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G2 DEFENCE

INTELLIGENCE AND SECURITY

MAN'S BEST FRIEND

Dogs to sniff out substances

NPAS

New National Police Air Service

NATIONAL SECURITY

The National Security Strategy

LESS-LETHAL WEAPONS

Taser, Plastic, Pepperballs

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Editor's Word...

At the height of the Provisional IRA (PIRA) campaign and following the attempt on Prime Minister Margaret Thatcher's life at the Tory Conference at Brighton on October 12, 1984, the IRA issued this challenging taunt:

"Today we were unlucky, but remember we only have to be lucky once. You have to be lucky always."

It's as relevant now as it was then – the discovery on October 29 this year of the bombs that had been sent by cargo aircraft from the Yemen to addresses in the United States was a mixture of excellent intelligence work and probably a dose of good luck. The Al Qaeda cell operating in Yemen that initiated the attack could echo the words of the PIRA and will, without doubt, make more attempts using increasingly sophisticated methods.

As with all these types of attack, even if they fail they cause disruption and delays as security and screening is tightened. To any terrorist organisation this is a small victory and as previous experience has shown, if for one real bomb there are several hoax calls, the disruption is increased.

The challenge is to strike the balance between security and normality – failure with the resulting death or injury produces an outcry – over restrictive or unimaginative security measures will not produce the same volume of complaint but rather a steady grumble that undermines the fabric of society.

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TASER XREP shotgun cartridge, self-contained, wireless electronic control device (ECD), is fired from a 12-gauge shotgun. (© Taser International. Inc.)

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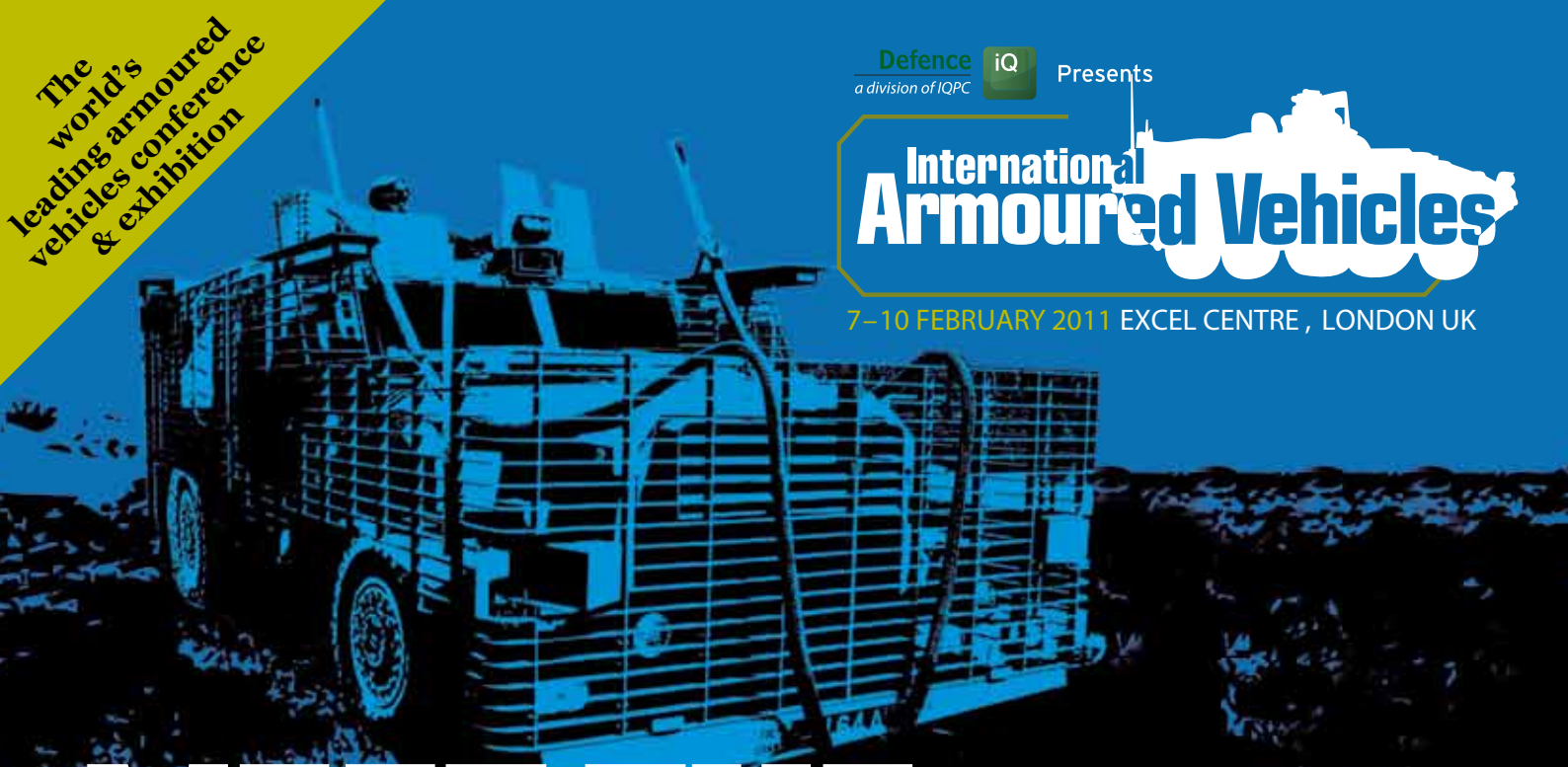

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Contents

Less-Than-Lethal Weapons

When it comes to non-lethal weapons most people are now familiar with name Taser, in fact “being Tasered” seems to have entered the language!

TASER XREP shotgun cartridge, self-contained, wireless electronic control device (ECD), is fired from a 12-gauge shotgun. (© Taser International. Inc.)

Having witnessed many demonstrations and spoken to many users I'm convinced that this weapon deserves a place in the armoury of any police force or law enforcement agency involved in protecting the lives and well being of its own personnel and the public when dealing with non-compliant individuals.

So what does it do?

The ***Taser*** fires two darts on the end of two wires that shoots out of the weapon at the target individual, from up to 10.6metres away. The probes embed into a person's skin or clothing and the weapon delivers an electroshock; this electrical current disrupts the voluntary control of muscles, causing the person to collapse, allowing them to be cuffed or otherwise restrained.

But of course there are problems! If you are using an electric shock to incapacitate people there are clearly safety concerns. A report by Amnesty International claims that between 2001 and 2008, 334 people died after being struck by Tasers. However, it is widely accepted that most of these deaths are attributable to other factors such as alcohol or drug intoxication, but any deaths do raise concerns.

The next issue is range. With an effective range of only 10.6metres there are only certain scenarios in which the Taser can be used effectively without endangering the lives of officers. For instance, the range is too short for any individual that is in possession of or suspected possession of firearms.

To deal with these scenarios Taser International have introduced the TASER XREP shotgun cartridge, which is a self-contained, wireless electronic control device (ECD), that is fired from a 12-gauge pump-action shotgun. It delivers a similar electroshock to the handheld TASER, but can be delivered to a maximum effective range of 30.48 metres, combining blunt force trauma of the baton round with the electroshock incapacitation.

Weapons firing baton rounds, rubber or plastic bullets of various types, have been in use since the 70's and continue to offer a tried and tested solution. They are fired from a variety weapons, usually shotguns or grenade launchers, many of these are 37 mm or 40 mm calibre adapted to riot control using specialised ammunition.

Others like the 18mm FN 303™ have been specifically developed as a less-than-lethal weapon.

The TASER X3 ECD in black and yellow. (© Taser International. Inc.)

The ***FN*** 303™ launcher consists of three main components: the less lethal launcher itself, a 15-round magazine and an air compressed bottle. The lightweight polymer magazine of the FN 303™ holds 15 projectiles and features a transparent cover to allow the operator to instantly verify both projectile type loaded and number of remaining shots. FN claim the weapon is accurate at 25 metres and offers a very high probability of torso hits at 50 metres.

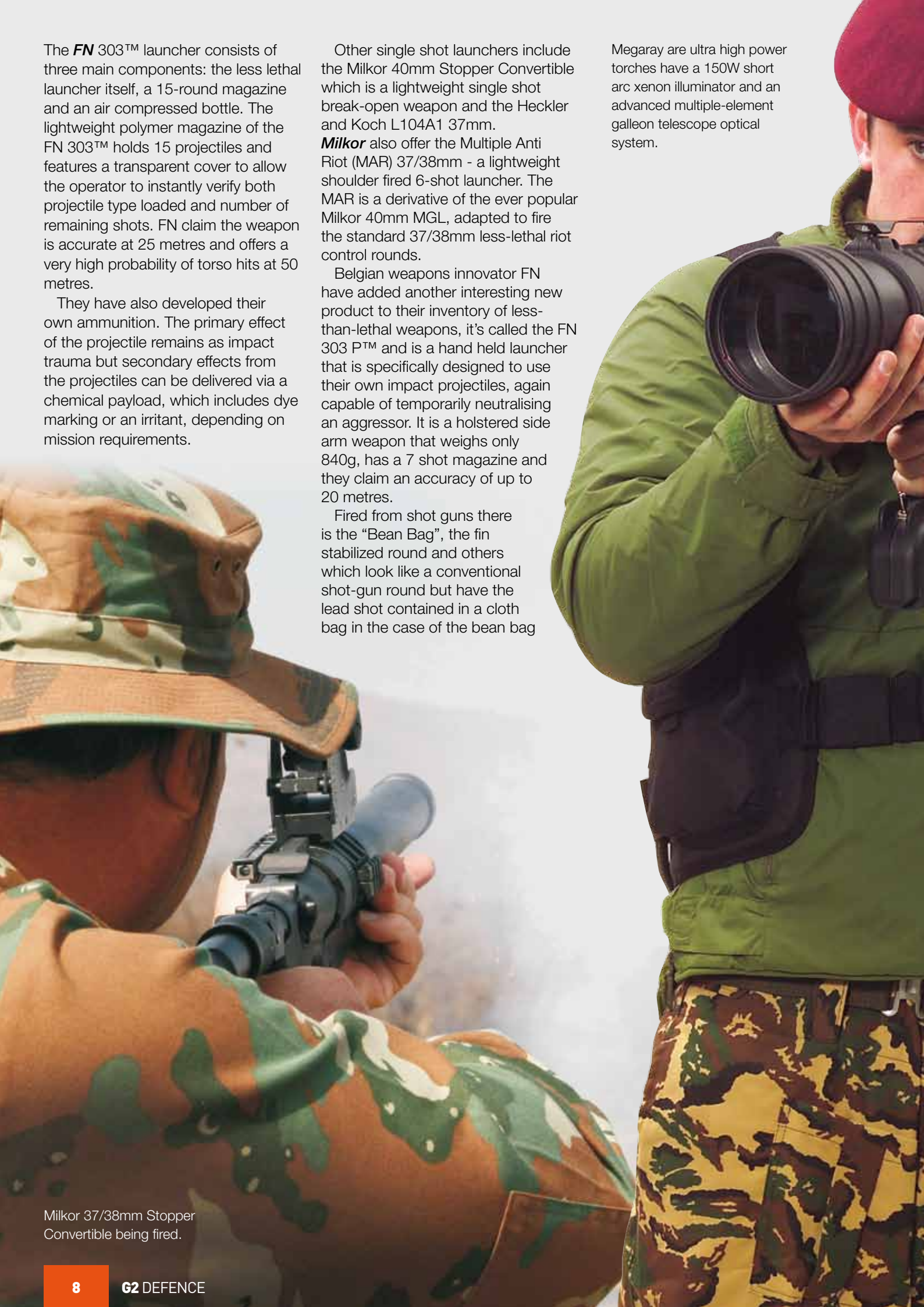
They have also developed their own ammunition. The primary effect of the projectile remains as impact trauma but secondary effects from the projectiles can be delivered via a chemical payload, which includes dye marking or an irritant, depending on mission requirements.

Other single shot launchers include the Milkor 40mm Stopper Convertible which is a lightweight single shot break-open weapon and the Heckler and Koch L104A1 37mm.
Milkor also offer the Multiple Anti Riot (MAR) 37/38mm - a lightweight shoulder fired 6-shot launcher. The MAR is a derivative of the ever popular Milkor 40mm MGL, adapted to fire the standard 37/38mm less-lethal riot control rounds.

Belgian weapons innovator FN have added another interesting new product to their inventory of less-than-lethal weapons, it's called the FN 303 P™ and is a hand held launcher that is specifically designed to use their own impact projectiles, again capable of temporarily neutralising an aggressor. It is a holstered side arm weapon that weighs only 840g, has a 7 shot magazine and they claim an accuracy of up to 20 metres.

Fired from shot guns there is the "Bean Bag", the fin stabilized round and others which look like a conventional shot-gun round but have the lead shot contained in a cloth bag in the case of the bean bag

Megaray are ultra high power torches have a 150W short arc xenon illuminator and an advanced multiple-element galleon telescope optical system.



Milkor 37/38mm Stopper Convertible being fired.

or the shot is replaced by a variety of other materials, less likely to penetrate the flesh.

These types of rounds are widely used in the US but are not favoured in the UK.

"Pepperballs" based on paintball technology offer another option but these need contact with the eyes, nose and mouth to be really effective. Companies like US manufacturer ***PepperBall Technologies*** offer a wide variety of options from the SA-8 Semi-automatic, compact, 8 shot compressed gas pistol with a range of 10+m to the TAC-700 averages 700 rounds per minute in full automatic with up to 18.3m.

South African company ***Megaray*** are offering ultra high power torches. These torches have a 150W short arc xenon illuminator and an advanced multiple-element galleon telescope optical system. At 1km, it will illuminate the target with a 35m diameter uniform white light field. Hand-held or mounted on a weapon these high powered strobe lights will cause nausea, disorientation and temporarily incapacitate the target individual. This is based on a well established psychological phenomenon as opposed to causing any actual brain malfunction.

There are of course more exotic systems such as the US military's Active Denial System, which is a focused millimetre wave device said to be capable of heating all living matter in the target area rapidly and continuously for the duration of the beam, causing transient intolerable pain but they claim no lasting damage. There are also various sonic and ultrasonic weapons (USW) that use extremely high-powered sound waves to cause nausea, disorientation to incapacitate the target and it is said under certain conditions to cause damage to internal organs and even death.

In conclusion it must be remembered that with all these weapons, they are meant to be used in what are already high risk, volatile situations, where the risk of injury to the perpetrator, the police officer or the public are at a heightened level. In these situations there is no no-risk option, but with the right equipment, the right training and clear guidelines as to their proper use, these weapons offer 'the least worst option'.

Many police chiefs around the world believe that these weapons have already been highly successful in reducing the number of injuries to officers and the public as well as to the perpetrators themselves.

Tony Kingham, Defence and Security Specialist, Publisher of www.worldsecurity-index.com

Milkor 37/38 or 40mm Stopper Convertible is an extremely lightweight single shot break-open weapon.

How to get to Carnegie Hall...

Knowing 'what is on the other side of the hill', to use an aphorism often ascribed to the Duke of Wellington, is as good a definition of situational awareness (SA) as any more artificially generated. Enhanced SA has become the Holy Grail of military commanders, planners and systems developers as the effects of irregular and urban warfare have become increasingly felt over the last two decades. The requirement is decidedly not, however, limited to the armed forces.

Command Support System
courtesy VectorCommand Ltd

Being able to answer the questions "where am I?", "where is the enemy?" and "what is happening round the corner?" is an ability just as important to what might be termed 'the blue light brigade' in New York, Jakarta or Ashby de la Zouch as it is to military commanders in Kabul, Kandahar or Tikrit.

The use of Geographic Information Systems (GIS) technologies is therefore as vital to the homeland security, emergency services and first responder communities as it is to the military. The industry has been quick to recognise the nascent and growing demand and has risen to the challenge of providing accurate, reliable and high resolution geographic databases for multiple applications, ranging from training through mission planning and rehearsal to force allocation.

One company that has been pre-eminent in the GIS application field for over thirty years is ESRI (Environmental Systems Research Institute, Inc.). Headquartered in Redlands, California, ESRI defines GIS as a system that "integrates hardware, software, and data for capturing, managing, analysing, and displaying all forms of geographically referenced information…. GIS allows us to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts."

Which is all well and good, provided you say it quickly and don't pay too much attention to the component parts of those two sentences. In the real world, what this all means is the ready availability of simple and consistent representation of spatial information – preferably in three dimensions where possible – directly relevant to the individual end user. At a time when the issue of 'information overload' is high on the list of challenges faced by systems designers, especially in the military field, this is not a simple matter of offering up a 'digital map.' Interactivity, resolution, common reporting reference frames and infinite flexibility are all characteristics in high demand by users, in and out of uniform.

There is an added challenge as well. In 1800, less than 3 percent of the world's population lived in cities. In 2008, that figure passed 50 percent for the first time and United Nations studies hold that by 2050, 74 percent of all population will be in urban conurbations, with the majority of that growth coming from the so-called 'developing nations'.

At a 2008 civil emergency management exercise in Sweden in 2008, co-hosted by NATO and the Swedish government, and at which this writer was an observer, counter-

Command Support System
courtesy VectorCommand Ltd

terrorist scenarios were played out in port and urban areas represented on GIS-generated digital maps shared across high speed computer networks. Companies such as Saab, IBM, Fujitsu and others combined their capabilities to provide for seamless integration of location and position data in real time for civil and military agencies.

The purpose of such exercises, which continue almost daily in countries around the world, is to test bed and benchmark capabilities against developing threats. While tactics, techniques and procedures are developed as an inevitable (and beneficial) outcome, the exercises themselves could not evolve without the visual SA and acuity provided by GIS. Whether the application is a first responder mission planning tool, a threat evaluation suite for the Home Office or a training suite for troops about to deploy to Afghanistan, a GIS is an absolute requirement for the provision of adequate SA.

Which means the GIS world is changing, as is to be expected, given the ever evolving nature of perceived threats. The Global War on Terrorism has changed the mindset of civil defence agencies and first responders, who now need accurate spatial information even more than ever before. The major difference being, however, that instead of that information being centred on traditional battlefields – wide open spaces where manoeuvre warfare is the norm – it now needs to be focused on urban terrain. To paraphrase Oliver Hazard Perry, "we have met the enemy, and he is in the city".

At the end of last year a consortium of 17 French companies and government agencies ended a two year development exercise aimed at establishing a highly detailed urban database of Paris. Aimed at developing methodologies and protocols for handling massive amounts of data rapidly with minimal human intervention, the TerraNumerica project, for which Thales provided the project lead, has highlighted some of the problems associated with accurately modelling urban landscapes.

While a GIS focuses on terrain features which change on a geological timescale (though companies such as CAE continue to work on terrain models that can be rapidly updated with battle damage such as craters and diverted rivers, for example), urban landscapes need to change far more rapidly. Construction work is an obvious agent of change and the ever present spectre of urban renewal means the profile of individual buildings can change radically in weeks if not days.

The requirement, therefore, is for a model that is adaptable and flexible, capable of injecting change at a moment's notice. This is where the TerraNumerica programme has performed ground-breaking work in the development of new algorithms to replicate windows and doors in otherwise generic building models, for instance. Law enforcement and emergency services personnel need to know what the entrance options are and what they look like today – not as they looked six months ago or when the database was originally created.

What began as a relatively simple though innovative adaptation of technology has grown beyond recognition. The GIS industry has grown beyond the wildest aspirations of its creators and is broadening its horizons to take new applications into account daily. Given the increasing focus on the urban environment and the spin-off benefits accruing to the homeland security and emergency services markets from the application of GIS technologies to urban operational training, we can expect to see more and more application of these solutions to training blue light services across the globe. Which means when an avatar poses the question in a synthetic training environment "how do I get to Carnegie Hall?" the answer he receives – "practice, practice, practice", will not necessarily be irrelevant.

Tim Mahon Defence and Security Journalist

Command Support System
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Unmanned Remote Surveillance Systems

Surveillance of a place, individual or group is one of the most fundamental elements of any good intelligence operation. The success of that surveillance usually dictates success or failure of the operation.

Hollywood would have us believe that we are all under surveillance, all the time, wherever we go, from satellites out in space. But the inadequacy of relying on satellite surveillance has always been only too apparent to those in the operational environment and is now obvious to the wider public as they proved woefully inadequate for spotting the terrorist attacks and in the hunts for high profile targets like Osama bin Laden.

Eyes and ears on the ground are an essential part of any intelligence operation, both military and law enforcement, even if those eyes and ears are electronic!

Surveillance in an urban environment is hard enough but can usually rely on mixing in with normal routine traffic, utilising local buildings and vehicles, either to keep "eyes and ears" on the subject or to locate surveillance devices such as covert cameras and audio recording equipment. Surveillance teams can use that same routine traffic to monitor, repair or replace the equipment.

The problem however becomes infinitely more difficult when you move operations to rural or other remote locations where unknown traffic or individuals of any kind may attract the attention of the surveillance subject/s. It may also prove difficult to physically approach the area at all.

It may therefore be necessary for operatives to approach

Members of the Joint Operations Center (JOC) coordinate emergency and exercise response activities for the Vigilant Guard 2008 exercise in coordination with local, state, and federal emergency agencies. (National Guard photo/Senior Master Sgt. Edward E. Snyder)

and place surveillance equipment for long term unattended surveillance.

However one of the major problems associated with remote surveillance equipment is the problem of recording time and battery life.

It is not unusual for unattended surveillance cameras and systems to be in place for weeks, even months. The need to recover data and replace batteries will often result in compromising the surveillance operation losing weeks or months of painstaking work and possibly endangering the lives of the security forces.

This is particularly true for the military, where systems are often required to operate in extremely remote locations in extreme conditions and hostile operational environments like Afghanistan and Iraq. In Afghanistan in particular temperatures can range from –24 °C to a shade maximum of 45–50 °C. These sorts of temperatures are not uncommon and severe snow; ice and rain are regular features of a typical winter.

It is therefore of vital importance that surveillance systems are both rugged and durable and have very long recording times and need a minimum of direct physical intervention.

Ideally once the system has been covertly inserted by military, special-forces or law enforcement personnel, the equipment should operate with no physical intervention for the entire period of the surveillance operation, from insertion to recovery.

To address this problem a UK company has come up with a system that goes a long way to meeting that requirement. The new system made by Ovation Systems is based on their existing FlashBack range of evidential recording systems, already in use throughout many Police forces, government agencies and military organisations around the world.

The new product is called the FlashBack-3R and is only 90 x 30 x

FlashBack-3R and is only 90 x 30 x 155 mm in size and weighs just 625g. Courtesy Ovation Systems

155 mm in size and weighs just 625g. It is weatherproof (able to operate in temperature conditions -20 to +65ºC [-4 to + 150ºF] with suitable HDD fitted [e.g. Solid State Disk]) and the ruggedised sealed casing means that it can be used in the harshest of environments from the damp and dirty temperate conditions of Europe to the dusty and sandy conditions of the Middle East.

It uses H.264 video compression technology, which provides high quality video coupled with very long record times. The system records to an internal 2.5" SATA hard disk drive of up to 1TB which can record real-time up to a staggering 8 weeks of real-time video footage. To extend battery life, it is possible to record selectively via its internal timer or to record for a preset duration when trigged by external ground sensors. The unit also includes an internal 16 zone motion detector.

All the features and functions can be either pre-programmed or configured remotely via to a built in ethernet interface. This allows for remote control, file download and even the streaming of live video when connected to either a wireless 3G or Satellite BGAN modem. This is vital for military operations where many systems are remotely deployed and need only be occasionally checked for activity.

It is also possible to connect to FlashBack-3 Rugged via Wi-Fi which can be activated by a remote key-fob transmitter. Whilst the range of a key-fob is relatively short, it is ideal to check the operation of the surveillance system from a nearby building or where there are walk-by or drive-by opportunities such as a path, road or track.

The system has been specifically engineered for use in military and other off-road vehicles that require a high degree of ruggedisation, either for vehicle based surveillance operations or for evidential purposes e.g. vehicle checkpoints. This includes Unmanned Ground Vehicles (UGV) such as those used for perimeter security and in EOD operations in places like Iraq and Afghanistan, where forensic evidence is vital in tracking down the bomb makers. The system can also be for protection of strategic areas from the deployment of IEDs.

Other uses for the system may include onboard or operator video recording on Unmanned Arial Vehicles (UAV's), helicopters and other airborne assets or even military or civilian Remotely Operated Underwater Vehicles (ROUV) operations in hazardous environments such as oil or gas exploration.

With over 1,500 FlashBack-3 DVRs (including over 50 FlashBack-3 Rugged systems) already sold to unspecified military customers, largely in the US and Europe, it is clear that in a world where video recording of operations for evidential or analysis purposes is now the norm, FlashBack-3R is a vital asset for the military and law enforcement operators alike.

Tony Kingham, Defence and Security Specialist, Publisher of www.worldsecurity-index.com

Members of the Joint Operations Center (JOC) coordinate emergency and exercise response activities for the Vigilant Guard 2008 exercise in coordination with local, state, and federal emergency agencies. (National Guard photo/Senior Master Sgt. Edward E. Snyder)

New plans for a National Police Air Service

A new National Police Air Service (NPAS) is set to provide a more efficient and accessible air support service throughout England and Wales that offers better value for money.

In 2009 a comprehensive review commissioned by Chief Constable Bernard Hogan-Howe identified serious inefficiencies with current arrangements – both in terms of cost and capability. ACPO and the Policing Portfolio Group therefore approved its central recommendation to replace the current system with 'a national service, organised regionally and delivered locally'.

What were the inefficiencies?

- Glass boundaries which meant that force aircraft were restricted to operating within their own force boundaries. This can result in longer travel times to scenes and increased costs as the nearest aircraft to an incident may not be attending.
- Inability to take advantage of economies of scale (in the purchase of aircraft, pilot training and maintenance).
- As part of a broader regional set-up, forces can avail themselves of a wider variety of assets.

What are the aims of the new structure?

- To maximise the benefits of air support to the delivery of frontline police services.
- To achieve this at lower cost than a service which is procured and managed on a local basis.
- To create an integrated part of the wider policing strategy, supporting its objectives.
- To harness innovation in the aviation sector for the benefits of policing.

The review estimated potential savings of £12- £18m per annum (capital and running costs) and the White Paper confirmed the Government's commitment to this happening by April 2012.

The government has expressed a commitment to establishing NPAS by April 2012. An ACPO led project team has been supported by the NPIA to develop an implementation plan for this national service.

Deputy Chief Constable Nick Gargan, Acting Chief Executive of the NPIA, said, "This will be a truly national

West Midlands Police helicopter. Courtesy West Midlands Police

policing service that will be at the heart of improving public safety. The NPIA has played a substantial role in helping to set up the service which will bring operational efficiencies and allow for the introduction of innovative contracts that offer better value for money for the service and the tax payer".

Previously air support in England and Wales was primarily delivered locally and independently – there were 30 Police Air Support Units (ASU), operating 33 aircraft.

In difficult financial times, NPAS illustrates how the police service is pro-actively moving towards a national, co-ordinated way of working. The new service will work collaboratively to provide capability from the air that maximises the delivery of frontline public services, but with a lower cost than services procured and managed on a local basis. The proposed model predicts a saving of an estimated £15.27M (22.8%) over current provision.

The following is a breakdown of proposed base sites. These are likely to change, and are as highlighted in the original proposal. They are also subject to sign off from the relevant police authority. This is the planning principle. It may change subject to addressing the concerns of some forces.

- Western Counties (currently serving Avon and Somerset and Gloucester) and Wiltshire (Consortium with Great Western Air Ambulance) will reduce to one aircraft, combine and relocate to a new base at RAF Colerne.
- Sussex and Surrey will reduce to

The National Policing Improvement Agency (NPIA) worked to improve public safety through the provision of Critical national services, build capability across the police service and provide professional expertise to police forces and authorities. Following the government's announcement to reduce the number of quangos, NPIA is to merge into a new agency National Crime Agency.

West Midlands Police helicopter. Courtesy West Midlands Police

West Midlands Police helicopter. Courtesy West Midlands Police

The Association of Chief Police Officers (ACPO) is an independent, professionally led strategic body. In the public interest and, in equal and active partnership with Government and the Association of Police Authorities, ACPO leads and co-ordinates the direction and development of the police service in England, Wales and Northern Ireland. In times of national need ACPO, on behalf of all chief officers, coordinates the strategic policing response.

one aircraft, combine and relocate to a new base at Dunsfold.

- Norfolk and Suffolk will reduce to one aircraft, combine and relocate to a new base at RAF Honington.
- Merseyside aircraft will be withdrawn from service with provision continuing from other bases in the area.
- South Yorkshire aircraft will be withdrawn from service with provision continuing from other bases in the area.
- Cambridge aircraft will be withdrawn from service with provision continuing from other bases in the area.
- Dyfed-Powys aircraft will be withdrawn from service with provision continuing from other bases in the area.
- The RAF Henlow based aircraft from Chiltern Air Support Unit (Thames Valley, Bedfordshire and Hertfordshire) will be withdrawn from service with provision continuing from other bases in the area.
- Essex aircraft will relocate to Southend Airport.
- Dorset aircraft will relocate to Bournemouth Airport.
- West Midlands aircraft will relocate to work from Wolverhampton Airport creating a two aircraft unit with Central Counties (West Mercia and Staffordshire). Both aircraft currently work under the Central Motorway Police Group banner.

Head of the NPAS, Chief Constable Alex Marshall, said, “This is not merely a cost saving exercise. While the current service is capable of doing its day job, artificial boundaries have meant that helicopters are restricted to operating within their own force area. A national, borderless service will ensure effective coverage of urban and rural areas”.

Davina White Publishing and Commercial Manager

West Midlands Police helicopter. Courtesy West Midlands Police

Search Dogs

The highly sensitive sensor is mounted on average at about .75 metres off the ground. The information processing system is located about 120mm behind the sensor and has a visual back-up system. Reliability is very high and with correct programming the sensor can detect explosives, weapons, buried mines, drugs or cash and even lost or hidden humans.

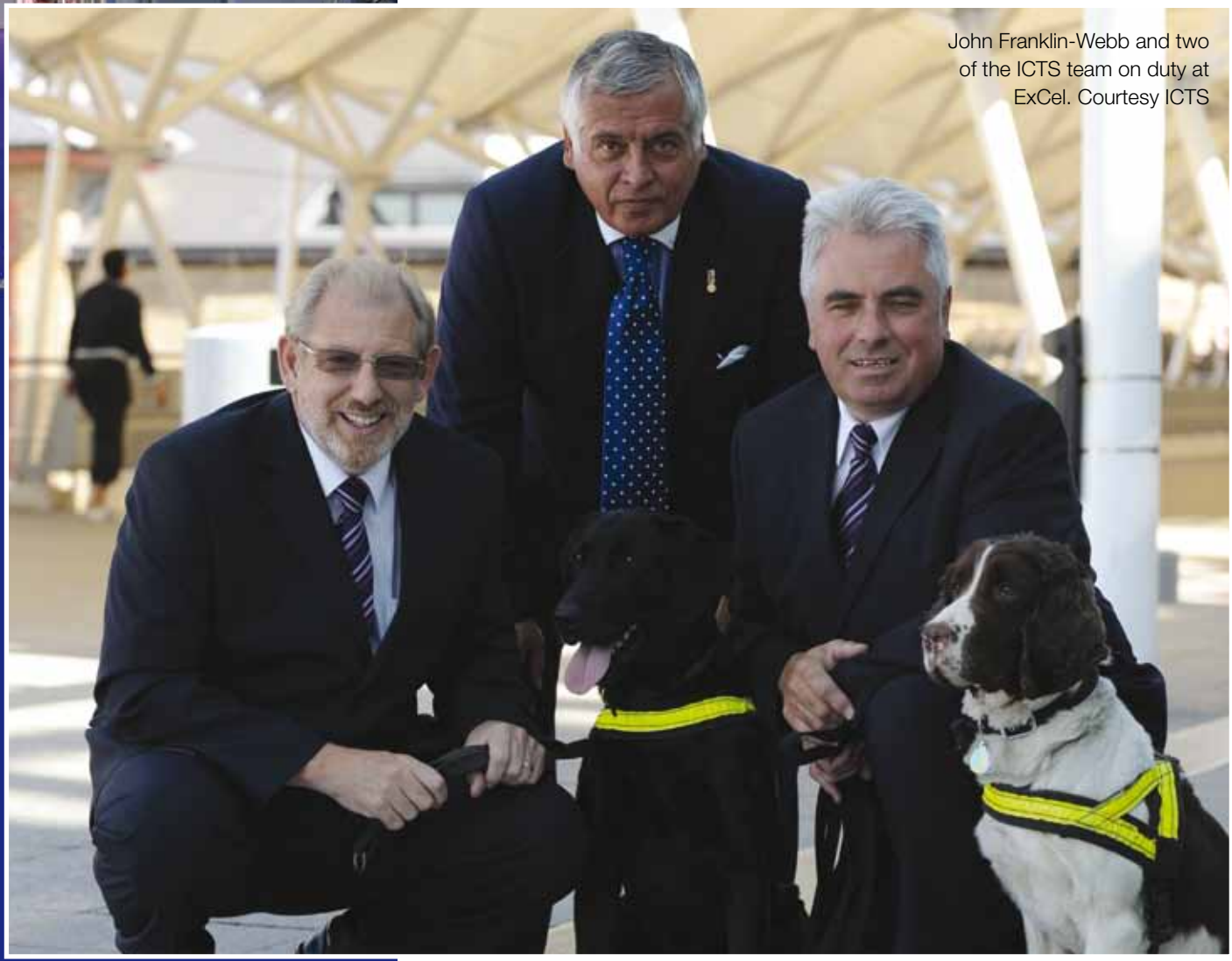
Pre event search at DSEi. Courtesy ICTS

No this is not a high-tech system straight off the benches of a laboratory in Silicon Valley – actually it might even be operating close to you as you read this article. It is of course a dog's nose.

While the human brain is dominated by a large visual cortex, the dog brain is dominated by an olfactory cortex – in effect a dog "sees" with its nose. Relative to brain size the olfactory bulb in dogs is roughly forty times bigger than that in humans with 125 to 220 million smell-sensitive receptors. The Bloodhound exceeds this with nearly 300 million. With these receptors dogs can discriminate odours at concentrations nearly 100 million times lower than humans.

Dogs are not just locate guns, drugs or explosives. A British visitor to California who had arrived straight off the 'plane in the United States with his wife and young family had the unnerving experience of a US Customs search dog bounding up to his 8 year old son and indicating by barking and wagging its tail that it had located contraband in the boy's back pack. Other passengers looked on in disgust assuming that the young lad was being used by the adults as a drugs mule. After some nervous moments it emerged that the dog was trained to locate fruit since the authorities in California did not want to have pests and blights brought into the state on fruit. These pests might endanger the orchards and vineyards that are a long standing part of the state's economy. Every morning back in England the little lad had carried his lunch to school in his pack and his mother had included an apple along with the sandwiches.

Dogs and their Search Advisers (handlers) can be employed proactively or passively. In the proactive role they search buildings, vehicles and locations – in the passive role they can screen people who may be carrying drugs or explosives. Police handlers with drugs dogs can be seen at bus and railway stations. At major public events this technique for screening is highly effective – visitors to DSEi last year will have seen the Search Advisers and dogs from ICTS on duty at the entrance to ExCel. While visual



John Franklin-Webb and two of the ICTS team on duty at ExCel. Courtesy ICTS

searches can be conducted and bags x-rayed the dog and advisor is a less intrusive way of screening.

The dogs employed by the Armed Forces, Police and commercial companies can come from a variety of sources. Some may be unwanted pets, others come from working breeders and in some cases they may be bred from existing proven dogs. What they have in common is a keen nose and a naturally lively nature that makes them want to search and hunt. This normally means that the best types are labradors or springer spaniels, however German shepherds have proved effective in searches for lost people or criminals on the run. The bloodhound is an excellent man hunter – however it is also a dog with a very genial nature and as such not ideal if the man is violent. Dogs are superb at locating illegal immigrants, capable of penetrating into jumbled cargo on a truck and finding humans despite the fact that attempts have been made to mask their scent with strongly smelling cargo. In the United States beagles have been used in a passive role since they have a keen sense of smell but to the general public have happy associations with the cartoon character Snoopy.

Dogs are suitable for training at about 12 months old and training lasts about three months. Every six months they are tested – however training is ongoing. A canine security firm will need to hold varying quantities of drugs or explosives to ensure that the dog receives the correct scent signature.

What can be challenging is when dogs that have worked only with small amounts of illicit illegal substances are confronted either by a large stash of drugs or a significant explosive charge. In order to ensure that they respond correctly and not overwhelmed by this huge scent signature, commercial dogs need to train in unison with the Police or Armed Forces who have access to explosives and drugs in large quantities. Interestingly dogs that have worked with these large amounts of these substances can sometimes find it harder to locate a few grammes hidden in an unlikely location – however it is finds like this that can lead to larger discoveries.

The relationship between handler and dog is particularly important – while to the general public the dog appears to be “working” in reality the search is a game and the discovery of illicit or contraband a source of real excitement because it leads to a reward. Normally the reward is a brief game with a tennis ball that the handler will have concealed on his or her person. The ball can also be a valuable distraction if following a find there is a violent confrontation – search dogs are not trained to detain a criminal and they need to be removed from the location as quickly as possible. This is done by the handler who simply throws the ball to a safe location and full of happy energy the dog follows it away from trouble.

Dogs can be rewarded with snacks – however this is not ideal since they need to be in peak condition. Dogs are trained only to accept food from their handler and at a set location – this prevents drugged or poisoned food being used to neutralise them.

The next time you enter an exhibition and see the smartly turned out Search Adviser and his or her dog sitting patiently by their side as the public stream past remember that you are being scanned by a supremely efficient sensor.

Will Fowler Editor in Chief

A sniffer dog is used to help identify unsavoury substances such a drugs at Heathrow © Home Office

Airport Security

It is now nearly a year since the abortive attempt of the Nigerian Islamist, Umar Farouk Abdulmutallab, to detonate plastic explosives hidden in his underwear on board Northwest Airlines Flight 253 bound for Detroit. So after the huge amount of publicity and 11 months to make some radical changes to airport security, what has changed?

The simple answer is, not a lot!

It is true that a lot of money has been spent, on some very useful new equipment that has been deployed in airports around the world, but, most of the basic fundamental problems still exist.

The first, and most important weakness in the whole international security system, is the lack of an internationally shared "Watch List". In the United States the authorities have tried to rationalise their existing lists, to operate more effectively, but these lists are still only available to US airlines, border officials and embassy staff plus a few bilateral arrangements with close allies.

Security should start long before the passenger gets to the security line. The United States Transportation Security Administration (TSA) are using thousands of trained officers to screen passengers in the terminal by the use of the Observation Techniques (SPOT) program, these sorts of techniques have been used by the Israelis for many years.

The fundamental problem of not having an International "Watch List" that can be shared by border and immigration officials worldwide remains true.

The sticking point seems to be data protection. No two governments or government agencies can agree about what information can be held, how it should be held, where it should be held and who will pay for it.

The only real initiative designed to address this problem is being pursued by an independent organisation called WBO-BORDERPOL (of which I am a part), with its **www.SafeBorder.net programme**. This is planned to be a global password protected extranet to share information about best practise, training, doctrine and most importantly it will include a "Watch List". Initially the watch list will include individuals for whom there are outstanding warrants but, over time and with the appropriate safeguards in place, it can be expanded to include more 'high risk' individuals. However it should be said that this is purely an independent initiative and as yet has no governmental participation, only observers!

The next major issue is the lack of proper 'profiling'.

The question is, do we need to inconvenience all of the people all of the time, or some of the people some of the time?

Does it make sense to apply the same screening measures to a grandmother from Frankfurt travelling via Schiphol, with checked in

Smiths Detection's eqo people screening system uses flat-panel millimetre-wave technology to identify threats hidden beneath passengers' clothing

B-SCAN X-ray system from Smiths Detection offers the detection of objects concealed internally or externally on the body. Using a smaller dose than backscatter X-ray, the B-SCAN provides a high-resolution, head-to-toe image in less than seven seconds.

baggage, on a return ticket to Detroit, as we do to a young Muslim male on a one way ticket, with no checked-in baggage, heading for the same destination. Clearly it does not; even our most libertarian friends must see that!

There are all sorts of existing and proposed schemes that could address this issue. For instance, pre-screening and trusted traveller cards, but none of these have been translated into shorter queues in airports.

For instance the US Secure Flight programme enables pre-screening of passenger information against USA Federal Government watch lists 3 days prior to flights into and via the US. The obvious extension to this sort of programme would be to link this process to the physical screening at the airport. This could be done by downloading a 'trusted traveller boarding card' similar or as part of the electronic boarding card system which would channel the traveller into an appropriate screening channel once they arrive at the airport, from 'Fast Track' to 'Regular Track'. Biometrics and e-passports have an important role to play here but that's too big a subject to be covered here and will be the subject of another article.

This does not mean that the normal discretionary screening by trained security staff would not apply to the 'Fast Track', but it would mean that a significant proportion of the screening process would have already been done, speeding up the whole process significantly for everyone, including those passengers in the 'Regular' queue, where more staff and resources would be available.

When it comes to implementing security within the terminal, a layered approach is the most effective and also the best deterrent. After all, if you are a would-be terrorist and you know that you might be detected or give yourself away at any stage of your journey; when you book, when you arrive at the terminal, when you check in, in the security line or in the departure lounge; your nerves are more likely to be jangling and the heightened tension might cause you to do just that and give yourself away. A layered system also gives the security system many more opportunities to catch them.

Security should start long before the passenger gets to the security line. The United States Transportation Security Administration (TSA) are using thousands of trained officers to screen passengers in the terminal by the use of the Observation Techniques (SPOT) program, these sorts of techniques have been used by the Israelis for many years. But this scientifically untested behavioural threat detection has come in for a lot of criticism recently following a report that noted 17 suspected terrorists had moved through eight SPOT airports on at least 24 different occasions undetected. This criticism may have some validity but to my mind it is early days in the programme and any additional training that helps officers become better observers of human behaviour can't be a bad thing! In fact, it should be widened to include other staff at airports, not just the security personnel.

Better use of CCTV is another obvious area that can be improved. More CCTV cameras does not mean better surveillance if it's not matched by more trained staff to operate them or more intelligent use of them through intelligent software such as face-recognition and video analytics. Although there are many claims and counter claims for the effectiveness of these types of technologies, particularly when it comes to moving crowds. Companies like **Abeo Technical Solutions** offer the AWARE system, and claim that through using intelligent video analytics, the system is capable of detecting anomalies in behaviour. **Cognitec** use face-recognition for their FaceVACS-VideoScan software which automatically scans incoming video streams, detects multiple faces and checks against "watch lists".

Detection technology such as that being offered by **ThruVision** scanners,

More CCTV cameras does not mean better surveillance if it's not matched by more trained staff to operate them or more intelligent use of them through intelligent software such as face-recognition and video analytics.

which uses a proprietary passive technology called 'Terahertz Imaging' to detect concealed objects on the human body. The great benefit of this type of technology is it can be used on moving crowds, and is particularly useful in chokepoints like doorways and at the top of escalators. Because this technology is passive and does not reveal details of the body, it can be used by male or female operators without consent of the subject.

The use of explosive sniffer dogs in random patrols throughout the terminal is still probably one of the most effective measures and one of the best deterrents.

Once in the security line trained staff remains the most important asset. Careful questioning about travel arrangements and indicators like body language are all critical factors in determining whether the passenger needs to moved up to the next level of screening.

Baggage scanning, explosive detection technologies and analysis of liquids and gels are essential and are now routine, but again, we will cover this in more detail in a later issue.

The installation of millimetre wave body scanners in many airports around the world from manufacturers like **Smiths Detection, AS&E, Rapiscan, L-3** and others has been highly publicised, but they are still not universal. These machines use such ultra low dose backscatter X-rays that they can be used routinely. For example, Schiphol Airport is now scanning all passengers heading for the US. These systems are designed as an alternative to or replacement for the pat-down and conventional metal detectors but they are also able to identify non-metallic objects such as plastic knives and guns and explosives. These systems have added another important layer to airport but they are only part of the answer.

Baggage scanning, explosive detection technologies and analysis of liquids and gels are essential and are now routine...

OD Security Soter System detects a female with an internally inserted gas bottle

Cognitec's FaceVACS-VideoScan automatically scans incoming video streams, detects multiple faces and checks for possible "watch list" matches.

What they cannot detect are substances hidden inside body cavities.

Al-Qaeda have already tried beating airport security successfully by using a bomb carried in the rectum of a suicide bomber, and it worked. Although the intended target was not an aircraft but Saudi Deputy Interior Minister Prince Nayef back in August last year, the assassin al-Asiri took two flights and passed through two airport security screening systems to reach his intended target. The assassination attempt failed to kill its intended target, the assassin was blown to pieces and most of the blast went down into the concrete floor. But a bomb exploded in a pressurised aircraft would be a very different story. It's been tried and tested and they will use it again!

To counter this threat, staff will need another option!

At present there are no explosives detectors deployed that can detect explosives carried inside the body in any practical application, although I have been told our old friend the sniffer dog can do the job.

However, in combination with effective profiling one answer to this is the full body X-Ray scanner of the type used by customs officers on arriving passengers to catch drugs mules. These scanners are used very successfully as an alternative to the highly intrusive cavity search and have the advantage for being able to detect objects both metallic and non-metallic, on the body and in the body, in the stomach or the bowel. These products fall well within safe limits as outlined by the American National Standards Institute (ANSI) but are probably not practical for mass scanning.

Systems like the **OD Security's Soter, Smiths Detection's** B-SCAN Series are already operating in airports, just not in departures.

This threat is very real, the technology is here, is already deployed and it works. It is about time it was deployed where it is most needed, in departures!

Tony Kingham, Defence and Security Specialist, Publisher of www.worldsecurity-index.com

One Box Does All

In the defence world, we often discuss the emergence over the last decade or more of the managerial mantra “do more with less”.

This reflects increasing budget austerity, the necessity to get more value out of uniformed personnel through automation and outsourcing and the requirement for interoperable, standardised equipment. Sometimes, we wear blinkers however, and need to be forcibly reminded that other public sector organisations face the same constraints with regard to the availability of sufficient financial and physical resources to be able to do their jobs effectively.

Facing the aftermath of the Comprehensive Spending Review last month, it is difficult to determine exactly what effect the CSR will have on police operations in the United Kingdom. To quote The Guardian on 20th October, “The police face a 20% cut in their budget as it becomes clear that the criminal justice system is set to become one of the biggest losers across Whitehall in today’s spending squeeze”. Other online analyses published the same day indicate that, nationwide, the police face a 14% budget cut in real terms by 2014-2015 and have done rather better than might have been expected.

Whatever one’s view of the obfuscatory manner in which CSR outlines the future of law enforcement in this country, the fact remains that in order to carry out the multiplicity of tasks – new and old – facing them, police forces need more resources rather than less. Facing unpalatable facts, however, is a sign of good and effective management, and moves have been made ‘behind the scenes’ for some time now to improve the efficiency and utility of some of

Integrated ANPR, DVR and MDT from Futronics.

the existing resources deployed for multiple tasks.

One of the issues facing managers of police vehicle fleets is the fact that although the platform may be common (i.e. the same Volvo, GM or Ford may be fielded by a variety of different forces round the country) each force will have different requirements for the equipment and layout of systems within the vehicle. There is a parallel here with what has happened in NATO forces, for example, over the last thirty years or more. Different national solutions addressing requirements that have significant commonality have led to wasted resources and assets that are used inefficiently. As a result, a drive towards common standards, joint operations, multinational development and seamless interoperability has transformed the capabilities and cost-efficiencies of many armed forces in the last decade.

"The police face a 20% cut in their budget as it becomes clear that the criminal justice system is set to become one of the biggest losers across Whitehall in today's spending squeeze".

The same issue now confronts the various police authorities in the United Kingdom. Faced with the necessity to control expenditure and justify every penny spent while at the same time addressing a multiplicity of functional proprieties, police authorities have begun to find innovative solutions to enhance performance.

One such initiative is the One Box concept, spearheaded by the Association of Chief Police Officers (ACPO) and the Home Office Scientific Development Branch (HOSDB). Put simply, One Box proposes a series of common standards and a 'single vehicle architecture,' which will provide for common wiring and interconnection points within the vehicle. The Holy Grail of 'plug and play' will therefore be in sight for mobile police officers, enabling them to devote more cognitive power to interpreting received and derived data rather than operating the mechanisms to retrieve it.

The question of human factors

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engineering and ergonomics is pretty fundamental to the One Box concept. Ensuring the control panel is in the same location no matter what vehicle the officer is driving, for example, speaks to the more efficient use of training time. If the controls are in a consistent location and follow the same layout in every vehicle, the officer can spend more training time in developing 'what if' scenarios and what amounts to mission rehearsal than learning which knob requires to be twisted which way at what point.

Described by Chief Inspector Mick Trosh of the Metropolitan Police, speaking at the National Blue Light Users Conference in 2009 as "putting the customer in the driving seat", the One Box concept consists of much more than compressing a variety of components into a magic 'black box' and ensuring the wiring harness has all the appropriate connectivity. A fundamental issue confronting operational planners is the restriction imposed by the availability of internal volume – "we can't keep on fitting more in this space", in Trosh's words.

In reality, One Box is a step towards an integrated driver and vehicle data management system that is likely to have multiple operational formats and several functionalities, while maintaining a single hardware/software backbone on which individual future applications can be seamlessly mounted. For example, there have been discussions about the potential utility of heads-up displays (again leveraging technologies developed for the defence world) in which relevant data from the onboard computer is projected onto the windshield within the driver's or passenger's field of vision. While the jury is out on that specific application in the UK (though experiments have been conducted elsewhere, notably in American law enforcement agencies), other rather more mundane applications such as the integration of automatic number plate recognition (ANPR) cameras have taken greater root.

At this year's National Association of Police Fleet Managers (NAPFM) exhibition in October, High Wycombe-based Microbus Limited, a pre-eminent supplier of in-vehicle computing technology, showcased its 'Clean Dash' installation of its M-PC2 in-vehicle PC in a Sussex Constabulary Ford Focus. The M-PC2 has been selected by ACPO as an available, off the shelf illustration of the One Box concept – integrating vehicular architecture and demonstrating the benefits of mobile data.

One Box, as what the military might call a concept technology demonstrator, is an ambitious project and there remains a huge amount to be done to take it through the various development phases culminating in a truly 21st century driver and vehicle data management system. Perhaps one of the most valuable lessons learned may be said to have been the fact that the various local authorities and forces need to speak with a single voice in specifying equipment and performance requirements. The fact that ACPO is leading the programme, with Home Office support, offers real hope that such harmonization may be achieved. The fact that similar programmes of capability integration and technology insertion for vehicles have already been conducted by the Ministry of Defence should also help in leveraging technology and marshalling industrial expertise.

Watch this space….

Tim Mahon Defence and Security Journalist

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What is G2?

G2 is the staff appointment within NATO for officers who provide timely, relevant, accurate, and synchronized intelligence about the enemy from a wide range of sources and sensors for tactical, operational and strategic-level commanders.

The end of the Cold War and the changing character of the threat to national and international security has broadened the scope of intelligence. It is now a multi-agency function that embraces not only the Armed Forces, but Police and Customs and Immigration as well as national counter intelligence and terrorism organisations like MI5, and the FBI. Just as crucial are the intelligence collecting agencies like GCHG, the CIA and MI6 that can allow the plans and plots of hostile groups to be monitored and neutralised.

The threat is global – the terrorists who have targeted the United States and Europe had received their training in Afghanistan and Pakistan. Modern communications allow images, information and ideas to be transmitted in seconds around the world. Just as the threat is global – so too is the need for accurate and timely intelligence that is speedily disseminated.

What is G2 DEFENCE?

G2 DEFENCE addresses this multi-agency approach to intelligence gathering and counter-intelligence. While operational techniques remain classified, the magazine covers equipment, operations that are in the public domain and the strategic overview. It will be a useful supplement to the information available to the professional and give the general reader an insight into a world that is both fascinating and little known.

Distribution

The magazine is in hard format for distribution at shows/ exhibitions, those in intelligence and security, those agencies responsible for the homeland and borders security. The magazine is also distributed in a digital format and accessible by the internet. It offers benefits to readers, contributors and advertisers by enabling a product to be showcased using video, or a company's advertisement to be enhanced with a piece of music, jingle or narration.

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Editorial

The editorial comes from a variety of sources including interviews with key people, articles written and submitted externally, articles produced internally and analysis from a wide range of specialists.

If you have any queries relating to editorial please contact the editor at editor@g2defence.co.uk

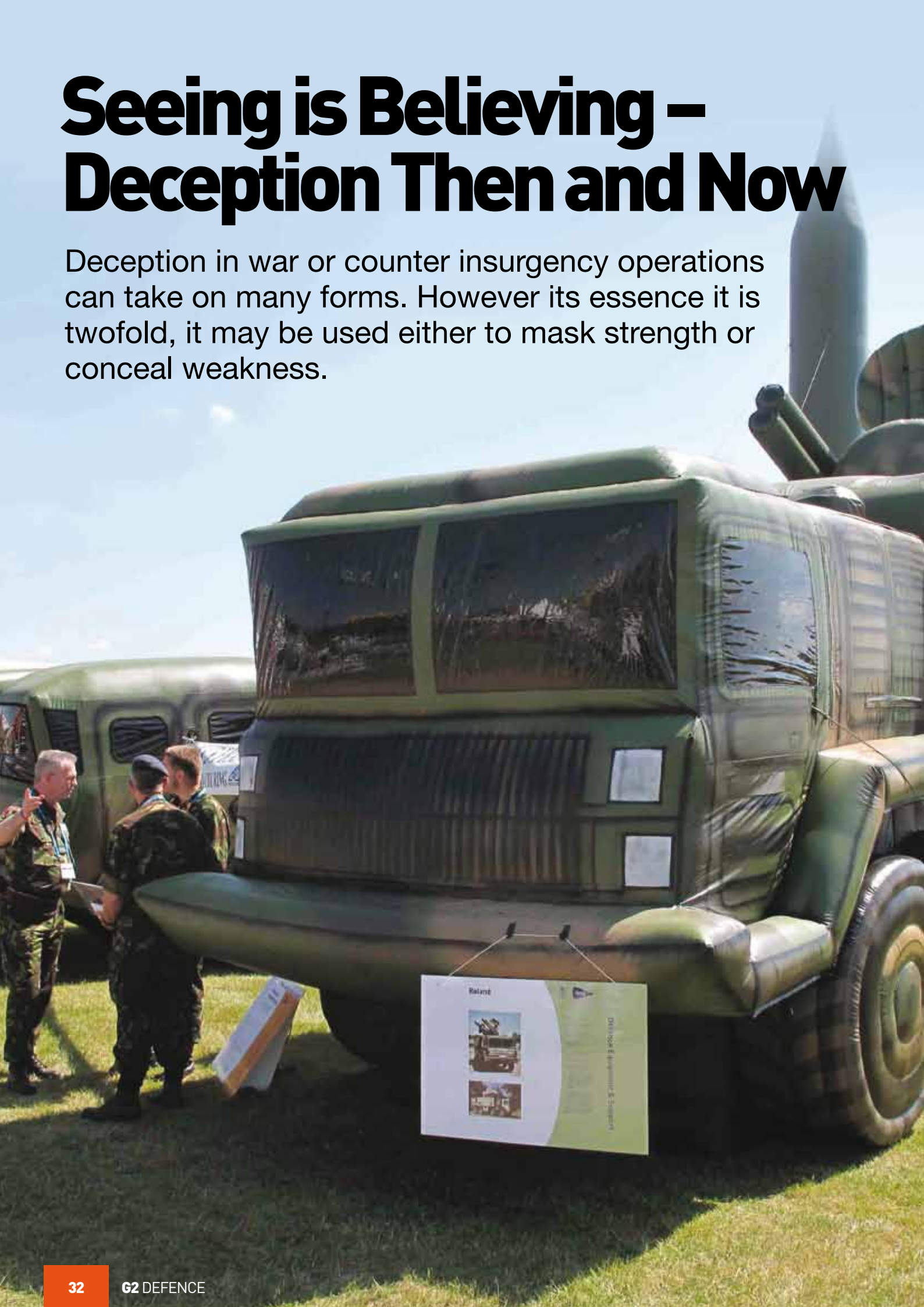
Advertising

The magazine is standard A4 (297mm X 210mm) and full colour throughout.

To discuss any advertising opportunities please contact the sales team at sales@g2defence.co.uk

Seeing is Believing – Deception Then and Now

Deception in war or counter insurgency operations can take on many forms. However its essence it is twofold, it may be used either to mask strength or conceal weakness.



An inflatable dummy radar vehicle. This can be used in air to ground recognition training for pilots or for deception in an operational theatre. Courtesy J & S Franklin

Inflatable dummy mobile surface to air missiles - the pilot of a fast moving combat aircraft would assume these were real and a hostile threat. He might therefore take evasive action or expend ordnance to destroy them. Courtesy J & S Franklin

In large scale conventional war the classic example are the two opposing sides in the months before D-Day on June 6, 1944. In the UK the Allies put together a huge deception plan called Operation Fortitude. The aim was to convince the OKW - the German High Command - that the Second Front in Europe would be launched against Norway, the Pas de Calais or against the long beaches on the Bay of Biscay. There was logic to all these spurious invasion plans – for example the route from Calais to Berlin was the shortest.

The deception plan – like all successful plans was multi-layered. For the few Luftwaffe reconnaissance aircraft that reached the coast of southern England there were numerous dummy emplacements – landing craft and vehicles to be photographed in Kent. Radio traffic from spurious formations including FUSAG – the Fifth US Army Group commanded by General George Patton was picked up by German radio interception units in Northern France. Patton himself was seen in Kent attending parades and public functions. German agents who earlier in the war had been captured and "turned" - faced with the prospect of execution or of cooperation with Allied intelligence officers had chosen the latter course, added the extra value element of Human Intelligence HUMINT. They transmitted reports of troop and vehicle concentrations in Kent.

In counter insurgency operations double agents or turned terrorists are not only a valuable source of intelligence but can also be used in deception schemes feeding false information and rumours back to hostile forces.

So effective was Operation Fortitude that days after the Allies landed in Normandy the OKW still believed that the main weight of the assault on North West Europe would fall on the Pas de Calais.

The essence of any successful deception operation like Operation Fortitude is to convince the victim that his or her skill or sound training has also been rewarded by good fortune. In essence they have been both clever and lucky.

Modern deception operations employ many of the techniques pioneered in World War II. The simplest is the visual – a dummy vehicle or emplacement is constructed from simple expendable materials. In Bosnia the Serbs used black plastic

sheeting normally employed by farmers to make “roads”. For the pilot of a fast moving combat aircraft this brief visual signature could be enough for him to release his ordnance.

Deception can also employed where camouflage is impossible – a major target like an industrial site is hard to conceal – however if something similar is built near the target this dummy may absorb some of the ordnance that would have done real damage. There is an art in creating fake battle damage – Argentine forces in the Falklands made realistic “bomb craters” at Stanley airport by piling up soil in a circle. Back in World War II lighting and fires from small stocks of oil were activated at night when Luftwaffe bombers attacked ports like Portsmouth. The lights and fires were actually located in the salt marshes close to the Royal Navy base.

When the British 1 Div redeployed from the Coalition right flank in Operation Granby the Gulf War of 1990-91 and moved to the west to join the US Army prior to Operation Desert Sabre, the staff were at pains to convince Iraqi forces opposite them that the British were still in place. Tanks moved out at night and were replaced by 1:1 scale flat plywood screens that to the naked eye viewed at a distance looked like Challenger tanks.

However sensors have increased in sophistication and while the “Mk1 Eyeball” may still be widely used and be spoofed and confused there are new systems that require new techniques in deception.

Radar and Image Intensification (II) made the seas and nigh time battlefield harder places on which to manoeuvre. However it was the Warsaw Pact that realised that radar could be a double edged weapon – simple radar reflectors – similar in concept to those fitted to small pleasure craft could be positioned to produce a mass of confusing radar returns. This was like the Chaff anti-missile system employed by ships and aircraft – a hostile radar would be swamped. Behind this clutter of radar returns troops could manoeuvre securely.

II had its limitations too – while it allowed vehicle crews and infantry to see in the dark what they saw was essentially a variation of what they would see in daylight.

The real advance came with Thermal Imaging (TI). First used operationally in the Falklands in 1982 TI stripped away the visual concealment that defeated the Mk1 Eyeball. Now operators could see the heat signature of men and vehicles by day or night – and perhaps more disconcertingly like the silvery trail left by a snail they could see the heat pattern on the ground left by the wheels or tracks of a truck or tank.

Deception had to move up a gear to continue to be effective. While spurious radio traffic remained effective and was employed by the British in Operation Granby – something had to be done to produce TI deception schemes. TI was now no longer the preserve of the armed forces – wildlife camera crews and even the construction industry were using it in their fields.

Early TI deception schemes were crude with a single heat source like a lamp, now deception schemes use electric filaments in 1:1 scale glass fibre models of tanks, missiles and vehicles to produce an exact thermal picture including the heat from the engine, tracks and other moving parts.

Deception in war may seem a very modern concept – something from the 20th and 21st Centuries. Perhaps it is appropriate therefore to end with a quote from Sun Tzu the Chinese general and strategist who wrote in his treatise The Art of War:

“Never will those who wage war tire of deception” - and that was in the 6th Century BC.

Will Fowler Editor in Chief

Three U.S. Air Force F-16 Fighting Falcon aircraft mockups parked on a fake runway at Spangdahlem Air Base, Germany, during exercise “Salty Demo ‘85” on 29 April 1985. “Salty Demo ‘85” was an air base survivability exercise evaluating passive and active defenses, aircraft operation and generation, and base recovery systems. Photo courtesy USAF

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NSRA – Uncertainty or a New Confidence?

When the giant concrete panels of the Berlin Wall came crashing down on November 9, 1989, there was a wave of euphoria across Europe and North America. The old polarity of East and West and the fears and constraints of the Cold War were over - for those who lived through these times as Servicemen and Women the idea that former Warsaw Pact adversaries would eventually become members of NATO would have seemed unbelievable, almost alarming.

Police screen a suspect in a drive to remove weapons and knives © Home Office

Fast forward 21 years and though the threat of a nuclear Armageddon seems remote – as does the idea of the tanks and APCs of the Group of Soviet Forces in Germany thrusting deep into a terrified West Germany - we still live in uncertain times.

This was highlighted this year when the British Coalition Government published its National Security Strategy "A Strong Britain in an Age of Uncertainty", based on the National Security Risk Assessment (NSRA) which was a reappraisal of Britain's role in the world and the current risks to security. In ascending order four main threats were identified which were assigned Tier 1 status.

The first were acts of terrorism affecting the UK or its interests. The second hostile attacks upon UK Cyber Space. The third a major accident or natural hazard like an outbreak of influenza and finally as the least likely threat was an international crisis between states that would draw in the UK and allies.

In other words the "Big War" that had dominated defence thinking, planning and equipment design and development was now fourth in the list of threats. The threat from attacks on UK Cyber Space is now particularly pertinent and was highlighted in the article about GCHQ in Volume 1, issue 2 issue of G2 Defence. The crucial work undertaken in Cheltenham ensures that our communications – both government and commercial - remain secure against hostile eavesdropping.

Ranked as Tier 2 and consequently as less likely threats but ones that merited concern were a further four. These were:-

1) An attack on the UK or its Overseas territories by another state or proxy using chemical, biological, radiological or nuclear (CBRN) weapons.

2) Risk of major instability, insurgency or civil war overseas which creates an environment that terrorists can exploit to threaten the UK.

3) A significant increase in the level of organised crime affecting the UK.

And finally:

4) Severe disruption to information received, transmitted or collected by satellites, possibly as the result of a deliberate attack by another state.

Finally as Tier 3 priorities there were seven possible threats:

1) A large scale conventional military attack on the UK by another state (not involving the use of CBRN weapons) resulting in fatalities and damage to infrastructure within the UK.

2) A significant increase in the level of

An illegal worker is taken away for questioning following a raid in Sussex © Home Office

terrorists, organised criminals, illegal immigrants and illicit goods trying to cross the UK border to enter the UK.
3) Disruption to oil or gas supplies to the UK, or price instability, as a result of war, accident, major political upheaval or deliberate manipulation of supply by producers.
4) A major release of radioactive material from a civil nuclear site within the UK which affects one or more regions.
5) A conventional attack by a state on another NATO or EU member to which the UK would have to respond.
6) An attack on a UK overseas territory as the result of a sovereignty dispute or wider regional conflict.
7 Short to medium term disruption to international supplies of resources (e.g. food, minerals) essential to the UK.

The National Security Council used the NSRA to formulate the Strategic Defence and Security Review (SDSR). The National Security Tasks identified in SDSR show that the response to the threats to the UK are now more complex and so require a multi-disciplinary approach. The country will no longer be protected exclusively by "Soldiers of the Queen" - they will continue to do their duty, but will be backed by and work with the Intelligence Services- both active and defensive – the emergency services, fire ambulance and police and Customs and Immigration.

The eight National Security Tasks are therefore cross-departmental and are:-
1) Identify and monitor national security risks and opportunities;
2) Tackle at root the causes of instability;
3) Exert influence to exploit opportunities and manage risks;
4) Enforce domestic law and strengthen international norms to help tackle those who threaten the UK and our interests;
5) Protect the UK and our interests at home, at our border, and internationally, in order to address physical and electronic threats from state and non-state sources;
6) Help resolve conflicts and contribute to stability. Where necessary, intervene overseas, including the legal use of coercive force in support of the UK's vital interests, and to protect our overseas territories;
7) Provide resilience for the UK by being prepared for all kinds of emergencies, able to recover from shocks and to maintain essential services;
8) Work in alliances and partnerships wherever possible to generate stronger responses.

Finger print technology at Heathrow Airport is demonstrated to Theresa May Home Secretary
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The eighth task is interesting. At the time "A Strong Britain in an Age of Uncertainty" was published on October 18, few outside a small circle within government and the MoD knew that a 50 year Anglo-French Defence Treaty would be signed by Prime Minister David Cameron and French President Nicolas Sarkozy on November 2.

Speaking at the ceremony in London Cameron said "It is the start of something new", and added, "The treaty is based on pragmatism, not just sentiment". He disclosed that the treaties, likely to be subject to parliamentary approval, would:
• Create a joint expeditionary task force in which around 10,000 UK and French service personnel will train and exercise together from 2011. The force will be able to launch high-intensity peacekeeping, rescue or combat missions.
• Co-operate on an integrated strike force ensuring French and British aircraft can operate off both the planned new British carrier and the French carrier Charles de Gaulle.

What will be challenging for the new Anglo-French forces will be where the national interests identified in the NSRA do not appear to coincide with those of the French – perhaps the treaty has added a new uncertainty to this "Age of Uncertainty"

Will Fowler Editor in Chief

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