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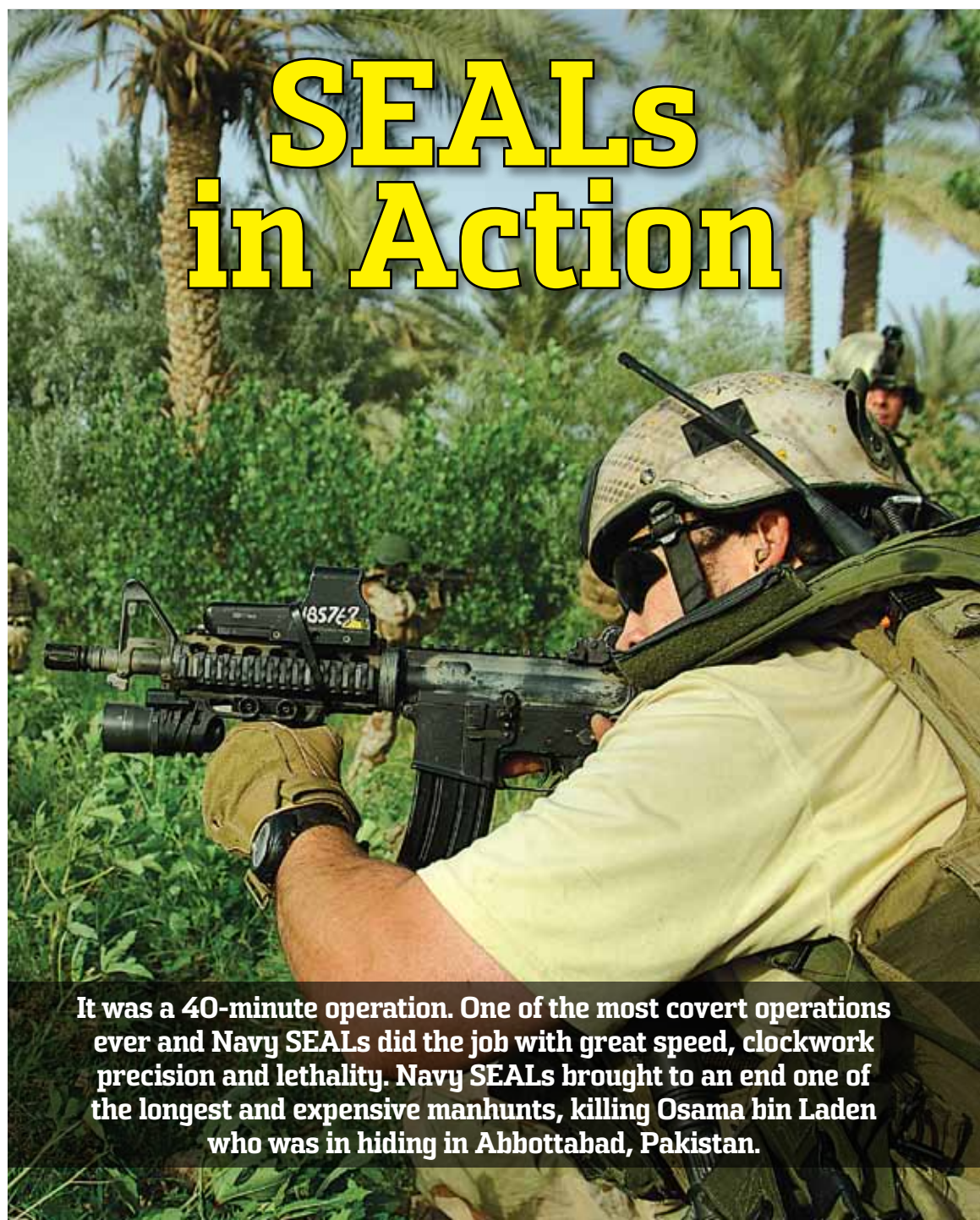
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SEALs in Action




It was a 40-minute operation. One of the most covert operations ever and Navy SEALs did the job with great speed, clockwork precision and lethality. Navy SEALs brought to an end one of the longest and expensive manhunts, killing Osama bin Laden who was in hiding in Abbottabad, Pakistan.






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Cover:

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Cover Image: US Navy

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Elite teams deliver

Since the disastrous day of September 11, 2001, the US vowed to avenge the terror-strike. It took almost a decade for the world's mightiest country to hunt down and kill the chief architect of Al Qaeda, Osama bin Laden. The task was accomplished by the elite team of the US Navy – Navy SEALs – in an operation named “Neptune Spear”, using a stealth helicopter. The 40-minute operation highlighted covertness, speed, precision and lethality. There are many legends about the Navy SEALs and we thought it would be apt to put the showlights on them and *SP's M.A.I.* has run their deeds on four pages.

Indeed, the world over, Special Forces are gaining in importance as asymmetric warfare requires a handful of highly trained men to get a ‘mission accomplished.’ India has its share of crack teams and the Special Forces personnel have shown exemplary skills in dealing with security threats.

General V.P. Malik, the former Chief of Army Staff has said though India's Special Forces do not have the same capability as the US forces due to non-availability of high technology, they are second to none. Depending upon the distance involved and combat environment up to and on the target, they are capable of carrying out Operation Geronimo (rechristened Operation Neptune Spear) type missions across the border or for any ‘out of area contingencies’.

General Malik as also Lt General (Retd) P.C. Katoch in his fortnightly column have laid emphasis on human intelligence and point out how the US relied on this factor to get rid of Osama, albeit it took time.

The world is increasingly becoming an ‘unsafe’ place to live in. A World Bank report has pointed out that about 1.5 billion people live in countries affected by repeated cycles of political and criminal violence. The World Bank President Robert B. Zoellick has said, “If we are to break the cycles of violence and lessen the stresses that drive them, countries must develop more legitimate, accountable and capable national institutions that provide for citizen security, justice and jobs.”

While there are issues such as unemployment and poverty

that need to be dealt with, India's security concerns arise from across the borders and the political leadership has pointed out at various forums that Pakistan is the hotbed of terrorism and that many terrorist camps continue to be alive. And that Osama inhabited close to Pakistan's capital Islamabad and just about 50 km from the Indian border speaks for itself the kind of complicity that goes on in that country.

And we hear from the Home Minister, P. Chidambaram, that the underworld don Dawood Ibrahim who allegedly master-minded Mumbai blasts, is very much in Karachi.

Security is of prime concern and the Civil Aviation Ministry has directed all airports to gear up and increase allocation for purchase of equipment. Full-body scanners may make the grade and endorsing that they are safe are two experts from the University of California who in a study conclude that there is “no significant threat” from backscatter X-ray scanners despite them using ionising radiation. **SP**

Jayant Baranwal
Publisher and Editor-in-Chief



Navy SEALs practice in a remote training facility to prepare for future attacks



Operation Neptune Spear ends longest manhunt

Much before the crack of dawn on May 2, a team of 40 CIA-led Navy SEALs, 24 on the ground, brought to an end a 10-year long manhunt. The crack team in a highly covert operation killed the chief architect of 9/11, Osama bin Laden in Abbottabad, Pakistan, about 56 km from Islamabad, the country's capital.

The CIA did a lot of groundwork prior to the operation and the interrogation of a captive in Guantanamo Bay detention camp got them the essential tip-off.

The operation:

- Four stealth helicopters flew in from US bases in Afghanistan and the elite Navy SEALs team came down by ropes in the darkness using night vision equipment
- The team burst through a door at bin Laden's compound, blasting their way through a brick wall

- Gunfight ensued with two couriers and a woman on the first floor
- Team enters bin Laden's room and shoots bin Laden's wife as she rushes forward

- The leading SEAL shot Osama in the chest, another shot Osama in the head

Unconfirmed reports mention that one of the choppers developed mechanical problems and crash-landed. The helicopter was destroyed by the US Forces. The entire operation lasted 40 minutes.

Osama bin Laden was holed up in a two-storey house 1,000 yards from a Pakistani military academy.

The Navy SEALs Team 6 which is said to have carried out the operation consists of US's quietest, most delicate killers because of their discreet work by sea, air or land. The team, according to reports, is part of a counter-terrorism group so specialised that no one can apply to join it. **SP**



Map not to scale



Invisible Black Hawk Down!

Reports are flying thick that the Navy SEALs Team Six used an extremely-modified Sikorsky MH-60M Black Hawk helicopters, having stealth features. The rumours of the stealth chopper are making the rounds, after one of the helicopters crashed in the compound of the hideout of Osama bin Laden and that the remnants indicated to its 'low-observability' and its capabilities to go undetected on the radar.

Military analysts have said in the US that the chopper's noise levels had been reduced with the use of extra blades on tail rotor. Also the material used look similar to that used in stealth fighters. The silver finish makes it harder to detect on radar and by infrared sensors. The angles and flat surfaces of the chopper have indicated on the modifications that have gone into the Black Hawk.

The US has attempted to use stealth helicopters before. In the mid-1990s, the Army developed several prototypes of the Comanche helicopter, a reconnaissance helicopter that was at the time a revolutionary step in stealth technology. SP



SEALs attack like sharks

In 1941, after the Japanese bombed Pearl Harbor, US troops were forced to invade Japanese territory by sea, often facing landmines and attacks from unseen enemies. As a countermeasure to these hazards, the US Navy began creating teams that were specially trained to go safely ashore and clear the path of obstacles and return intelligence on enemy locations.

These teams of six men were called Naval Combat Demolition Units. Their physical training was arduous and included carrying heavy loads, swimming, running, and manoeuvring in small boats. Their training also included handling explosives. Eventually, they evolved into underwater demolition teams (UDT).

In the 1960s, North Vietnam was fighting South Vietnam and President John F. Kennedy wanted to send in small teams of guerrilla fighters to help South Vietnam. With the Army's Green Beret unit already set up, it was time for the Navy to create its own Special Operations unit. Building on the training of the UDTs, the Navy SEALs (an acronym

for sea, air and land) were created. Their training readied them for the work ahead in the jungles, coasts, and rivers of Vietnam. Their task was to go behind enemy lines and

raid enemy camps, sabotage supplies, cut off enemy communications, and destroy stored ammunitions.

The SEAL team often works in small units with a platoon comprising of up to 16. They are trained to perform specific tasks under any type of circumstance and in any environment.

SEAL missions require detailed planning and precise execution and are trained to perform missions that fall into categories: unconventional warfare (UW) – using guerrilla warfare tactics in battle; foreign internal defence (FID) – training given to foreign nationals in order to build relationships; direct action (DA) – moving against an enemy target; counter-terrorism and special reconnaissance. SP



Array of firearms

The special forces team use an extensive array of firearms. The highly-accurate and versatile M4A1 Carbine is the standard issue weapon for SEAL operators, while pistols are usually carried as backup weapons. Weapons choice is always mission-dependent and the SEALs have a wide array of firearms from which to select the precise ones.

SEALs use handguns such as the 9mm SIG Sauer P226 and the MK23 MOD 0 45-calibre offensive handgun with a suppressor and laser-aiming module.

They use rifles such as the carbine automatic M4A1 5.56mm and the AK-47. They also use shotguns, machine guns (MK43 and M2HB), and the HK MP5 9mm submachine gun series, among others. Add to that list sniper rifles such as the M88 .50 PIP and the M-14 sniper rifle, along with grenade launchers, mortars and AT4 anti-tank rockets, and SEALs can choose a weapon to fit the specific task at hand. SP

A Navy SEAL conducts target practice with a M4A1 carbine





Hooyah! Here are the Hell's Angels

Hooyah! – the war cry of the Navy SEALs – becomes an automatic response for SEALs during the torturous SEAL training. While there may be other variations in meaning, “hooyah” generally means “yes,” “understood,” and “I’m not letting this evolution get the best of me.” (Evolution is the term used for each event in the training schedule.)

SEAL training is brutal. It takes over 30 months to train a Navy SEAL to the point at which he will be ready for deployment. The SEALs that emerge are ready to handle pretty much any task they could be called on to perform, including diving, combat swimming, navigation, demolitions, weapons, and parachuting. The training pushes them to the limit both mentally and physically in order to weed out those who may not be able to successfully complete the demanding missions and operations with which SEALs are faced.

The types of stresses they endure during Basic Underwater Demolition/SEAL (BUD/S) are the same stresses they will endure as SEALs. If they can’t withstand it when lives aren’t on the line, chances are good they won’t be able to withstand it when lives are at stake.

From day one in SEAL training, trainees are taught the importance of teamwork. Focus is not on the individual. The fact that the SEALs have never left another SEAL behind on a mission is a testament to this belief system.

SEAL Training: BUD/S

Basic Underwater Demolition/SEAL (BUD/S) training lasts seven months. An important part of basic conditioning is drown-proofing. In this evolution, trainees must learn to swim with both their hands and their feet bound.

Another evolution is surf torture, also called “cold water conditioning.” The water temperatures usually hover around 65 degrees Fahrenheit (18 C), and never go above 68 degrees F (20 C).

Hell Week

Hell Week is when students train for five days and five nights solid with a maximum total of four hours of sleep. Hell Week begins at sundown on Sunday and ends at the end of Friday. During this time, trainees face continuous training evolutions. The largest number of trainees drops out during Hell Week. This extreme training is critical, though. SEALs on missions must be able to operate efficiently, oblivious to sub-zero temperatures and their own physical comfort. Their lives, as well as the lives of others, may depend on it. **SP**

PHOTOGRAPHS: US Navy

Operation Theatres

Here are some of the key theatres in which the Navy SEALs have showed their exceptional valour.

Operation Just Cause (1989)

Working with Delta Force and other elite units, DevGru members assisted in the capture of deposed dictator Manuel Noriega during the United States’ invasion of Panama in December 1989.

Operation Pokeweed (1990)

DevGru reportedly returned to Panama to take part in a secret operation intended to apprehend the Colombian drug lord Pablo Escobar. The mission is believed to have failed due to poor intelligence.

Battle of Mogadishu (1993)

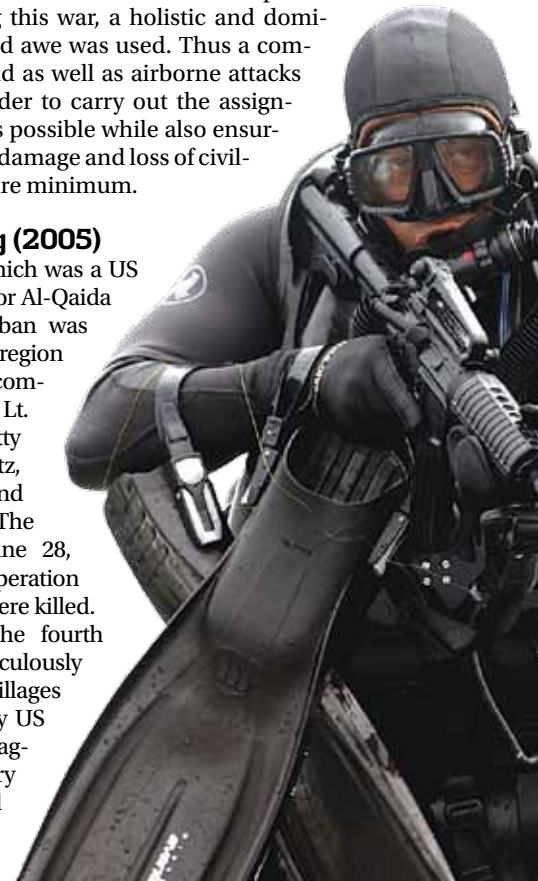
DevGru members participated in a multinational task force during Operation Gothic Serpent, the US-led mission to capture Somali warlord Mohamed Farrah Aidid in the fall of October 1993. It culminated in the Battle of Mogadishu, which was later chronicled in the book *Black Hawk Down: A Story of Modern War* and a subsequent film adaptation.

Operation Anaconda (2002)

In March 2002, Operation Anaconda as part of the US invasion into Afghanistan commenced. Later during the same year, Operation Enduring Freedom – Philippines was conducted during which the key ASG terrorist leader was captured and killed. During March of 2003 the US Navy SEALs took part in the invasion of Iraq. This Navy SEAL mission was called Operation Iraqi Freedom. During this war, a holistic and dominant tactic of shock and awe was used. Thus a combination of both ground as well as airborne attacks were carried out in order to carry out the assignment in as little time as possible while also ensuring that infrastructural damage and loss of civilian life was kept to a bare minimum.

Operation Red Wing (2005)

Operation Red Wing which was a US led expedition to hunt for Al-Qaida guerrillas and the Taliban was conducted in the rocky region of Kunar. The team comprised four members – Lt. Michael P. Murphy, Petty Officer (PO) Danny Dietz, PO Matthew Axelson and PO Marcus Luttrell. The mission started on June 28, 2005 and during the operation three of the members were killed. Only one survived. The fourth Navy SEAL was miraculously protected by the local villages and later on rescued by US military forces. *Time* magazine carried the story – How the shepherd saved the SEAL. **SP**





Where SEALs Dare

The killing of the elusive international terrorist Osama bin Laden has focused the arclights on the Navy SEALs. Here are the men who dared to undertake operations which ordinary mortals would shudder to think of. Some of them have been decorated with the Medal of Honor, the US's highest tribute.

Navy SEALs who have been decorated with the Medal of Honor include: Lt Thomas Norris (Vietnam); Lt (jg) Joseph Robert Kerrey (Vietnam); Lt Michael Edwin Thornton (Vietnam); Lt Michael P. Murphy (Afghanistan) and Petty Officer 2nd Class Michael A. Monsoor (Iraq).

Vice Admiral William H. McRaven



The man in the spotlight is Vice Admiral William H. McRaven, one of the most experienced terrorist hunters in the US. A former SEAL himself, McRaven tapped a special unit for Operation Neptune Spear, two months earlier.

He has worked almost exclusively on counterterrorism operations and strategy since 2001, when as a Navy captain he was assigned to the White House shortly after the September 11 attacks. The author of a textbook titled "Spec Ops" McRaven

had long emphasised six key requirements for any successful mission: surprise, speed, security, simplicity, purpose, precision and repetition.

Although he's a three-star admiral, the muscular 55-year-old still sometimes accompanies his teams on snatch-and-grab missions.

Roy Boehm (April 9, 1924 – December 30, 2008)

Arguably one of most famous of all Navy SEALs, and considered the godfather of all SEALs. He was the

first officer in charge of SEAL Team Two.

Roy. H. Boehm served the military for 30 years in various capacities, and rose from the enlisted ranks to develop, and lead what was to become part of the elite combat force. He was instrumental in not only designing and developing but also implementing and leading this commando force.

Michael Anthony Monsoor (April 5, 1981 – September 29, 2006)



Monsoor was killed during the Iraq War and posthumously received the Medal of Honor. Monsoor enlisted in the US Navy in 2001 and graduated from Basic Underwater Demolition/SEAL training in 2004.

Delta Platoon was sent to Iraq in April 2006 and assigned to train Iraqi Army soldiers in Ramadi. Monsoor and his platoon frequently engaged in combat with insurgent forces. On September 29, 2006 an insurgent threw a grenade onto

a rooftop where Monsoor and several other SEALs and Iraqi soldiers were positioned. Monsoor quickly smothered the grenade with his body, absorbing the resulting explosion and saving his comrades from serious injury or death. Monsoor died 30 minutes later from serious wounds caused by the grenade explosion.

In October 2008, the US announced that DDG-1001, the second ship in the Zumwalt class of destroyers, would be named Michael Monsoor in his honor.

Michael Patrick Murphy (May 7, 1976 – June 28, 2005)



He was the first person to be awarded the medal for actions in Afghanistan; and the first member of the US Navy to receive the award since the Vietnam War.

After college he accepted a commission in the United States Navy and became a United States Navy SEAL in July 2002. Murphy was sent on several missions while participating in the Global War on Terrorism and was killed on June 28, 2005, after his team was compromised

and surrounded by Taliban forces near Asadabad, Afghanistan.

On May 7, the US Navy christened its newest guided-missile destroyer, pre-commissioning unit (PCU) Michael Murphy (DDG 112) during a ceremony at General Dynamics Bath Iron Works in Bath, Maine. The new destroyer was christened on what would have been Murphy's 35th birthday. **SP**

Navy SEALs Trivia

- SEALs crash through doors and 'double tap' their enemy's face, as they did to Osama bin Laden, to ensure he was dead
- A SEAL has never been left behind on a mission nor captured
- There are currently about 2,290 active-duty SEALs
- There are no women Navy SEALs
- About 25 per cent of trainees make it through training to become SEALs
- The SEALs have to do 42 push-ups in under two minutes
- Some Navy SEALs have drank snake venom to survive
- The film Navy SEALs starring Charlie Sheen focuses on their operations. The story of the movie was written by a Navy SEAL

GENERAL (RETD)
VP. MALIK

Op Geronimo

A reality check for India

Operation Geronimo enabled elimination of Osama bin Laden—the world's most wanted and hunted terrorist leader—in a Special Forces' action which will go down in history for strategic as well as operational reasons. It has several lessons on the employment of Special Forces in the emerging security threats related to terrorism, border management, security of offshore assets, and to meet any 'out of area contingencies' (OOACs).

At the strategic level, Operation Geronimo shows that national security remains the highest priority for the US President, no matter which political party he may belong to. It reflects national determination and perseverance to achieve a national security goal: in this case bringing to justice a terrorist leader who had so brutally assaulted the United States ten years ago on September 11, 2001. And if such a goal demands overlooking 'sovereignty' of a friendly or a not-so-friendly nation, so be it! As this mission and its cause were so 'righteous', no nation except Pakistan has raised any objection on it. The operation has definitely enhanced US deterrence capability against future misadventure by any terrorist group.

At the operational level, credit should be given to the CIA, which on the basis of a Guantanamo interrogation report, was able to build upon it, brick by brick, and get to the target. That the target was being shielded by its own ally would have made that much more difficult. In such a mission, human intelligence plays a much greater role than technical intelligence and ensures greater chances of success in the execution of the mission. The CIA has shown exemplary capability and once again proved the importance of human intelligence over technical intelligence.

Like the buildup of intelligence, planning and execution requires capacity building: selection of personnel, extensive training, coordination and rehearsals over target like objectives. The plan must ensure total surprise to be able to deliver high results with minimum resources and signatures. For days, the team has to maintain a ready to launch mode so that minimum time is wasted between political assent and mission execution. Security of the mission is, therefore, critical.

The operation in Abbottabad was conducted by a SEAL Team (the acronym is derived from its capacity to operate at sea, in the air and on land) nominated for the mission two months in advance. The SEALs are US Navy's principal special operations force; part of the Naval Special Warfare Command and maritime component of the US Special Operations Command. They are trained in a wide variety of missions including counter-terrorism, unconventional warfare, foreign internal defence and hostage rescue.

Yet another lesson is about the separation between operational and strategic levels in such operations. While there was always some degree of overlap between these levels, due to ever increasing influence of Information Technology (IT), enhanced mobility, long reaches in targeting and effective command and control, this overlap stands blurred. Continuous intelligence briefing of the US President over nine months and the picture of the President monitoring its execution along with his national security team says it all!

Operation Geronimo has reinforced the need for Special Forces in the emerging security threats in peace and war. In war, they are employed as force multipliers to complement the task performed by conventional forces entailing high risk and high gain missions requiring minimum visibility.

India maintains Special Forces in all three wings of its armed forces—Army Commandos, Marine Commandos (MARCOS) and Air Force Garuds, apart from the Special Action Groups (SAGs), comprising Army personnel on deputation with National Security Guards. While the SAGs have dedicated resources like aircraft and helicopters, state-of-the-art equipment and training facilities, the Special Forces of the armed forces depend mostly on their service resources. These Special Forces are not country specific but mission specific. Special Forces of the armed forces can be integrated for any mission. For this purpose, they carry out joint training frequently.

India's Special Forces do not have the same capability as the US forces due to non-availability of high technology. But depending upon the distance involved and combat environment up

Intelligence is the key to Special Forces operations. Employment of Special Forces requires accurate intelligence and continuous surveillance of the target.

PHOTOGRAPH: White House



US President Barack Obama and Vice President Joe Biden, along with members of the national security team, receive an update on Operation Geronimo on May 1, 2011



to and on the target, they are capable of carrying out Operation Geronimo type missions across the border or for OOACs. However, there are some problems in their tasking, organisational and equipping priorities.

First and foremost is the inhibition at the decision-making level, usually on the ground(s) of moral and diplomatic propriety, poor understanding of strategic environment, military knowledge and risk appetite. This attitude at the highest level gets reflected in their employment mostly on tactical missions instead of strategic missions. We thus fail to exploit their true potential and remain content with successful counter-terror operations hinterland.

Intelligence is the key to Special Forces operations. Employment of Special Forces requires accurate intelligence and continuous surveillance of the target. We need enhanced human and technical intelligence capabilities in our neighbourhood and wherever else required. This takes a long time to build and much less to get eroded. Some years ago, RAW had built such a capability but was frittered away on political directions. Intelligence also requires automated

decision support system and real time dissemination along with a common operation picture.

In the absence of a Chief of Defence Staff and tri service apex organisation like the Special Forces Command, despite frequent joint training, our Special Forces are not optimally integrated. Currently, Army Special Forces face an acute shortage of officers and some essential equipment.

Finally, in view of the raging debate in some parts of the world over ethical, moral and 'sovereignty' issue, it has been stated that strategy and diplomacy in international relations are based on the art of the possible and advancement of national interests. The Western world believes that morality in this ethical system is the handmaiden of state policy, dictated by the situation in which we are placed. Our own Vedic thinking had been that "Chakravarty Raja is free to have his policies limited by strictures and tampered by ethical considerations and sentiments, but not if his intention is to best serve the national interests." A righteous cause is important, but the method need not be sentimental, or even ethical. Kautilya said, "When the interests of the country are involved, ethics are a burdensome irrelevance." **SP**

A righteous cause is important, but the method need not be sentimental, or even ethical. Kautilya said, "When the interests of the country are involved, ethics are a burdensome irrelevance."



Muscle power at Vijayee Bhava

In a six-day joint wargame, the Indian Army and the Indian Air Force displayed its muscle power in the exercise called *Vijayee Bhava* (Be Victorious) in Suratgarh, Rajasthan, near the Pakistani border. Over 20,000 troops participated in the exercise which saw the latest weaponry and armoured vehicles in the Thar desert.

The Indian Army, the world's fourth largest fighting force, has reportedly conducted 10 major military exercises along Pakistan's border in the past six years.

The Ministry of Defence said on the eve of the exercise that this was the first amongst a series of Western Command routine annual summer exercises underway in the South Western Sector. The manoeuvres were conducted in North Rajasthan to test the operational and transformational effectiveness of the Ambala-based Kharga Corps as also validate new concepts which have emerged during the transformation studies undertaken by the Army. The pivot corps manoeuvres are scheduled to take place later this month. The Command HQ synergises the operations of the Pivot and Strike Corps.

This exercise envisaged sustained massed mechanised manoeuvres in a simulated environment by composite combat entities, supported by air and complemented by a wide array of weapon systems and enabling combat logistics.

The Indian Army, which is working towards a 'capability based approach', has embarked on a series of transformational



initiatives spanning concepts, organisational structures and absorption of new age technologies, particularly in the fields of precision munitions, advance surveillance systems, space and network-centricity. These were fielded and trial evaluated by nominated test bed formations and units participating in the exercise. The thrust of the transformational initiative is for the Army to emerge as a modern, lean, agile and enabled force. **SP**

Indian Navy action makes pirates flee Chinese vessel



An aerial view from Indian Naval TU 142M aircraft. Pirates mother vessel is seen in close proximity

Indian Navy's persistent efforts recently led to some pirates fleeing from a Chinese merchant vessel MV Full City. On May 5 morning, the Navy received an SOS call regarding a pirate attack on Chinese merchant vessel MV Full City about 450 nm (850 kms) West of Karwar. The Indian Navy immediately diverted an Indian Navy aircraft and a Coast Guard ship.

The TU 142 (maritime reconnaissance) aircraft of the Indian Navy, which was on anti-piracy patrol, arrived overhead MV Full City in less than 30 minutes. The aircraft observed a pirate mother ship next to MV Full City and an empty skiff alongside the ship.

The aircraft made a number of low passes over the ship and strongly warned the pirates on radio to leave the merchant ship immediately, stating that Naval warships were closing in the area. The aircraft observed that the warning had the desired effect and the skiff was seen fleeing from the ship along with the pirates and heading for its mother ship nearby.

As there were no surface forces in the immediate vicinity to board MV Full City and sanitise the ship, the Indian Navy aircraft maintained overhead MV Full City for over three hours assisting the rescue operation by coordinating with the NATO Task Force. The TU aircraft finally left the area after four hours, having successfully freed MV Full City from the pirate attack and, ensuring that surface forces were within the range to proceed with the boarding and sanitising operations.

With independent as well as collaborative efforts the Indian maritime forces have reduced the threat of piracy in the Arabian Sea in general and the Eastern Arabian Sea in particular. Reports indicate that there has been a drop of over 80 per cent in the number of piracy attacks in the Eastern Arabian Sea. As a matter of fact, in the month of April 2011, there was not a single reported piracy attack in the Eastern Arabian Sea. This demonstrates the nation's continued determination to assure safety of merchant shipping in the International Sea Lanes in the Arabian Sea. **SP**



DRS bags contract from US Army for enhanced night vision goggles

DRS Technologies, a Finmeccanica Company, announced that the US Army has awarded its reconnaissance, surveillance and target acquisition (RSTA) business unit a \$16.5 million contract for enhanced night vision goggles (ENVGs).

Awarded by the US Army's Project Manager Soldier Sensors and Lasers (PM SSL), the contract is provided through a programme to acquire leading-edge systems to enhance survivability of warfighters.

Prime contractor DRS RSTA and strategic partner L-3 Electro-Optical Systems leveraged complementary capabilities and critical expertise in both of ENVG's fundamental technologies.

DRS' infrared imaging technology enables soldiers to see target detail even through heavy obscurants such as sandstorms and fog. L-3's image intensifier technology enhances laser aiming, mobility and manoeuvring under very low-light conditions.

"The DRS helmet-mounted ENVG system will provide warfighters with unprecedented mobility, situational awareness, threat recognition and targeting accuracy," said DRS RSTA President Terry Murphy. "We are pleased that the Army has selected the DRS team to produce these mission-critical enhanced night vision goggles."

The ENVGs use 25 µm, 320 x 240 infrared detectors that are currently fielded on more than 10,000 of the DRS light weapon thermal sights (LWTS), the image intensifier tubes

provided by L-3 are fielded on more than 80,000 L-3 AN/PVS-14 night vision goggles. The DRS ENVG will apply extensive image fusion and human factors engineering using expertise gained through government research and development programmes and advanced soldier mobility systems. This expertise is critical because ENVG images will be viewable not only separately, but optically fused in the eyepiece. **SP**

Indian Army reiterates presence of terrorist camps in Pakistan

The Indian Army has reiterated that terrorist camps in Pakistan were very much active and intent on creating trouble across the Indian border.

Major General Ravi Thodge, General-Officer-Commanding of the counter-insurgency Kilo Force in the Kashmir Valley said that "Guerrilla training camps are still active across the line of control."

A huge cache of arms and ammunition along with other logistic support equipment were displayed. The arms and ammunition were seized by personnel of the 6 Rashtriya Rifles and Jammu and Kashmir Police in the dense Haphruda forests in Kupwara, Thodge said.

Eight AK-56 rifles, four AK-47 rifles, one under barrel grenade launcher (UBGL), eight UBGL grenades, 694 rounds of AK ammunition, 40 grenades, one radio set with antenna, 20 remote-control improvised explosive device (IED) boxes and 15 electric detonators, among other ammunition and equipment, have been recovered. **SP**



DRS gets follow-on order for advanced thermal weapon sights

DRS Technologies announced that its reconnaissance, surveillance and target acquisition (RSTA) group has been awarded a \$68.2 million contract by the US Army Research, Development and Engineering Command (RDECOM) to provide advanced thermal weapon sights (TWS).

As a result of this follow-on order, totals have now reached over \$460 million against a five-year indefinite delivery indefinite quantity (IDIQ) contract awarded to DRS Technologies in July 2007.

The order of the infrared-detecting devices—which enable soldiers to conduct surveillance and target acquisition, day or night—includes light, medium and heavy TWS from the DRS (TWS) II family of systems. Since 2004, RSTA has manufactured and delivered over 50,000 TWS. This new award will further expand the military deployment of technology from DRS.

The TWS employ 25-micron uncooled vanadium oxide detectors which enable troops to view the battlefield and pinpoint targets clearly through smoke, dust, haze, light fog and total darkness. Regardless of lighting conditions, the DRS detects infrared (heat) waves from people and objects in their field of view and display sharp images from hundreds of metres away.

"We are pleased that the Army has continued to call on DRS Technologies for thermal weapon sights to enable its soldiers to engage even more effectively in combat situations," said RSTA President Terry Murphy.

"As the largest producer of uncooled focal plane arrays in the world, RSTA has set the pace for the development of military infrared technology applications. We are privileged to offer our latest thermal technology to help maximise the capabilities and impact of troops." **SP**



Ambassador Roemer says Indo-US relations bigger than deal

The US Ambassador in India, Timothy J. Roemer has said that though the US was 'disappointed' on losing out on the \$10 billion deal for India's requirement of medium multi-role combat aircraft (MMRCA), the relationship between the two countries would remain strong.

The Ambassador told reporters that "Indo-US strategic relations is bigger than any one



deal". The 'global partnership' revolved around various areas such as security, environment, green technology and fighting poverty. "We are two partners working together for global peace, global partnership. One deal does not impact that strategic relationship," he said.

Boeing and Lockheed Martin were in the MMRCA race till the government decided to down-select to two defence companies. "We believe that cost of F-18 and F-16 is about 70 to 80 million (dollars) a piece and the Typhoon and Rafale is around 130 million (dollars) a piece. We provided great value particularly to the taxpayers of India. We provided great technology. We have rather proven, mature and working (technology). I think the competitors have a radar system that they are trying to incorporate."

Around the same time the down-select was announced, the US Ambassador also put in his papers citing 'personal reasons'. He is expected to return to the US in June. SP



Flight tests of the first serial Su-35S starts

Sukhoi Company has started the flight tests of the first Su-35S serial fighter. The aircraft was flown from the airfield of Komsomolsk-on-Amur Aircraft Production Association named after Yuri Gagarin. During an hour and a half flight the pilot performed tests on various operating modes. The aircraft was piloted by test pilot Sergey Bogdan. He was the very pilot who flew the first Su-35 prototype on February 19, 2008.

After the completion of production flight tests, the aircraft will be delivered to the Russian Ministry of Defence. Sukhoi has finished preliminary tests of Su-35/Su-35S, conforming the key features of avionics, aircraft stability and control during flight and performance of power plant and navigation systems. SP

Lockheed Martin-built nextGen missile warning satellite launched

The first space-based Infrared system (SBIRS) geosynchronous (GEO-1) spacecraft, built by Lockheed Martin for the US Air Force, was successfully launched on May 6 from Cape Canaveral Air Force Station, aboard a United Launch Alliance Atlas V rocket. SBIRS GEO-1 is the most technologically advanced military infrared satellite ever developed and will deliver vastly improved missile warning capabilities for the nation while simultaneously improving the nation's missile defence, technical intelligence and battlespace awareness mission areas.

SBIRS GEO-1 includes highly sophisticated scanning and staring sensors that will deliver improved infrared sensitivity and a reduction in area revisit times over the current constellation. The scanning sensor will provide a wide area surveillance of missile launches and natural phenomena across the earth, while the staring sensor will be used to observe smaller areas of interest with superior sensitivity. These dual independent sensors will enhance early warning of missile launches around the globe, support the nation's ballistic missile defence system, greatly expand our technical intelligence gathering capability, and bolster situational awareness for warfighters on the battlefield. SP

Boeing contract for JDAM kits

The Boeing Company has announced that it has received contracts totaling \$100 million for two types of Joint Direct Attack Munition (JDAM) kits. Naval Air Systems Command (NAVAIR) awarded the company an \$8 million contract that represents the first major production order for Laser JDAM kits. The contract is for low-rate initial production of 700 laser sensor kits for the Navy's direct-attack moving target capability weapons requirement.

The US Air Force announced a \$92 million contract for more than 4,000



Lot 15 JDAM kits on March 14. This follows an \$88 million contract awarded January 14 for the first 3,500 tail kits in the same lot.

JDAM is a low-cost guidance kit that converts existing unguided free-fall bombs into near precision-guided weapons. In addition to conventional JDAM and Laser JDAM applications, the JDAM extended range configuration – currently in demonstration with an international customer – is designed to increase the stand-off range to approximately 65 kilometres. **SP**

Pratt & Whitney delivers first F135 engine

Pratt & Whitney has delivered the first F135 engine for low rate initial production (LRIP) 3 to the US Government for the F-35 Lightning II programme. F135 engines in LRIP 3 meet established affordability targets and include engine modifications and improvements based on findings from the F-35 flight test programme. Pratt & Whitney is a United Technologies Corp. company.

“Delivery of our 21st production engine is a significant milestone for the F-35 programme, as we continue to deliver a more mature and capable F135 engine to meet the evolving needs of the war fighter,” said Bennett Croswell, Vice President, F135/F119 Engine Programmes. “In doing so, we continue reducing costs to produce a more affordable and reliable product for our customers.”

As part of LRIP 3, Pratt & Whitney will begin delivery of F135 engines to all three branches of the US Armed Forces, as well as F-35 partner countries the United Kingdom and the Netherlands. Pratt & Whitney has delivered all 20 of the F135 engines in LRIP 1 and 2.

Pratt & Whitney has designed, developed and tested the F135 to deliver the most advanced fifth-generation fighter engine for the United States and its allies around the world. The F135 is the only engine powering the F-35 test programme with more than 88 flawless vertical landings, 845 flight tests and 1,200 flight hours. **SP**

Patriot test fires PAC-3 MSE missile

Raytheon Company's Patriot Air and Missile Defense System successfully test-fired Lockheed Martin's PAC-3 MSE (Missile Segment Enhancement) missile recently at White Sands Missile Range.

“This demonstration of Lockheed Martin's MSE missile with the Patriot system builds on the family of combat-proven GEM and PAC-3 interceptors already available with Patriot and continues a rich history of integrating new technologies and capabilities,” said Sanjay Kapoor, Vice President for Patriot Programmes at Raytheon Integrated Defense Systems (IDS).

Raytheon IDS is the prime contractor for both domestic and international Patriot Air and Missile Defense Systems and system integrator for Patriot Advanced Capability-3 missiles. **SP**



PHOTOGRAPHS: Lockheed Martin, Boeing



Boeing delivers first C-17 to UAE Air Force and Air Defence

Boeing recently delivered the first of six C-17 Globemaster III airlifters to the United Arab Emirates (UAE) Air Force and Air Defence during a ceremony at the company's final assembly facility in Long Beach.

The UAE will take delivery of three more C-17s this year and two in 2012 as it modernises its airlift capabilities.

“I am proud to say that the first C-17 airlifter delivered to the United Arab Emirates was built in the great state of California. C-17s can be seen in the skies over California and around the world delivering humanitarian aid to those in need, even to the most remote runways in the world,” said California Lt Governor Gavin Newsom. “My hope and mission is to make sure that we keep this capability alive and keep this production line rolling.”

“Congratulations to the UAE Air Force and Air Defence as they join the worldwide community of C-17 operators,” said Chris Chadwick, President, Boeing Military Aircraft. “We pledge that your commitment to the C-17 will be backed up by Boeing's expertise, support and dedication – wherever your crews fly the finest airlifter the world has ever known.” **SP**



Rustam-H project gets ₹1,500 crore

The Defence Research and Development Organisation (DRDO) is set to deliver the next version of unmanned aerial vehicle (UAV) Rustam-I. The project has received a sanction of ₹1,500 crore from the Cabinet Committee on Security (CCS), according to Dr W. Selvamurthy, Chief Controller, R&D (Life Sciences), DRDO.

“Rustam-H is on the priority list of CCS and work has started on the project. We have already developed a special range for the project at Chi-

Rustam prototype at Aero India 2009, Bengaluru



tradurga in Karnataka where a runway and air traffic control system have been installed for the testing of Rustam-H. The project should reach a considerable conclusion within next three to five years,” Dr Selvamurthy said.

Rustam-H, the advanced version of Rustam-I, a medium altitude long endurance (MALE) UAV, will be designed for 24 hours of endurance, a longer flying range and 500 kg payload. Bangalore-based Aeronautical Development Establishment (ADE) is the nodal lab for the development of Rustam-H. The software would be provided by Centre for Artificial Intelligence and Robotics (CAIR). **SP**



Boeing Phantom Ray completes first flight

The Boeing Phantom Ray unmanned airborne system (UAS) successfully completed its first flight April 27 at NASA's Dryden Research Center at Edwards Air Force Base, California. The 17-minute flight took place following a series of high-speed taxi tests in March that validated ground guidance, navigation and control and verified mission planning, pilot interface and operational procedures. Phantom Ray flew to 7,500 feet and reached a speed of 178 knots.

“This day has been two-and-a-half years in the making,” said Darryl Davis, president, Boeing Phantom Works. “It’s the beginning of providing our customers with a test bed to develop future unmanned systems technology, and a testament to the capabilities resident within Boeing. Just as follow-on tests will expand Phantom Ray’s flight envelope, they also will help Boeing expand its presence in the unmanned systems market.”

The flight demonstrated Phantom Ray’s basic airworthiness, setting the stage for additional flights in the next few weeks. These company-funded flights will prepare Phantom Ray to support potential missions that may include intelligence, surveillance and reconnaissance; suppression of enemy air defences, electronic attack, strike and autonomous air refuelling. **SP**

First flight of heavy-fuel powered Fury 1500 UAS



AME unmanned air systems (AME UAS) has announced the successful first flight of the Fury 1500 small tactical unmanned aerial system (STUAS) powered by a heavy-fuel engine.

Its latest upgrade to the Fury, developed at AME UAS’s facility in San Luis Obispo, California, significantly increases the capability of the system, decreasing the logistical footprint of the system while increasing its endurance substantially.

The Fury 1500 is a long-endurance, survivable, and runway-independent UAS, providing the large (multi-payload) capacity needed to satisfy critical requirements for the warfighter. The Fury UAS, which was designed for multiple special missions, had its initial flight in 2008. **SP**

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Full-body scan not a health risk

A study by Pratik Mehta of University of California, Berkeley and Dr Rebecca Smith-Bindman of University of California, San Francisco has concluded that there is “no significant threat” from backscatter X-ray scanners despite them using ionising radiation.

The study said that the doses are very low – less than one per cent of the additional radiation a person gets from flying in an airplane – that only a handful of cancer cases are likely to result directly from scanner use.

“If individuals feel vulnerable and are worried about the radiation emitted by the scans, they might reconsider flying altogether since most of the small, but real, radiation risk they will receive will come from the flight and not from the exceedingly small exposures from the scans,” wrote Pratik Mehta and Dr Rebecca Smith-Bindman.

The authors wrote that among the estimated one million US frequent fliers who take ten 6-hour plane trips per week for a year, there would be four additional cancers. About 4,00,000 cancers would occur in those fliers anyway.

Mehta and Smith-Bindman said that one would need to undergo 50 airport backscatter scans to equal the exposure from a dental X-ray, 1,000 to equal the exposure from a chest radiograph, 4,000 to equal a mammogram, and 2,00,000 to



equal a CT scan.

The authors recommended that the TSA should not use body scanners but approve of independent testing devices. There are 486 of such scanners in use in 78 US airports. By the end of 2011, there will be around 1,000. **SP**

Civil Aviation Ministry reiterates air safety

The Civil Aviation Ministry’s resolve is to have a zero tolerance approach towards safety of the aviation sector. In order to have a sustained and continuous process of monitoring and implementing safety-related issues a Civil Aviation Safety Advisory Council (CASAC) has been set up under the chairmanship of Secretary, Ministry of Civil Aviation. It is a representative body of all stakeholders and safety experts of international repute. It has six working sub-groups which are working continuously to formulate policies/regulations pertaining to civil aviation safety requirements.

It is further clarified that at present nine government Flight Operation Inspectors (FOIs) are on the rolls of Director General of Civil Aviation (DGCA). However, these are insufficient number to carry out mandatory safety oversight functions. Therefore, there is a civil aviation requirement (CAR) for taking pilots from other airlines on secondment basis to supplement the surveillance activity undertaken by the FOIs.

This is an effective tool to put in place an effective safety oversight over the increasingly growing aviation industry. Accordingly, 18 FOIs on secondment basis are working in the DGCA. The regulatory authority has an effective system in place to avoid any conflict of interest while discharging their statutory duties. The oversight functions are done by a team of FOIs and not on individual basis. They have to undertake mandatory surveillance of various airlines in accordance with the annual plan as per the standard check list.

DGCA has a stringent safety audit procedure in place which is undertaken by the Air Safety Directorate. This Directorate is headed

by an officer of the level of Deputy Director General and adequately manned in headquarters and all the regions. It is brought to the notice that ICAO and FAA has conducted an elaborate safety audit of the DGCA and has put it on record that India conforms to the highest level of safety regulations. India remained category-I nation on safety parameters.

It is reiterated that an effective safety oversight system is in place and is constantly being monitored, guided and upgraded to conform to the highest degree of surveillance. However, third party audit is a welcome idea and would be given due consideration. However, outsourcing of safety oversight function is neither appropriate nor desirable as it involves criticality of the operation.

Further, the Ministry is actively in the process of establishing a Civil Aviation Authority (CAA) which is going to replace the existing DGCA with additional duties and responsibilities in order to make it more effective, proactive, dynamic and consumer friendly. **SP**

Woman with gun arrested at Delhi airport

The Central Industrial Security Force (CISF) personnel at the Indira Gandhi International Airport found a woman carrying a country-made pistol in her check-in baggage. The woman, identified as Vandana Kaushal, was produced in a court and was granted bail for a surety of ₹10,000.

Security officials at the airport recently found the pistol and a live cartridge in her baggage and she was not able to produce any valid documents. She was taking a flight to Mumbai. A case under Arms Act has been registered against her. **SP**



Electric vehicles for military, security and police

The latest IDTechEx report has projected a rising market for electric vehicles for military, security and police duty. It is expected to be 15 per cent of the total electric vehicle market by value in 2021.

The report said that although the bulk of this demand will be for military vehicles on land, the water and airborne applications will each become businesses of well over one billion dollars yearly within the decade. The report emphasises the need to benchmark best practice between each of these modes and gives a large number of examples.

Interestingly, unmanned operation is very important, particularly for water craft and aircraft. Both hybrid electric and pure electric drive trains will be deployed in large numbers.

The report makes sense of the bewildering variety of electric vehicles used and about to be used for military, security and police purposes, whether hybrid or pure electric. Huge numbers of micro and nanobots will be deployed for surveillance and other military tasks making countermeasures almost impossible. Most of these will fly. Indeed tens of millions of dollars are being spent developing robot hummingbirds and bats alone.

Autonomous underwater vehicles (AUVs) cost up to \$5 million each and are already bought in thousands for search and rescue. Add to that unmanned aerial vehicles (UAVs) such as solar planes and the \$517 million Northrop Grumman solar military airship, now being built, are an even more important part of this story. They are used for surveillance and AUVs in the upper atmosphere are a fraction of the cost of a surveillance satellite.

At the other extreme, hand launched surveillance aircraft are electric for reliability and silence and over \$400 million has already been spent on them. All are driving a rapid change in technology of parts and powertrains as is explained in many summary tables and text in the report. For instance, multi-mode energy harvesting is being increasingly deployed.

Although most of the development, manufacture and purchase of these vehicles takes place in the USA, unique advances in Singapore, Korea, the UK, Germany, Switzerland, Canada, New Zealand and elsewhere are explained in the report including the many electric vehicles for dual purpose civil and military applications, often where the civil application first pushes the boundaries of what is possible. **SP**

PHOTOGRAPH: Northrop Grumman, free-D.nl

CISF security for Infosys Pune centre

The Central Industrial Security Force (CISF) has been asked to provide security cover to Infosys Pune centre following threat perception to major infrastructure facilities including those of the private sector. The CISF has been providing security at Infosys campus in Bangalore and Mysore since 2009.

The CISF Inspector General P. Phalnikar said, "With reports of sleeper cells and various other intelligence inputs coming in, we cannot take security lightly. After the 2009 amendment to the CISF Act, the mandate of the force has been broadened to provide direct security cover to the private sector also. We are currently providing security to nuclear installations, space establishments, airports, seaports and power plants."

He said the CISF provides special training to its personnel in anti-terror operations and its strength has grown several fold to reach 1.25 lakh personnel. **SP**



LT GENERAL (RETD)
PC. KATOCH

The Humint factor

It is well known that during the time of I.K. Gujral as the Prime Minister the government banned development of trans-border human intelligence (HUMINT) sources. What is not known is that this naiveté has been compounded by successive governments in not reversing the decision, which is out of sync with ground realities of the 21st century requirements.

Talk to retired officials of intelligence agencies and they confirm this. HUMINT has been moribund in India ever since. We fail to understand that HUMINT will continue to be the heart, soul and brain of 21st century intelligence, on the same analogy that importance of the 'man behind the machine' should never be relegated. Not only does HUMINT enhance asymmetric advantage of our adversaries it is actually laughable to patronize this supposedly Satyug posture while wallowing in corruption, sleaze and deceit otherwise.

Even the Defence Intelligence Agency, which has a mandate to operate trans-border human sources is denied permission to do so and directed to rely solely on technical intelligence (TECHINT). India does not understand the value of human intelligence, especially in achieving asymmetric advantage in the face of non-traditional threats and there are no signs of an effort to make amends. What a happy state for China and Pakistan.

Reliance on TECHINT alone is wholly inadequate albeit it is convenient to obfuscate lack of a coherent intelligence strategy in general and voids of inter-agency synergy in particular. We are unwisely spending crores on TECHINT while spending relatively nothing on HUMINT. This is the root cause for our inability to strategise and cope with irregular and asymmetric threats, both national and transnational. This has not only affected covert intelligence gathering but also counter intelligence. We do not even exploit open source intelligence including capitalising on the considerable Indian diasporas abroad.

Within the country, while media encourages the citizen journalist concept, the establishment has no such concept – the feasibility of 'billion eyes on the ground' has never been explored. Hence, inadequate intelligence even in the case of the Maoist insurgency has created the biggest fault line in India. The powers that be need to educate themselves on the nuances and advantages of HUMINT, at the strategic, operational and tactical levels, that even signal intelligence (SIGINT) and open source intelligence (OSINT) are linked to HUMINT and HUMINT will continue to play significant role in both defensive protection and offensive penetration of cyberspace.

The ambivalence and ambiguity of our hierarchy of course is understandable, for how do you task your intelligence agencies in the absence of a national security strategy and national security objectives? This is despite continuing calls by eminent strategists, like the late K. Subramanyam to act up and fill these voids. How do you evolve a national intelligence acquisition plan and task your intelligence agencies when we are still struggling to evolve an integrated intelligence set up? But we can't have them sitting idle either, can we?

No wonder an erstwhile Intelligence Bureau official pens in his book that no matter who is in power in India, the entire intelligence effort is focused on how to do down the opposition. Disregarding HUMINT makes us easy targets, earning the label of a 'soft state'. We need to reinstate primacy of HUMINT in relation to TECHINT, the former costing less, requiring less time and being more responsive in relation to the latter. Without this, we will continue to make decisions in vacuum and without holistic intelligence. Suitable application of HUMINT, duly integrated with modern surveillance technology and processing capacity, will greatly enhance situational awareness, assist in the decision support system and lead to better decision-making. **SP**



Suitable application of HUMINT, duly integrated with modern surveillance technology and processing capacity, will greatly enhance situational awareness, assist in the decision support system and lead to better decision-making



Sony hires cyber-security detectives

Sony has hired cyber-security detectives from Guidance Software and consultants from Robert Half International Inc's subsidiary Protiviti to help clean its networks and catch the people behind a massive data breach that exposed the personal data of more than 100 million video game users.

The Japanese electronics giant has retained a team from privately held Data Forte that is led by a former special agent with the US Naval Criminal Investigative Service to work alongside the FBI agents, who are also probing the matter. **SP**

RBI advises banks to set up whistle-blowing system

The Reserve Bank of India has directed the banks to put in place a strong whistle-blowing system as well as reward employees who help prevent cyber frauds.

"Appropriate mechanisms need to be established in banks...including transaction monitoring teams in banks and to investigate them (disputes or suspicions raised by stakeholders) thoroughly. Banks should have a well-publicised whistle-blowing mechanism," RBI said.

This suggestion is part of the central bank's guidelines on information security, electronic banking, technology risk management and cyber frauds. "A positive way of creating employee awareness is to reward employees who have gone beyond their call of duty, and prevent frauds. Awards may be given to employees who have done exemplary work in preventing frauds," the RBI said. **SP**



EU carbon trading resumes

Following cyber thefts in several countries and loss of carbon accounts, the European Union had shut down trading in emission certificates. Recently, the last of the bloc's national carbon registries resumed operations. The European Commission, the EU's executive, said that Lithuania's registry reopened for carbon trading.

The European Commission on January 19 had suspended all spot trading in emissions certificates after thieves hacked into accounts in five national registries and stole some two million allowances valued at about €30 million. The Commission had asked the countries to secure the registries, before readmitting them. The cyber raids revealed massive security holes in some registries and showed how the fragmentation of the carbon market made it almost impossible to track down the stolen certificates or decide who owned them after they were found. **SP**

ILLUSTRATION: Anoop Kamath



Osama phishing scams

Even in death, Osama bin Laden continues to trouble. In the Internet world, there has been a wave of phishing scams in his name designed to collect personal or financial information.

Phishing scammers use e-mail or malicious websites to solicit information by posing as a trustworthy source. The US Government's "stop, think, connect" campaign reminds all Internet users to be vigilant whenever they're online, and to use caution when opening e-mails that purport to show images related to bin Laden's death. The same caution should be used with e-mails about the royal wedding or other recent major news events.

In addition to phishing, scammers may also post fake images online that can lead you to an infected website. At least two domains were found to be serving up fake antivirus rogware called "Best Antivirus 2011" on searches for "Osama bin Laden body" on a Google image search in Spanish, according to reports. **SP**



RFI/RFP/TENDERS

Indian Army

RFI: Active protection and counter measures systems for Tank T-90S/SK

Branch: DGMF

Publication date: May 4

Last date: May 31

RFI: Dual Technology Mine detectors

Branch: E-in-C Br

Publication date: March 21

Last date: June 30

Source: www.indianarmy.nic.in

Indian Navy

Tender: Fire resistant overalls

Branch: Dte of Procurement, Navy

Publication date: March 30

Last date: May 26

RFP: Supply of J-24 sailing boat with accessories

Branch: INS Jarawa, Port Blair

Publication date: April 10

Last date: June 10

Source: www.indiannavy.nic.in

Indian Air Force

RFI: Surface-to-air guided weapons range

MoD

Publication date: April 21

Last date: May 21

Tender: Spares for MiG-23 aircraft

Air Headquarters, MoD

Publication date: March 4

Last date: May 19

Tender: Spares for IL-78 aircraft

Air Headquarters, MoD

Publication date: March 7

Last date: May 26

Tender: Supply of Pechora spares

Air Headquarters, MoD

Publication date: March 10

Last date: June 9

Ministry of Home Affairs

RFP: Supply of Telephone Call Interception System

Police Modernisation Division

Publication date: April 29

Last date: June 16

Steiner's new military riflescopes

As a leading supplier of optics to the military and armed forces around the world, Steiner has worked closely with Special Forces and international weapons experts in the development and design of its new military riflescopes.

The new line of military riflescope includes five models which will meet a wide variety of tactical needs and applications. The new models include: 1x-4x-24mm, 3x-12x-50mm, 3x-12x-56mm, 4x-16x-50mm and 5x-25x-56mm.

From their rugged 34mm tubes and world class Steiner optics to the specially design G2 Mil Dot reticle, these scopes set a new standard for Steiner performance, quality and reliability. Three of the scopes—3x-12x-50mm, 3x-12x-56mm, and 4 x-16 x-50 mm—will be available in the first quarter of 2011. These three scopes share the same features such as 34mm tubes and 19.5 mils of elevation and 5 mils of windage adjustment, a specially designed illuminated, front focal plane G2 Mil Dot reticle and side mounted parallax/focus adjustment. SP



iRobot UGV

IRobot has unveiled pre-production prototypes of the new 110 FirstLook unmanned ground vehicle (UGV). The 110 FirstLook provides hasty situational awareness, and is capable of performing persistent observation as well as investigation of confined spaces.

The robot, which weighs less than 5 lb, is equipped with four built-in cameras and two-way audio communication with digital mesh networking capabilities for providing multi-direction situational awareness. iRobot's Government and Industrial Robots division President Robert Moses said the robot would be an ideal tool for warfighters and first responders for a range of infantry missions and special operations. SP



Harris new Falcon command system

Harris Corporation has unveiled its new portable software application, RF-5410-FC Falcon command system, which provides advanced battle-management capabilities. It is fully compatible with military and commercial GPS and delivers real-time troop positions for friendly and hostile forces, sensor data and status information. The system enables the entire military enterprise to work on a common operational picture and allows for target, threat and location information to be sent and received covertly. Harris RF Communications international business unit president Andy Start said the system will equip each soldier with up-to-date intelligence and plans, thereby increasing the chance of mission success. SP

Phantom jamming for convoy protection

The RCJ1390LT-H is a vehicle mounted very high power jammer designed for blocking remote-controlled improvised explosive devices used by terrorists. It uses state-of-the-art technology for maximum performance and jamming the signals transmits to activate bombs. Each module of RCJ1390LT-H transmits unique noise signal which create "firewall" between the transmitter and its receiver. Jamming radius of RCJ1390LT-H depends on several conditions such as transmitter frequency and output power, distance to receiver and obstacles between. System modularity allows flexible usage in different applications. The system use broadband omnidirectional antennas for 360 degree protection according to Phantom Group. SP



ITT Corporation announces key leaders for post-separation companies

ITT Corporation has announced the leaders who are expected to take the future roles of Chief Financial Officer and general counsel and Corporate Secretary in the three new companies that will be formed upon completion of the Corporation's previously announced plan to spin off its defence and water businesses later this year.

The new ITT Corporation will be led by ITT's current Chief Financial Officer, Denise Ramos, 54, who will serve as its future Chief Executive Officer. Its Chairman of the Board will be Frank MacInnis, 64, currently a Director of ITT Corporation and the Chairman and former Chief Executive Officer of EMCOR Group, Inc. The other key management officials will be: Thomas Scalera and Burt Fealing identified as CFO and GC at new ITT; Mike Speetzen and Frank Jimenez identified as CFO and GC at new water company; and Peter Milligan and Ann Davidson identified as CFO and GC at new defence company. **SP**

MBDA revenues up 7 per cent

MBDA, the European leader and global player within the missile systems sector, achieved a turnover of 2.8 billion euros in 2010, an increase of seven per cent compared to 2009. Order intake reached 2.2 billion euros, down from 2009 (2.6 billion euros) and the order book as of December 31, 2010, is 10.8 billion euros. Operational performance of the business remains strong, at over 10 per cent return on sales.

Antoine Bouvier, Chief Executive Officer of MBDA, said, "2010 was a year of mobilisation for MBDA. Mobilisation particularly with regard to Aster and the success it achieved in an ambitious firing programme which culminated in the first ever intercept of a ballistic missile by a European missile.

"Year 2011 will be a key moment for MBDA. Thanks to the integration that has taken place within the Complex Weapons sector over the last 15 years, the six national companies that all competed with each other in 1996 have now become one single company. MBDA is now seen as the test case for initiatives in other industrial sectors in Europe." **SP**

Rafael registers record net profits

Rafael Advanced Defense Systems ended 2010 with a record net profit of \$170 million, with orders totaling \$1.9 billion, an order backlog of \$3.6 billion and sales of \$1.8 billion.

Rafael posted a record profit, mainly resulting from R&D activities, financing revenues, and the sale of its subsidiary Medingo. Despite a decrease in sales compared to 2009, Rafael achieved its target sales, against falling global defence budgets and demand in some of its major markets. Rafael's order backlog in 2010 was \$3.5 billion, comprising 1.8 years of sales activity, of which 74 per cent is intended for export to countries in Europe, Latin America, the US and the Far East. **SP**

Rockwell Collins' second quarter sales up

Rockwell Collins has reported a sales increase of \$81 million or 7 per cent, to \$1.223 billion for its second quarter ended March 31, 2011 compared to 2010. Total segment operating earnings increased 11 per cent to \$242 million, or 19.8 per cent of sales, for the second quarter of 2011 compared to \$219 million, or 19.2 per cent of sales, for the second quarter of 2010.

"As expected, we were able to deliver solid growth across both our businesses with Commercial Systems leading the way," said Rockwell Collins Chairman, President and Chief Executive Officer Clay Jones. "Indicative of our operating leverage, Commercial Systems delivered operating earnings growth at almost three times the rate of sales while Government Systems demonstrated it could maintain an exceptionally high rate of profitability despite slower, albeit positive, growth." **SP**

SECURITY EVENTS

IMDEX Asia 2011

18-20 May

Changi Exhibition Centre, Singapore

www.imdexasia.com

CIPATE 2011 (China International Exhibition and Symposium on Police and Anti Terrorism Technology and Equipment)

19-21 May

Beijing Exhibition Centre, Beijing, China

www.cipatechina.cn/index.html

Irregular Warfare Summit 2011

23-25 May

Key Bridge Marriott, Arlington, VA, USA

www.irregularwarfaresummit.com

Air Weapons Integration 2011

24-26 May

Le Meridien Piccadilly, London, UK

www.airweaponsintegration.com

Homeland Security Summit India

30-31 May

Le Méridien, New Delhi, India

www.homelandsecurity-india.com

Cyber Security 2011

30 May-1 June

Hotel Le Plaza, Brussels, Belgium,

www.iqpc.com/Event.aspx?id=452000

Army Aviation Exhibition & Conference

6-8 June

Redstone FMWR Community Activity Center (CAC), Redstone Arsenal, AL USA

www.armyaviationevent.com

ArmorCon Military Armor Conference

6-9 June

Sheraton Premiere at Tysons Corner,

Vienna, USA

www.ArmorConExpo.com

Undersea Defence Technology 2011

7-9 June

ExCeL London, UK

www.udt-europe.com

Air Mission Planning

8-9 June

Copthorne Tara Hotel, London, United Kingdom

www.smi-online.co.uk/airmission-planning2.asp

Soldier Technology 2011

7-10 June

Olympia Conference Centre, London, UK

www.soldiertechology.com



Harry Potter's author skips screening

Harry Potter creator J.K. Rowling persuaded security staff at a New York airport to let her breach baggage restrictions – because she refused to be parted from the manuscript of the final 'Potter' book.

The author was given special treatment on her transatlantic flight – where heightened security measures are still in operation following the recent uncovering of a terrorist plot to blow up planes using explosives carried in hand luggage.

Rowling wrote on her website diary: "The heightened security restrictions on the airlines made the journey back from New York interesting, as I refused to be parted from the manuscript of book seven. A large part of it is handwritten and there was no copy of anything I had done while in the US. They let me take it on thankfully, bound up in elastic bands. I don't know what I would have done if they hadn't – sailed home probably." **SP**

Britain's biggest gem heist

Scotland Yard have issued CCTV images of two men dressed in suits, concealing handguns, who escaped with 43 rings, bracelets, necklaces and watches from the central London store in August last. They threatened staff at Graff's with handguns, briefly seized a woman employee as a hostage, and fired warning shots as they made a getaway in a series of cars.

The extent of the heist had been kept secret but police have now disclosed that the items stolen had a retail value of \$65 million (£40 million).

Britain's previous biggest diamond jewellery robbery is believed to be a £23 million raid, which also took place at Graff's, in 2003.

The two men, thought to be Londoners, arrived in a taxi at 4:40 p.m. on August 6 and were only in the New Bond Street jewellers for a matter of minutes. After being let in through the security doors both men produced handguns and threatened staff. They selected a total of 43 items and placed them into a bag before briefly seizing a woman employee hostage. **SP**



Taliban prisoners escape à la the Great Escape

Close to 500 Taliban prisoners recently escaped from Kandahar prison in southern Afghanistan through a tunnel hundreds of metres long. "A tunnel hundreds of metres long was dug from the south of the prison into the prison and 476 political prisoners of which 106 were Taliban commanders escaped last night," said Prison Director General Ghulam Dastageer Mayar.

The jail break is the second major escape in three years to hit Kandahar prison. In 2008, around 1,000 prisoners including Taliban militants escaped after the Taliban used a truck bomb to blow open the gates. **SP**

PHOTOGRAPHS: Daniel O'Brien/Wikipedia



The Malaysian arms heist

It was Malaysia's largest military weapon heist that turned into a hostage crisis and a five-day standoff with the police and army. On July 2, 2000, 15 men disguised as high-ranking army officers stole over 100 military-grade weapons and thousands of ammunition rounds from two Malaysian army camps. Malaysian police and army intelligence revealed that the Al-Ma'unah, an Islamic deviationist cult responsible for the heist and hostages. **SP**

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