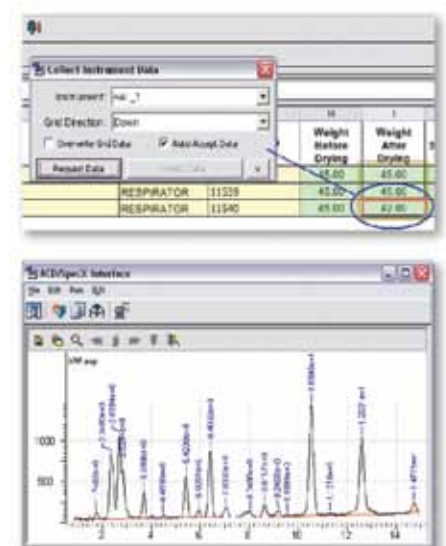
- 10 people working simultaneously (modular configuration).
- 3 people working simultaneously (mobile configuration).

Environmental Performance

- Extreme climate proof (A1 to C1).
- CBRN Protected (COLPRO).
- Fire resistant (EI60).
- EMI/ RFI compliant.

Standards

- Laboratory environment ISO17025.
- System Safety H SystSäKE.
- Fire fighting EN 15004-1:2008.
- Extreme climatic conditions STANAG 2895.
- CBRN filtration (AEP-54).
- Electromagnetic Compatibility DEF STAN 59-411



MODULAR C-IED LABORATORY



System Description

- Fully deployable on site in 1 week (requested emplacement inside hosting camp or protected area).
- Housing based on ISO 20 feet containers (sea/ air/ terrestrial freight).
- Built-in CBRN air filtration.
- Integrated HVAC cooling / heating.
- Integrated power conversion system (UK/ USA/EU) and Back-up power supply (UPS).
- Water handling systems:
 - Clean water (cool/ hot),
 - Waste water management system (Hazardous, Grey & Black).
- Analytical instruments and sampling tools (see below).

- Personnel safety means (EPIs, etc.).
- Incorporates an Integral Security System (Control access, Firing System).
- Specific area for preserving & storage samples (tempered, vented, etc.).
- Includes an administrative office space.
- Holistic data handling throughout the lab by Lab Information Management System (LIMS).
- Full IT network connectivity (Int. LAN/ Ext. Secure WANs).

The CBRN filtering systems guarantee a clean and safe working environment and prevent any leaks to or from the surrounding environment.



Main Technologies

Triage

- X-Ray equipment
- Explosive/ chemical detector
- Radiological detector
- Dismantling tools & workbench.

Biometric Analysis

- Laminar flow cabin
- Extraction Fume cabinet
- Forensic light source
- Cyanocrilate chamber
- Ninhydrin chamber
- High resolution Gellifter scanner
- Fingerprint matching.

DVE Detailed Visual Examination

- Microscope (visible/ UV)
- Macroscopic Intercomparisson
- Professional photo camera & kit
- Illumination Table for films.

Electronic Analysis

- Digital oscilloscope
- RF Generator
- Spectrum analyzer
- Audio amplifier & Antennas set
- Desktop Faraday cabinet
- Soldering and recovering station.

Electronics Data Recovery

- Cloning device
- Content indexer
- Write blocker
- CD/DVD/ Blu-ray Surface Repairment
- Miniclean room.

Chemical Analysis

- Explosive detection Kits
- Ultrapure water generator
- Extraction fume cabinet.

SEA Secure Storage Area

- Tracking and labeling system
- Vented cabinet for explosive storage.

Command Area

- Connectivity to secure IT Networks.

Platform management & Control

- LIMS application
- Fire fighting control application
- Security control application
- Power conversion & backup.

Sanitation Area

- Water management (clean/ waste).



- 1 Triage (DMAT Entrance)
- 2 Biometric Analysis
- 3 Detailed Visual Examination (DVE) & Electronic Analysis
- 4 Chemical Analysis
- 5 Secure Storage Area (SEA)
- 6 Command Area
- 7 Platform Management & Control
- 8 Sanitation Area

MOBILE C-IED LABORATORY



System Description

- Fully deployable in 3 h. from arrival at site. Deployable in 3 h. from arrival at site. Built in lifting legs make deployment antonymous negating the requirement for a crane.
- Housing based on ISO 20 feet containers (sea/ air/ terrestrial freight)
- Built-in CBRN air filtration (air cleanness inside)
- Integrated HVAC cooling / heating
- Integrated power conversion system (UK/ USA/EU) and Back-up power supply (UPS)
- Water handling systems:
 - Clean water (cool/ hot)
 - Waste water management system (Hazardous, Grey & Black)
- Analytical instruments and sampling tools (see below)
- External canvas is attached to rear side to get additional room for Triage (X-Ray) if requested.
- Personnel safety means (EPIs, etc.)
- Incorporates an Integral Security System (Control access, Firing System)
- Specific area for preserving & storage samples (tempered, vented, etc.)
- Includes an Administrative office space as well as Sanitation area along dedicated containers.
- Holistic data handling throughout the laboratory by Lab Information Management System (LIMS).
- Full IT network connectivity (Int. LAN/ Ext. Secure WANs)
- The system is devised to operate autonomously at site for up to 72 h.



Main Technologies

Triage

X-Ray equipment (outside)
Explosive/ chemical detector
Radiological detector
Dismantling tools & workbench.

Biometric Analysis

Laminar flow cabin
Forensic light source
Cyanocrilate chamber
Ninhydrin chamber
High resolution scanner
Fingerprint matching.

DVE Detailed Visual Examination

Microscope (visible/ UV)
Professional photo camera & kit
Illumination Table for films.

Electronic Analysis

Digital oscilloscope
RF Generator
Spectrum analyzer
Audio amplifier & Antennas set
Desktop Faraday cabinet
Soldering and recovering station

Electronics Data Recovery

Cloning device
Content indexer
Write blocker
CD/DVD/ Blu-ray Surface Repairment

Chemical Analysis

Explosive detection Kits
Ultrapure water generator
Extraction fume cabinet

SEA Secure Storage Area

Tracking and labeling system



Platform management & Control

Connectivity to secure
IT Networks LIMS application
Fire fighting control application
Security control application
Power generator & backup

Washing Area

Sink with fume extraction



ISO 9001:2000



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