

Counter-IED Report

Winter 2020/21

THREAT NETWORKS' TRENDS IN DIGITAL INFLUENCE

OPERATIONALIZING INFORMATION FOR BUILDING C-IED CAPACITY

MECHANICAL IED REMOVAL IN THE URBAN ENVIRONMENT

AFGHANISTAN – A GLANCE AT THE UNPLEASANT FRIGHTS OF EXTANT IEDs

DEVELOPMENTS IN BOMB SUIT TESTING AND STANDARDIZATION

ELECTRONIC INITIATION SYSTEMS FOR MILITARY AND LAW ENFORCEMENT OPERATIONS

PROLIFERATION OF MINES, IEDs AND UXO IN COLOMBIA

PORTABLE X-RAY SCANNERS - A VERSATILE TOOL FOR SECURITY AND LAW ENFORCEMENT

CAN INDIA EFFECTIVELY REGULATE EXPLOSIVES?

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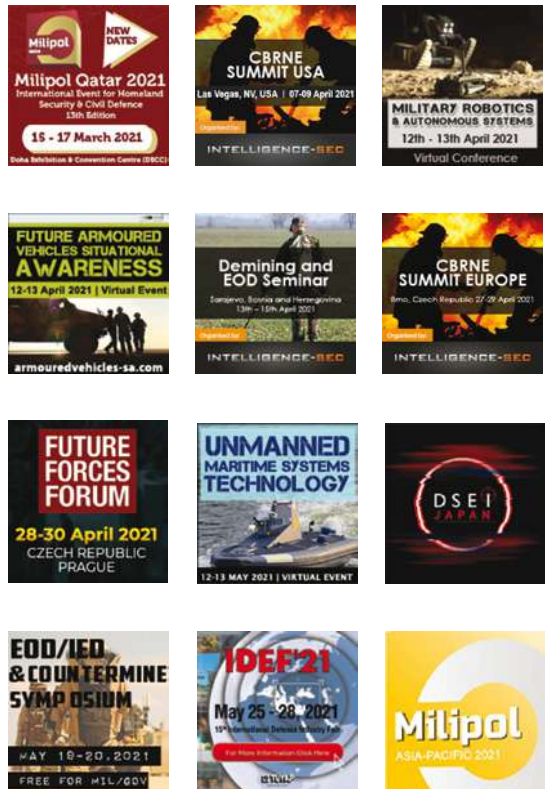
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U.S. Navy photo by Mass Communication Specialist 1st Class Scott Bigley

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Counter-IED Report

Published by Delta Business Media Limited
3rd floor, 207 Regent Street
London, W1B 3HH
United Kingdom

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www.deltabusinessmedia.com
www.counteriedreport.com



ISSN 2050-6732 (Print)
ISSN 2050-6740 (Online)

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CONTENTS

| | |
|-----|--|
| IFC | QINETIQ INC. |
| 5 | ICOR TECHNOLOGY |
| 7 | GARRETT METAL DETECTORS |
| 9 | MED-ENG – A BRAND OF SAFARILAND GROUP |
| 10 | NOVO DIGITAL RADIOGRAPHY |
| 11 | FOREWORD By Rob Hyde-Bales, Consulting Editor, Counter-IED Report |
| 14 | VIDISCO LTD |
| 14 | DYNITEC GMBH |
| 15 | TRENDING TACTICS, TRENDING TOPICS... THREAT NETWORKS' TRENDS IN DIGITAL INFLUENCE By Lieutenant Colonel Jose M Rufas, Chief of Attack the Networks Branch, C-IED Centre of Excellence |
| 24 | 3DX-RAY LTD |
| 25 | OPERATIONALIZING INFORMATION FOR BUILDING C-IED CAPACITY By Michael Solis, Resident Program Manager in Kenya, U.S. Department of State |
| 29 | DEMINING AND EOD SEMINAR |
| 30 | MECHANICAL IED REMOVAL IN THE URBAN ENVIRONMENT By David Parry MC, MSc, Program Safety & Quality Assurance Manager |

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CONTENTS

- 34 8TH ANNUAL EOD/IED & COUNTERMINE SYMPOSIUM**
- 35 AFGHANISTAN – A GLANCE AT THE UNPLEASANT FRIGHTS OF EXTANT IEDs**
By Shafi Ullah (Ahmadzai) - Head of Quality Management,
Directorate of Mine Action Coordination (DMAC)
- 39 DEVELOPMENTS IN BOMB SUIT TESTING AND STANDARDIZATION**
By Dr. Aris Makris, Ph.D., Vice-President, RD&E and Chief Technology Officer
and Dr. J.-P. Dionne, Director of Research Engineering, Med-Eng
- 46 FUTURE FORCES FORUM**
- 47 ELECTRONIC INITIATION SYSTEMS FOR MILITARY AND LAW ENFORCEMENT OPERATIONS**
By DynITEC GmbH
- 50 PROLIFERATION OF MINES, IMPROVISED EXPLOSIVE DEVICES (IEDs) AND UNEXPLODED ORDNANCE (UXO) IN COLOMBIA**
By Wilder Alejandro Sanchez, international security analyst
- 56 CBRNe SUMMIT USA & CBRNe SUMMIT EUROPE**
- 57 PORTABLE X-RAY SCANNERS - A VERSATILE TOOL FOR SECURITY AND LAW ENFORCEMENT**
By Vincent Deery, Sales and Marketing Director at 3DX-Ray Ltd.

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CONTENTS

- 62 MILIPOL QATAR 2021**
- 63 CAN INDIA EFFECTIVELY REGULATE EXPLOSIVES?**
By Colonel H R Naidu Gade – Army Veteran
- 69 USE OF WEAPONIZED CONSUMER DRONES
IN MEXICAN CRIME WAR**
By Robert J. Bunker, John P. Sullivan, and David A. Kuhn,
Small Wars Journal-El Centro and C/O Futures, LLC
- 78 IDEF 2021 - 15TH INTERNATIONAL DEFENCE INDUSTRY FAIR**
- 79 PALESTINIAN BALLOON-BORNE IED PROGRESSION**
By Chief Superintendent (ret.) Michael Cardash,
Terrogeance Senior CIED Analyst / Author of Mobius reports
- 92 MILITARY ROBOTICS AND AUTONOMOUS SYSTEMS**
- 93 “KILLING ROTARIES”, IMPROVISED THREAT AND
EXPLOSIVE DEVICES AGAINST HELICOPTERS**
By Lieutenant Colonel Jose M Rufas, Chief of Attack the Networks Branch,
C-IED Centre of Excellence
- 99 FUTURE ARMoured VEHICLES SITUATIONAL AWARENESS**
- 99 UNMANNED MARITIME SYSTEMS TECHNOLOGY**
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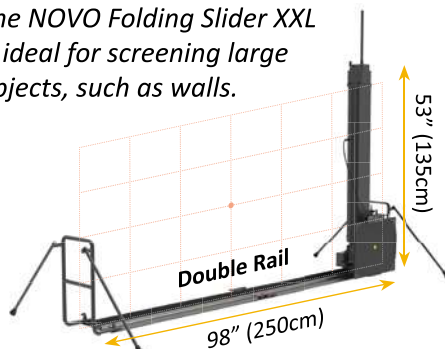
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FOREWORD

By Rob Hyde-Bales, Consulting Editor, Counter-IED Report

As 2020 ended it has proved to be the most tumultuous year in living memory. The global pandemic Covid-19 that originated in China in late 2019, by the end of December 2020 had resulted globally in some 1.83 million deaths from nearly 84 million reported cases of the virus. In addition to the impact on the world's population, the virus has decimated the global economy and that will take years to recover. Most of the world was woefully ill-prepared for the pandemic – in particular, the United States, the United Kingdom, Italy, Spain, and France.

From the global security perspective 2020 witnessed the beginning of the final phase of withdrawal of US forces from Afghanistan and Iraq after nearly 20 years of counter-insurgency operations. The UK was also heavily committed to these operations together with other NATO forces. In Afghanistan, the US and the UK followed the earlier Soviet decade long occupation of the country with similar results – very heavy casualties and massive capital expenditure, but an absence of an end to the conflict. Afghanistan continues to suffer at the hands of the Taliban and NATO recently expressed its concern over the final withdrawal of US military. In Iraq, Iranian backed militias exacerbate the security environment, and this situation is likely to further deteriorate with the December assassination of Iran's senior nuclear scientist Mohsen Fakhrizadeh. In both Afghanistan and Iraq, and other countries around the globe, the Improvised Explosive Device continues to exact both a heavy death toll and extremely high rates of life changing injuries. It also presents a real challenge to both national reconstruction and economic development.

The West and in particular the UK and the US are now addressing what they see as the main emerging challenge to their security – so called near peer competition from an ever more powerful China and a resurgent Russia under President Putin. The situation was encapsulated by the then US Secretary of Defence Mark Esper in February 2019 at the Munich Security Conference. He stated, "We are now in an era of great power competition with our principal challenges being China, then Russia. We must move away from low intensity conflict and prepare once more for high intensity warfare". UK Prime Minister Boris Johnson recently echoed the US sentiment with the announcement of the largest increase to defence spending since the end of the Cold War. Plans include the revitalisation of the Royal Navy. Additionally, the Office for Artificial Intelligence, the National Cyber Security Centre, and UK Space Agency with an aspiration to launch a rocket in 2022 form critical elements of the future UK defence and security strategy.

Michael Solis with the US Department of State in Kenya in his article on operationalising information for Counter-IED (C-IED) capacity building cogently opines that the critical requirement in this respect is effective information management. Too often bilateral security assistance in terms of C-IED concentrates on the functions of training and the provision of equipment, but such efforts alone do not assist in the critical area of capacity building. Rather they have often resulted in duplication of effort or redundant training from donor nations or organisations. In this respect such assistance addresses the effect whilst ignoring the cause of a hostile IED campaign. The author makes a

strong plea for C-IED capacity building to be based on internationally agreed documentation and standards. Following the excellent International Mine Action Standards, the UN IED Disposal Standards contain a chapter devoted to Information Management and an Annex on IEDD Task Reporting Guidelines. A robust information management system relies on timely and accurate reporting, analysis and dissemination utilising a national database. In the past national or organisational sensitivities concerning information sharing have often hindered an effective C-IED intelligence cycle. The three NATO agreed pillars of a C-IED strategy – Prepare the Force, Attack the Networks and Defeat the Device must be based on a foundation of effective intelligence. The combination of training and equipping together with information management, all based on internationally agreed documentation, are critical elements of a national long-term Counter-IED capacity.

Dr Robert J. Bunker, Dr John P. Sullivan and David A. Kuhn, Small Wars Journal – El Centro and C/O Futures, LLC, in their insightful article describe how Mexican criminal cartels have progressed from conventional aircraft through ultralight aircraft and finally to drones for the purpose of aerial narcotics trafficking. Drones have been used in support of cross border trafficking between Mexico and the US since 2010. In April 2019, a cartel ISR drone was used in the El-Paso sector of the border in illegal migrant cross border movement. The migrants were used as mules to carry illegal narcotics loads. However, during the past three years a significantly more ominous trend has emerged – the use of weaponised or armed consumer drones by the criminal cartels. Such tactics are not new, and the so-called Islamic State has made widespread use of weaponised drones in both Iraq and Syria to deliver improvised, craft-produced, and repurposed munitions to ground targets. In February 2017, some 200 such attacks were recorded during the heaviest fighting in Mosul. The authors document four incidents in Mexico since 2017 in which the cartels have progressed to weaponised drones in an escalation of their criminality.

One incident involved an aerial delivered IED attack against a high ranking Mexican official and the others the pre-emptive discovery of drones, IEDs, firearms and ammunition by law enforcement officials. Each incident involved easy to operate commercial quadcopters and varying IED payloads.

In his thought-provoking article David Parry examines the increasing use of mechanical assets for IED removal, concentrating on humanitarian and commercial operations. The key aim of this trend towards mechanical IED disposal is to reduce the physical risk and time exposure of personnel undertaking such clearance to IEDs. He identifies the fundamental differences between traditional demining and mechanical IED removal. Too often there are attempts to conflate these two operations. He describes demining as effectively an agricultural process whereby mines are harvested from the ground, whereas mechanical IED removal is more nuanced. He draws a comparison between the traditional military NATO agreed Counter-IED pillars of activity and the humanitarian and commercial operational framework. The purpose of this is to identify the differences between these two types of IED removal to better understand the activities that specifically support humanitarian and commercial operations. He examines these activities including financial considerations, operational support, machinery modification, the testing and acceptance process, mechanical IED removal training, tasking procedures and finally safe working practices. He illustrates how these activities fit into the recommended best practice guidance model for humanitarian and commercial mechanical IED removal operations.

Shafi Ullah is Head of Quality Management in Mine Action Coordination in Afghanistan. In an informative article he describes how more than 40 years of continuous conflict have left a deadly legacy of explosive hazards including Explosive Remnants of War, landmines and IEDs. The IED remains the favoured weapon of the insurgents and terrorists and one IED attack in Kabul in 2019 in Kabul resulted in 95 deaths and more than 150 casualties. An ever-

1 Counter-IED Report Spring/Summer 2018, Armament Research Services, pp. 53-63 (<https://bit.ly/3oyL1Ns>).

growing threat is that of the Abandoned Improvised Mine (AIM) – a victim operated, pressure-activated IED which is a de facto anti-personnel mine. The Mine Action Programme Afghanistan has developed a strategy to address the AIM threat by a combination of an extensive education programme for the population, AIM clearance to return land to the civil population and a comprehensive training programme for AIM deminers. MAPA is the first mine action programme to develop national standards in response to the existential threat of Abandoned Improvised Mines and 2021 will see the AIM clearance programme in Afghanistan accelerate.

In his comprehensive article on the use by threat networks of cyberspace – interconnected digital technology – Lt Col Jose M Rufas of the NATO C-IED COE displays a real depth of knowledge about this increasingly critical topic. The malign use of cyberspace today represents an ever-growing existential threat to the West. Its topicality has been thrown into sharp relief by recent events in the United States, both leading up to and since the presidential election, culminating in the exclusion of the outgoing President from social media platforms. In this professionally researched article, the author examines both the historical context and modern-day hostile usage of cyberspace by jihadists and terrorists – notably, but not exclusively, Al Qaeda and the so-called Islamic State/Daesh to disperse their toxic propaganda. He charts early activity by Daesh when they were producing hard copy printed magazines. He then examines propaganda posters and professionally produced audio-visual products. Finally, he opines that despite the requirement to take down these hostile sites and links, security services and researchers need to be able to access them to monitor cyberspace developments by technologically savvy jihadists and terrorists who are only too aware of the propaganda value of their products.

In their highly topical article on bomb suit testing and standardization, Dr Aris Makris and Dr Jean-Philippe Dionne of Med-Eng in Canada, highlight the critical importance of EOD Personal Protective Equipment (PPE). Prior to 2020 it is likely that relatively few people had heard of PPE, but the global Covid-19 pandemic dramatically changed that situation and

the term became one of the defining acronyms of last year. The authors describe how historically there had been no internationally recognised quality standards for EOD PPE. In 2016 the US National Institute for Justice NIJ 0117.01 standard for Public Safety Bomb Suits addressed the gap in standardized EOD PPE evaluation. The standard outlines a significant list of baseline performance and capability demanded in a bomb suit along with associated testing methods and pass/fail criteria. However, it remains a minimum standard and in selecting a certified suit, end-users must also consider additional features. The NIJ standard covers fragmentation, spine and head impact protection, flame resistance, blast overpressure, together with static and dynamic field of view. In addition to these considerations, purchasing agencies should also take account of requirements beyond the NIJ standard such as increased fragmentation protection, variable suit sizes, CBRNe compatibility, electromagnetic compliance, personal cooling, communications, lighting, and strong customer support. ■

Rob Hyde-Bales biography



During his career in the UK Royal Engineers, Rob Hyde-Bales was responsible for landmine clearance in Libya and, more latterly, Afghanistan in the running of the first United Nations humanitarian landmine clearance training programme – Operation Salam. The programme trained Afghan male refugees in landmine clearance techniques, and Afghan women and children in mine awareness and avoidance training. More recently he set up the Caribbean Search Centre in Kingston, Jamaica. The Centre is designed to train security forces across the Caribbean in modern search techniques. After retiring from the army he joined Cranfield University at Shrivenham, near Oxford, and undertook a research project on behalf of the UK Ministry of Defence that examined ways to improve the sharing of IED threat information between the military and civilian organisations in hazardous areas.



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Counter-IED Report

published by

Delta Business Media Limited

3rd floor, 207 Regent Street, London, W1B 3HH, United Kingdom

Tel: +44 (0) 20 7193 2303

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