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August 1-15 • 2011

Prahar launch
(report on page 2)
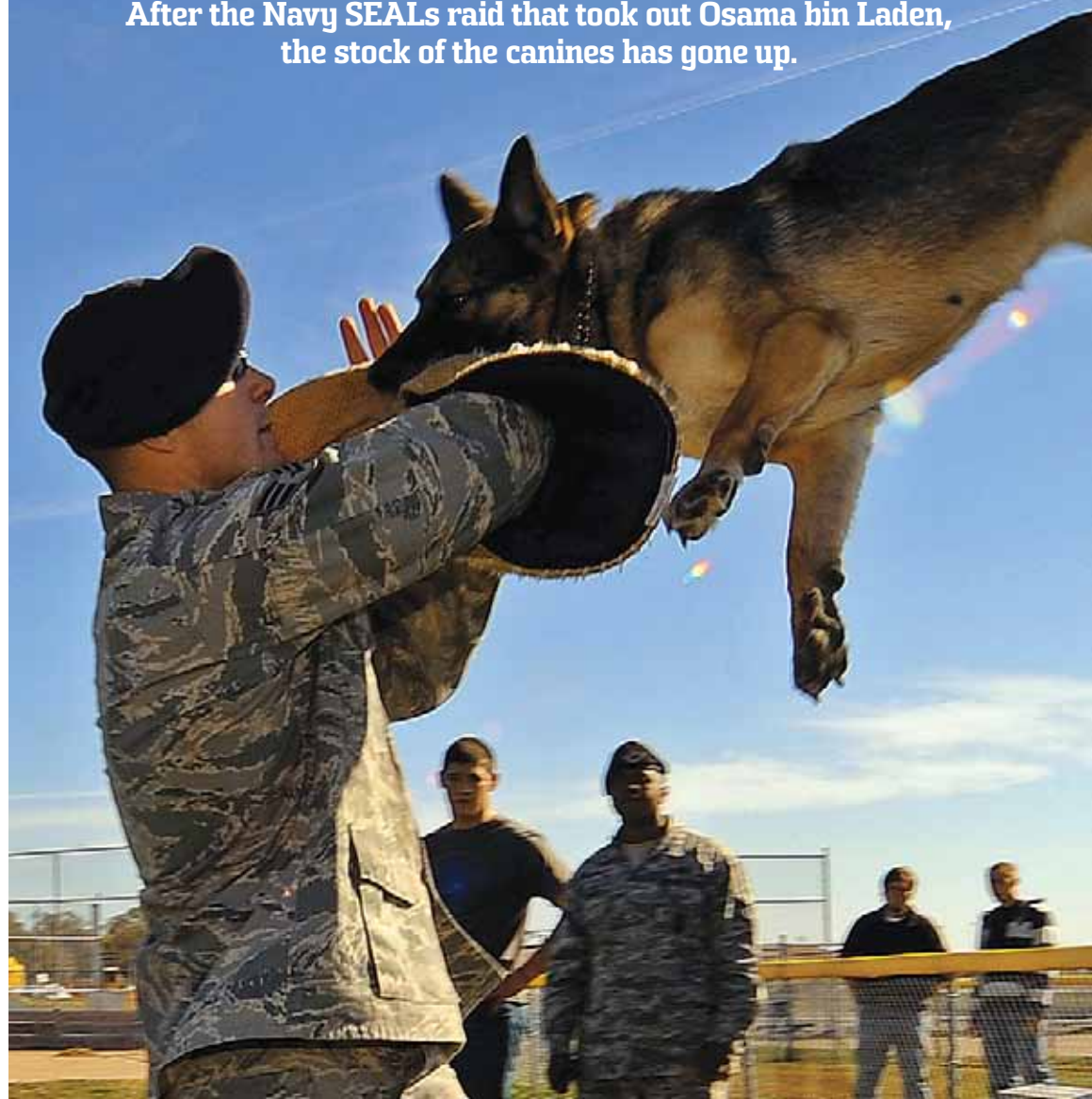
Dogs of War

Dogs are highly trained, invaluable assets in the war on terror. After the Navy SEALs raid that took out Osama bin Laden, the stock of the canines has gone up.

DELENG/2010/34651

India test fires a shoot-and-scoot nuclear missile, Prahar

[By **Vishal Thapar**]

Prahar, 150-km ballistic missile, appears to be India's response to Pakistan's Hatf IX (Nasr), a 60-km tactical nuclear missile, which was test-fired in April.

Indo-Pak rivalry enters the phase of tactical nuclear weapons, a potentially dangerous development which lowers the nuclear threshold (increases chances of nuclear strikes).

Pakistan's Nasr is aimed at blunting India's Cold Start doctrine of rapid mobilisation and invasion as punishment and deterrence against 26/11-type attacks.

India has described the Prahar as a "battlefield support system", an extension of its artillery, but stops short of officially calling it a nuclear weapon; Pakistan officially calls the Nasr a "tactical nuclear weapon" and a "low-yield battlefield deterrent", capable of inflicting damage on (Indian) mechanised forces. India describes the Prahar is an Army tactical missile, comparable to the US ATACMS, does not term it a strategic missile yet but says it is capable of carrying "different types of warheads."

But both sides describe the missiles as battlefield weapons, meant to destroy opposing formations. Pak's Nasr is not only meant to blunt India's Cold Start doctrine but also extends the threat of a nuclear strike to pre-empt even a limited war. Indian defence planners have been preparing to fight limited wars with Pakistan under a nuclear overhang (this presumes that a limited war is possible without provoking a nuclear exchange).

India says Prahar extends its artillery range to 150 km, filling the gap between multi-barrel artillery rockets like Smerch (70 km) and Pinaka (30 km) and medium-range ballistic missiles. This single-stage, solid-fuelled quick-reaction missile can hit a target 150-km away in just four minutes.

It is highly accurate, with only a 10-metre room for error. It's accuracy is far higher than the artillery rockets and even the other ballistic missiles of comparable range (Prithvi).

It can carry bombs of up to 200 kg: which is less than the capacity of the 150-km range Prithvi nuclear missile which can carry a 500 kg bomb payload. This is an indication that nuclear warheads are being miniaturised.

The Prahar's road mobile launcher can fire a salvo of six missiles to overwhelm an enemy formation. **SP**

Cover:
Senior Airman Steve Hanks hoists Ada up in the air after she clamped down on the bite sleeve as part of a working dog demonstration in 2010, at Offutt Air Force Base, Nebraska.

Cover image: USAF

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Scary scenario: Children as suicide bombers

The United Nations has come out with its mid-year report on Afghanistan and noted with concern how children were being used as suicide-bombers, indeed a scary picture. On May 1, in Paktika province, a 12-year-old suicide bomber, the youngest ever reported in Afghanistan, killed three civilians and injured 12. The Taliban has its own interpretation of the word 'children' (anyone who has not had beard growth is considered a child) and has denied 'using children in jihadic operations'. But the fact that not just in Afghanistan, but elsewhere too, the 'madrasas' have been breeding grounds for extremist activities is an open secret.

Pakistan has been one such state which has spewed terrorism, using all kinds of approaches. Those at the helm in Pakistan keep denying this but the whole world knows what the truth is. Yet again, it was empty rhetoric when the young and pretty-looking Foreign Minister of Pakistan, Hina Rabbani Khar, visited India. Air Marshal (Retd) B.K. Pandey opines that the outcome from the meeting of the two Foreign Ministers were 'only bland statements' regarding trade and travel across the line of control (LoC). On the crucial issue of terror threat from Pakistan, India drew a complete blank with the young lady stating India's view on terrorism as 'dated'.

However the killing of Osama bin Laden in Abbottabad, close to a military base, proves Pakistan wrong. In this issue, *SP's M.A.I.* is running a story on the use of dogs in dealing with terror, particularly after a canine was part of the Navy SEALs raid on Osama's hideout.

We have run a report from SIPRI which mentions how eight countries – the US, Russia, United Kingdom, France, China, India, Pakistan and Israel – possess over 20,500 nuclear weapons. Though there is a drop from the previous year's count, the threshold levels of deterrence has come down. India and Pakistan have both tested missiles recently and both sides describe the missiles as battlefield weapons meant to destroy opposing formations.

Vishal Thapar writing on Prahar missile test states that Pakistan's Nasr missile is not only meant to blunt India's Cold Start doctrine but also extends the threat of a nuclear strike.

In an interview the just retired Director General of Army Air Defence, Lt General (Retd) Ram Pratap mentions how there is a gradual shift in Army Aviation Defence from gun-centric to missile-centric. In an interview with Lt General (Retd) Naresh Chand he outlines how the Army Aviation Defence is geared to meet any kind of threat, including asymmetric.

So also the outgoing Chief of the Air Staff, Air Chief Marshal P.V. Naik talks about India moving from an adversary-based force to a capability force. The Air Chief has pointed to how the IAF's modernisation programme will accelerate from 2014 as many of the acquisitions would start materialising. The final bidder for the medium multi-role combat aircraft (MMRCA), he is hopeful will be known in September. We are certainly hopeful that the armed forces gets the equipment that it has been looking for.... **SP**

Jayant Baranwal
Publisher and Editor-in-Chief

ARMOR rugged tablet computers achieve Verizon certification

DRS Technologies, Inc., a Finmeccanica Company, announced that the ARMOR X10gx and ARMOR X7 rugged tablet computers have endured rigorous testing and have been certified for connectivity on the Verizon Wireless network. This accomplishment ensures that ARMOR customers that utilise the integrated WWAN capabilities of the ARMOR X10gx and X7 will have an optimal data and communication experience with Verizon Wireless.

Both fully-rugged tablets—with integrated Gobi 2000 WWAN mobile broadband radio to keep the user connected on multiple wireless networks—achieved certification under Verizon Wireless Open development programme. This programme is designed to allow and encourage the development community to create new products, applications and services, and bring these to the marketplace on the Verizon Wireless network.

"This qualification is another example of our commitment to deliver innovative and complete rugged mobile solutions to ARMOR customers," commented Mike Sarrica, Vice President and General Manager for DRS Tactical Systems. "Mobile workers need strong connectivity, and the ARMOR X10gx and X7 both deliver that while enhancing the efficiency and productivity of an increasingly mobile workforce."

The ARMOR™ X10gx and X7 feature a range of connectivity options that go beyond WWAN, including Bluetooth® wireless, integrated GPS, and 802.11 a/g/n WiFi. They are specifically-designed for those mission-critical tasks that require connectivity, mobility, ease of use and the durability to support all-weather operations. The ARMOR™ X10gx and X7 are certified to MIL-STD-810G for extremes in temperature, vibration, shock and drops.

With a weight of just 4.7 lbs, the ARMOR X10gx carries an ingress protection (IP) rating of 67, which means it is fully protected against dust and can withstand the effects of immersion in water to depths up to three feet. **SP**

Spain's first BAM ship completes sea trials

Meteoro, the Spanish Navy's first Buque de Acción Marítima (BAM) amphibious action ship has successfully completed its sea trials. The goal of these trials, which took place on July 17 and 18, was to test the ship's navigation and combat systems, and to evaluate its noise level.

Meteoro, which was launched on October 16, 2009, is a medium-sized vessel offering high performance, substantial multirole capability, a high degree of commonality with other Spanish Navy ships, and reduced acquisition costs.

Its principal missions are escort and protection of other ships, monitoring of maritime traffic, anti-terrorism, counter-piracy, anti-drug and anti-human smuggles operations, as well as search and rescue, humanitarian assistance, and enforcement of fisheries, environmental and anti-pollution regulations. **SP**

GA-ASI bags Hellads contract

General Atomics Aeronautical Systems, a leading manufacturer of unmanned aircraft systems (UAS), tactical reconnaissance radars, and electro-optic surveillance systems, has announced that the Defense Advanced Research Projects Agency (DARPA) awarded the company a contract for development of the complete demonstrator laser weapon system (DLWS) for the agency's high energy liquid laser defense system (HELLADS) programme.

The HELLADS laser concept employs an innovative new approach to electric lasers which combines the high storage density of solid-state with the efficient heat removal of flowing liquids. **SP**

Bids for futuristic infantry combat vehicle

The Ministry of Defence (MoD) is likely to finalise soon the vendor for the manufacture of the futuristic infantry combat vehicle (FICV). The request for proposal (RFP) for the ₹10 billion contract has attracted bids from the Tata Motors, Mahindra & Mahindra, Ashok Leyland, Larsen & Toubro and Bharat Forge.

The MoD has sought the RFP in the "buy and make" category and Indian firms with requisite technical and financial capabilities will be given the order and thus will be expected to build 70 per cent of the vehicle. The awardee can opt for technology tie-ups with foreign companies.

According to reports, the FICV is expected to be half-tracked and half-wheeled, and a combat vehicle ready for inland warfare. There is a requirement for 2,610 FICVs in the Indian Army, as the existing Sarath BMP-II combat vehicles built by the Ordnance Factory Board (OFB) will be phased out from 2017. **SP**

Lockheed Martin demonstrates joint tactical radio network

Lockheed Martin performed its first successful joint tactical radio network demonstration for the US Navy, transmitting Internet-protocol enabled data and video communications. Using a joint tactical pre-engineering development model (pre-EDM) radio, the team extended the Navy's existing network via wireless communications. The demonstration verified the technical maturity of the airborne & maritime/fixed station joint tactical radio system (AMF JTRS) network.

AMF JTRS is designed to allow airmen, sailors, marines and soldiers to seamlessly share secure (NSA Type 1) voice, data, and video communications, in real-time.

Lockheed Martin's AMF JTRS team includes BAE Systems, General Dynamics, Northrop Grumman and Raytheon. **SP**

First multipurpose frigate "Carlo Bergamini" launched

Riva Trigoso (Genoa) shipyard recently celebrated the launch of the frigate "Carlo Bergamini", the first of a series of Fremm vessels – Multi Mission European Frigates – ordered from Fincantieri by the Italian Navy within the framework of an Italo-French programme of cooperation.

Present at the ceremony were General Biagio Abrate, Chief of Defence, Admiral Bruno Branciforte, First Sea Lord and Giuseppe Bono, CEO of Fincantieri and Corrado Antonini, Chairman of Fincantieri.

The vessel, which is due for delivery in early 2012, will feature a high degree of flexibility, capable of operating in all tactical situations. The ship, which is 139 metres long with a beam of 19.7 metres, will have a displacement at full load of approximately 5,900 tonnes. The "Carlo Bergamini" will have a maximum speed of more than 27 knots and will provide accommodation for a crew of 145. **SP**

PHOTOGRAPH: Fincantieri

Stealth frigate Satpura to be commissioned next month

Satpura, the second Shivalik class indigenous stealth frigate, conceived and designed by the Indian Naval Design team is to be the mainstay frigates of the Indian Navy for the first half of 21st century. The ship is scheduled to be commissioned on August 20, 2011 by Defence Miniter A.K. Antony in Mumbai.

Specifications

Type: Shivalik class guided-missile frigate
Displacement: 6,200 tonnes
Length: 142.5 metres (468 ft)
Beam: 16.9 metres (55 ft)
Propulsion: 2 x Pielstick 16 PA6 STC diesel engines & 2 x GE LM2500+ boost turbines in CODOG configuration
Speed: 32 knots (59 km/h)
22 knots (41 km/h) (diesel engines)
Complement: 257 (35 officers)
Sensors and processing systems: 1 x MR-760 Fregat M2EM 3-D radar; 4 x MR-90 Orekh radar; 1 x EL/M 2238 STAR; 2 x EL/M 2221 STGR; 1 x BEL APARNA; HUMSA (Hull Mounted Sonar Array); ATAS/Thales Sintra towed array systems
Electronic warfare and decoys: BEL Ajanta electronic warfare suite
Armament: OTO Melara 76mm SRGM; 2 x AK-630 30mm guns; 2 x Barak SAM 9M317 (SA-N-12) SAM, total of 24 missiles; 8 x Klub cruise missiles; 90R missiles (ASW); DTA-53-956 torpedoes; Klub AS missile; 2x RBU-6000 (RPK-8)
Aircraft carried: 2 x HAL Dhruv or Sea King Mk. **SP**

Oshkosh Defense to recapitalise heavy tactical vehicles

Oshkosh Defense, a division of Oshkosh Corporation, will recapitalise 160 trucks from the US Army's family of heavy tactical vehicles (FHTV) fleet, including heavy expanded mobility tactical truck (HEMTT) A4s and palletized load system (PLS) A1s, following an order from the US Army TACOM Life Cycle Management Command (LCMC). Through its recapitalisation programme, Oshkosh will restore these vehicles to the latest configuration in zero-miles/zero-hours condition at significantly less than the cost of a new vehicle.

Since 1970, Oshkosh has remanufactured more than 11,000 military vehicles. In addition to recapitalising its own vehicles, Oshkosh also upgrades vehicles originally built by other manufacturers. Oshkosh has refurbished more than 2,000 heavy-payload vehicles for the Army's Theater Provided Equipment Refurbishment (TPER) programme. **SP**

DRS Tactical Systems launches asset trade-in programme

DRS Technologies announced that its Tactical Systems Group recently created its newest ARMOR offering, the Re-ARMOR trade-in and free recycling programme.

As a leader in rugged mobile solutions, ARMOR provides computing systems that meet the stringent demands of mobile workforces around the world. By partnering with AnythingIT, a leader in information technology (IT) re-use & recycling, ARMOR has expanded its product offering to include asset trade-in, data destruction, and recycling for its customers.

"Re-ARMOR benefits our customers by removing many of the environmental issues associated with disposal of their old electronic equipment. It's a great incentive for new customers to join the ARMOR family," said Mike Sarrica, Vice President and General Manager for DRS Tactical Systems.

Re-ARMOR helps to manage the retirement of legacy equipment, which can put a strain on internal IT departments. The programme provides trade-in options for virtually any type of IT product. The process is simple, concise and, in many cases, financially favourable as it can help to reduce a company's cost of ownership in technology hardware.

Beyond the earth-friendly advantages, Re-ARMOR provides the highest possible trade-in values on legacy equipment in a way that is compliant with all government and environmental regulations. The programme meets the expanding federal and state regulations for data security by utilising facilities that are certified by the US Environmental Protection Agency and Department of Environmental Protection. **SP**

Dogs of war

Jackson, a Belgian Malinois breed, is US Air Force Military Working Dog serving in Iraq

They have been to war for ages now. They will continue to do so in future. After the classified canine that went along on the Navy SEALs' raid which killed Osama bin Laden, dogs have generated a lot more interest, as their capabilities have come into sharp focus. Some reports have pointed out that a Belgian Malinois breed, named Cairo, was part of the elite Navy SEALs team.

The Belgian Malinois breed, which is stubbier and smaller than a German shepherd, was the choice as it fits into the operations which included tandem parachute jumping and rappelling operations.

Prior to 9/11, the US military had about 1,800 dogs and the number has swelled to 2,700 and many of them have been deployed in Afghanistan, helping the US Marines to take on extremists. Canines have been used for protection, pursuit, tracking, search and rescue and importantly for sniffing out bombs and till date there is no technology which can better this.

The breeds of choice are the German shepherds, Belgian shepherds or Malinois, labradors and dobermans. The labrador retrievers are most sought after as they have 'good noses and non-aggressive temperaments' which help in sniffing. These dogs have a sense of smell which is 40 times greater than a human being can and are trained to detect and identify both explosive material and 'wanted' individuals. **SP**

Rex, the tracker

Rex (1993-99), a golden Labrador of Rashtriya Rifles, has been a recipient of GOC-in-C commendation card for his outstanding and exemplary performance against militants.

Rex was born at the RVC Centre and School Meerut and after a year's training was posted to the 14 Army Dog Unit under Delta Force. Rex was assigned the area's adjoining the town of Bhaderwah, to help troops in trailing and tracking militants.

In March 1995, operating with troops of 25 Rashtriya Rifles in jungles of Badrot, South of Bhaderwah, he tracked a militant injured in an encounter for over three km in the thick of militant fire. In a chase that lasted for over four hours, he managed to recover one AK-56 rifle and a haversack containing 92 rounds. In April 1998, out on a patrol in Gulgandhar area, security forces killed two dreaded militants and badly injured one, who managed to escape. Picking up the scent of his blood, Rex went hot on the trail and moved speedily and stealthily over strenuous undulating mountains. After tracking over two km, he succeeded in tracing out the body of the militant in a hideout where he had succumbed to his injuries.

Let out on yet another 'trial' with the QRT of CO 25 RR in Daraba near Rajouri, Rex suffered an unfortunate fall and sustained serious intestinal injuries. He was evacuated to the nearest Army Veterinary Hospital where he developed acute gastroentrities and finally succumbed on September 22, 1999. **SP**

Brave Indian Army dogs

Brigadier Hemant Mahajan in his blog writes: "We had our share of local dogs who were excellent sentries at gun positions. The local dogs were ideal guides in white out conditions too. In Drass area with 8 feet of snow off the road the dogs would mark the route by peeing every 50 metres. Extremely well trained and dependable, they would wait for troops at the road head and take them to the gun position and back. I have of course been guided by them often when you can't see a thing.

We had 'Dixit' a veteran with a few medals to his credit. We had pressed him into service for an avalanche rescue mission. A black labrador, he used go around in a cheetah with his trainer and kit. **SP**

Dogs with cameras detect bombs

The dog school of the Royal Netherlands Air Force has acquired a new technique for detecting explosives. With a camera attached to its head, a search dog can search for explosives by itself.

The dog handler watches the dog's progress from a distance, on a portable video screen. The training coordinator is enthusiastic about the results: "The interaction between man, animal and technology results in the professional detection of explosives which pose a threat to the lives of human beings anywhere in the world. The development of this training, based on our knowledge and expertise gained during operations, has yielded good results. **SP**

Army Air Defence shifts from gun-centric
to missile-centric approach

Lt General Ram Pratap, just prior to his retirement as the Director General of Army Air Defence (DGAAD), in an interaction with Lt General (Retd) Naresh Chand of SP Guide Publications, spoke about the gradual shift taking place in army air defence, from a gun-centric to missile-centric approach. Excerpts of the interview:

SP's MAI (SP's): Army Air Defence (AAD) has been a separate arm for almost two decades. Have there been any conceptual changes in its doctrine with regards to concepts and operations?

Lt Gen Ram Pratap (DGAAD): In our nearly two decades of existence there has been an overall growth of AAD in all aspects of operational concepts, training philosophy, equipment and man-management. A great deal of conceptual and doctrinal work has matured. The op-concept has been driven by the fast evolving air threat and need to keep pace with the same in putting up a viable counter. The salient points include, the concept of layered-and-tiered defence, conceptualisation of an integrated family of ground-based AD weapon system (GBADWS) and associated command, control and support infrastructures required to counter futuristic air threat and a gradual shift from a gun-centric to a missile-centric approach for air defence.

SP's: What about the effect on the type of weapons and sensors required to counter threats?

DGAAD: A two-pronged strategy is being followed as regards the weapons and sensor in that, firstly the existing inventory of weapons and sensors is being revamped through a series of qualitative upgradation as to make them 'technologically enabled' to counter the existing air threat, while at the same time, state-of-the-art equipment is to be inducted as successor systems to remain effective in countering air threat for the foreseeable future.

SP's: The threat of UAVs is increasing day by day. How do you counter this threat?

DGAAD: We started by developing a conceptual base by carrying out a comprehensive general staff study on UAV capabilities, vulnerabilities and developing anti-UAV capabilities. Based on the recommendations, various soft- and hard-kill options are under consideration at appropriate levels to counter this fast growing threat.

SP's: What are the plans for soft-kill as a counter to the air threat?

DGAAD: Soft-kill option has the undeniable advantage of lightening response timings, a kill capability which is certainly beyond the hard-kill range with no crossover parameter restrictions and a possibility of multiple-kill through a single device. It also holds a promise of taking on the stand-off threat, as also, the threat from smart/intelligent/precision-guided munitions. Laser-based weapons provide a realisable method of soft-kill in the foreseeable future. Army AD has developed a concept for enabling the GBAD-WS with soft-kill capabilities to take on the threat vehicles, as well as precision munitions through this kill option. This concept is under consideration/refinement at appropriate level.

SP's: Do you think that AAD has a role in asymmetrical warfare?

DGAAD: It has a definite role in asymmetrical warfare. The same is related to providing a viable counter to the air threat vehicles like the UAVs, etc. that are likely to be employed by the potential adversary both in the surveillance, as well as, the strike role. In addition, GBADWS may also be used innovatively in some other scenarios in asymmetric warfare where beyond visual range surveillance and high rate of gunfire/ SAMs may be required.

SP's: What are the landmark achievements during your tenure?

DGAAD: I have had a very fruitful and satisfying tenure. Developing a sound conceptual and doctrinal base for AAD, getting through with landmark JSSGs on GBADWS (which was stuck for many years) and ASM, conceptualising and putting in place an approved LTIPP which has become a master reference document for all future AAD procurements and evolving a sound general staff policy statement have taken place. An unprecedented number of contracts relating to procurement of modern weapons as well as upgradation of the existing ones, stand signed or will be signed in the near future. We have been able to keep our vintage equipment effective and fully serviceable through proactive interaction with other related branches as well as various public sector undertakings. Some new target system for live AD firing are already in place and effective steps have been taken to remove night-blindness in GBADWS. Efforts have been put into place to revamp and optimise the training activity using 'enabling technologies'. I could also count the successful move/esablishment of Army AD Centre from Nasik to AADC Gopalpur (Orissa) and its merger into the latter and the academic empowerment of a large numbers of men. **SP**

*Lt General Ram Pratap retired on June 30 and Lt General Kuldip Singh has taken over from him.

MMRCA lowest bidder to be declared in six weeks: P.V. Naik

The outgoing Chief of the Air Staff, Air Chief Marshal P.V. Naik announced that the L1 (lowest bid) for the medium multi-role combat aircraft (MMRCA) will be declared in five to six weeks time. The Indian Air Force (IAF) had completed the benchmarking and now it would be put up before the Cost Negotiation Committee (CNC).

Addressing his last press conference as the Chief of the Air Staff (CAS), Naik said: "It will happen anytime," and Ministry of Defence would be calling the vendors to open the commercial bids. The CAS-designate N.A.K. Browne was also present at the press conference.

Reiterating the IAF's approach, Naik said air defence, acquisitions and training of manpower would continue on massive scales to enhance IAF's capabilities. Speaking later to SP Guide Publications, Naik said: "From 2014, the capacities will expand considerably and it will take about five years with huge investments making the force one of the best in the world. The squadron levels are expected to go up in the next couple of years which at present is fluctuating between 30 and 34.

Asked about the highpoint in his career, Naik said: "There have been many highpoints and many low points. The highpoint in my career came when I was the Vice Chief and we participated in the Red Flag exercise and came in for considerable praise and acclaim from the US Air Force and other air forces which participated." The next Red Flag exercise is slated for 2013.

As to the highpoint during his tenure as the Air Chief, he said: "It happened recently when three lady officers conquered the Mount Everest." Asked whether women would be enlisted in combat stream, now that a woman's team had climbed the Mount Everest, he remarked that the three Service chiefs were looking at it.

On the issue of Chief of Defence Staff (CDS), Naik replied with a categorical 'no'. "In the present form it is not acceptable. We don't have the technology to have CDS and that includes visibility, communication etc for a single-point contact with the Raksha Mantri. There has to be a national debate, but I don't see it happen till another 10 years."

Nuclearisation of Pakistan

To a question on nuclearisation of Pakistan, he replied: "We are not worried." The stated policy is to give a retaliatory and harsh response. The armed forces, he added, were being modernised and that the range of options for deployment would expand. "We have the capability to conduct a similar operation like Abbottabad," he said to another query.

On the recent successful test of Prahar surface-to-surface missile, the Air Chief said: "It is a good development" and its ownership could be with any of the three services. "For every target, we have multiple options, missiles, remotely piloted aircraft, and of course manned aircraft among them. What needs to be used at what point would be a tactical decision." As for the medium combat aircraft, he said it was on the drawing board and it would be twin-engine aircraft, an improvement on LCA (light combat aircraft).

Evaluations for heavy-lift and also attack helicopters were going on. On the purchase of basic trainers worth $1 billion, he confirmed that Pilatus PC-7 had been shortlisted and there was no controversy in the bidding process.

Responding to a question on HAL's drawbacks in integrating engines on trainers, the Air Chief was diplomatic and said the IAF had a healthy relationship with HAL and that the engines were not manufactured by HAL and that there were no problems with the engines as reported in the media.

The Air Chief also clarified that "gaps in intelligence will exist in any country, but the moves made by the Ministry of Home Affairs had been paying dividends. The intelligence levels will keep improving." **SP**

Lockheed Martin's infrared system achieves critical milestone

Lockheed Martin's infrared search and track (IRST) sensor system for the US Navy F/A-18E/F achieved critical milestone B approval to proceed into the engineering, manufacturing and development phase. Lockheed Martin's IRST sensor system augments aircrews' ability to search, track and engage targets in dense threat environments.

"In air-to-air engagements, IRST provides a discriminating capability to counter threats at greater standoff distances enhancing survivability," said Paul Hey, IRST Senior Programme Manager in Lockheed Martin's Missiles and Fire Control business. "The successful Milestone B achievement sets the foundation for delivering IRST capability to the warfighter, and is a testament to the hard work and collaboration of the US Navy and industry team." **SP**

X2 Technology Demonstrator takes its final flight

Sikorsky Aircraft Corp's X2 Technology-demonstrator has flown for the last time, the company announced recently.

The demonstration flight conducted from the company's new Sikorsky Innovations Center within its Development Flight Center, demonstrator gave guests one last look at its technology in flight before officially being retired and transitioning to its first application, the S-97 Raider.

It was the 23rd test flight of the award-winning X2 aircraft, which flew approximately 22 total hours and achieved a maximum cruise speed of 253 knots in level flight at its peak point in the programme. That milestone, an unofficial speed record for a conventional helicopter, was achieved on September 15, 2010.

"This flight is the culmination of a five-year, internally funded programme to expand the operational envelope of helicopters," said Sikorsky President Jeffrey Pino. "The results of this programme speak of the success of a rapid prototyping environment, where a small empowered team was able to meet a specific number of very challenging goals. We met these within a small budget and a compressed schedule.

"The X2 programme also has helped to develop the next generation of Sikorsky engineers, including some who are now in key positions on the S-97 Raider programme and the Fireflyelectric helicopter programme. The entire Sikorsky workforce stands proud of this accomplishment and what it means for the future of rotorcraft aviation," Pino said.

The programme began in 2005 when Sikorsky first committed resources and full funding of $50 million, for the programme's development. Earlier this year, the demonstrator team won the 2010 Robert J. Collier Trophy. **SP**

Thales and Dassault sign contract to upgrade IAF's Mirage 2000 fleet

Thales and Dassault Aviation have signed a contract for the upgrade of the Indian Air Force's (IAF) Mirage 2000 fleet on July 29. Based on the integration of latest generation equipment and systems, the upgrade will further enhance the technical-operational capabilities of the Indian Air Force's Mirage 2000. The aircraft represents a long tradition of cooperation with French military aviation, initiated 50 years ago.

The extensive involvement of Indian industry within the programme will consolidate existing ties with the French aerospace industry and will reinforce long-term cooperation based on cutting-edge technologies and the sharing of technical know-how and expertise.

Dassault Aviation and Thales are highly appreciative of the Indian Government's continuing trust in them and are delighted with this contract that further consolidates the long-term strategic partnership between India and France. They reiterate their commitment to meet the operational requirements of IAF and underline their pride in contributing to India's defence for over half a century. **SP**

Eurocopter and HAL sign pact

Eurocopter and the Hindustan Aeronautics Limited (HAL) have reiterated their commitment to take their five-decade long relationship to the next level. The long-time partners are in the process of signing agreements to further strengthen their industrial cooperation and links. This association will focus on increasing existing collaboration and exploring new potential business areas to serve both Indian and international markets.

"HAL is fast developing into a major player in the aerospace sector. With this increasing pace of growth, HAL welcomes opportunities for joining hands with a global player like Eurocopter. We look forward to corroborating this partnership further in the coming years," said Ashok Nayak, HAL Chairman.

Since 1962, Eurocopter has partnered with HAL through two cooperation agreements, enabling HAL to manufacture more than 600 helicopters based on the Alouette 3 and Lama, more popularly known in India as the Cheetah and Chetak. This fleet has been the backbone of the Indian armed forces over decades. India was the first nation with which Eurocopter signed a licence agreement which included technology transfer. In 1984, HAL has been supported by Eurocopter in the development of the advanced light helicopter (ALH), a five-tonne twin-engine transport helicopter. This industrial partnership was strengthened in 2005 with the manufacturing of composite assemblies.

HAL is manufacturing 100 shipsets of these assemblies per year for the AS550/AS350 helicopters, and contributes to Eurocopter global supply chain. Lutz Bertling, President and CEO of Eurocopter said, "HAL is one of the most important partners of Eurocopter Group. Giving continuity to our 50 years of successful relationship, we are proud today to reinforce and extend the scope of our association in India. We remain committed to work with HAL contributing to the expansion of the helicopter capabilities of India." **SP**

Rockwell Collins to upgrade KC-10

The US Air Force has awarded Rockwell Collins a contract to provide systems integration and avionics for the KC-10 communication, navigation, surveillance/air traffic management (CNS/ATM) cockpit modernisation programme.

The contract, valued at more than $160 million over the life of the programme, calls for Rockwell Collins to provide the flight management system, displays, data link communications and surveillance capabilities.

"This programme provides technology that ensures the KC-10 meets current and future CNS/ATM requirements, allowing it to operate in commercial airspace throughout the world," said Dave Nieuwsma, Vice President and General Manager of Mobility and Rotary Wing Solutions for Rockwell Collins. "These new capabilities will allow the aircraft to arrive at its destination quicker, enhancing mission effectiveness while saving fuel." **SP**

IAE to power KC-390

Embraer Defense and Security, in concurrence with the Brazilian Air Force, has announced that International Aero Engines AG has been chosen to provide the powerplant for the country's new KC-390 multi-role tanker/transport aircraft. The engine will be the V2500-E5.

The KC-390 development programme was launched in April 2009 and the Brazilian Air Force formalised its intent to purchase 28 aircraft in July of last year. Five additional countries have agreed to join as industrial partners, with resulting aggregate purchase intentions now totaling 60 airplanes. It will also be marketed globally, representing opportunities for further growth.

"We are very pleased to be providing V2500 powerplants for this new multi-role military aircraft being developed and produced by Embraer," said Ian Aitken, President and CEO of IAE. **SP**

Raytheon's aerostat system completes endurance test

Raytheon company's aerostat system – joint land attack cruise missile defence elevated netted sensors (JLENS) – recently completed a successful endurance test.

"Providing long endurance surveillance for cruise missile defence is a very important capability of JLENS," said David Gulla, Vice President for Global Integrated Sensors at Raytheon Integrated Defense Systems (IDS). "This recent test demonstrates JLENS' ability to stay aloft for extended periods performing its surveillance mission at lower costs than other systems and in a reliable manner. This test, along with others, is proving JLENS' value as an important component of the larger integrated air and missile defence mission." **SP**

Northrop Grumman demonstrates aircraft survivability

Technology developed as part of Northrop Grumman's Rotorcraft Avionics Innovation Laboratory (RAIL) took flight for the first time aboard the US Navy's T-Rex UH-1N test bed aircraft to demonstrate improved aircraft survivability, increased situational awareness and digital interoperability.

Utilising an Internet protocol (IP)-based, mesh-enabled, beyond-line-of-sight network, the aircraft transmitted and received sensor metadata and imagery from the battlefield to provide a common operational picture showcasing network-centric multi-platform collaboration.

"Several field-ready upgrade capabilities were integrated into existing systems to produce solutions our warfighters need, including threat geolocation, sensor cross-cueing, transmission of video and threat data, and scene-stitched imagery to provide situational awareness around the platform," said Hao Tran, Director of Advanced Concepts and Technologies for Northrop Grumman's Advanced Concepts and Technologies Division. "In addition, we successfully introduced Northrop Grumman's multifunction advanced threat warner onboard a helicopter providing a four-in-one capability in a single sensor, including missile warning, laser warning, hostile fire detection and sensor video." **SP**

ScanEagle flies 5,00,000 combat hours

Insitu Inc. announced on July 19 that its ScanEagle unmanned aircraft system (UAS) surpassed 5,00,000 combat flight hours and more than 56,000 combat sorties to deliver actionable intelligence, surveillance and reconnaissance (ISR) to the warfighter with 99 per cent mission readiness. Consistently providing long sorties and high mission-readiness over half a million hours demonstrates the maturity and reliability of Insitu systems, processes and practices.

"We successfully accomplished this milestone through a collaborative global team," said Insitu President and CEO Steve Morrow. "We have a dedicated, highly trained, agile team of field service representatives, engineers, programme support personnel and partners who support our

customers around the world to make ScanEagle an invaluable ISR asset."

The small-operational footprint, runway-independent ScanEagle UAS can stay aloft for more than 24 hours—more than twice the time of the average mission, so it can respond to the unexpected —capturing superior image quality covertly at relatively low altitudes. Currently, there is an average of 22 ScanEagle aircraft in flight globally at any given time. The system has provided uninterrupted service to the warfighter since its first deployment with the US Marine Corps in 2004.

Fielding scores of technology upgrades, Insitu has built on lessons learned in theatre to address the urgent requirements of the warfighter with tangible solutions using the proven ScanEagle platform. Insitu's newest system, Integrator, uses the same design concepts to ensure reliability. **SP**

First Euro Hawk UAS touches down in Germany

Euro Hawk, the first high-altitude, long-endurance (HALE), signals intelligence (SIGINT) unmanned aircraft system (UAS) based on the RQ-4 Global Hawk produced by Northrop Grumman or the German Bundeswehr, successfully touched down in Manching, Germany on July 21.

The Euro Hawk will carry a new SIGINT mission system developed by EADS Deutschland GmbH (Cassidian) and integrated in Manching, Germany.

"Arrival of the Euro Hawk on German soil marks a significant step in delivering this highly capable and unique system to the Bundeswehr," said Nicolas Chamussy, Head of UAVs, Cassidian Air Systems, and member of the board of directors, EuroHawk GmbH. "Our trans-Atlantic partnership with Northrop Grumman has helped the entire team achieve this outstanding milestone, which also reinforces Cassidian's role as a leader for complex UAS solutions in Europe."

Delivery of the first Euro Hawk demonstrator to the Bundeswehr is scheduled for mid-2012, with another four systems scheduled tentatively between 2015 and 2017. **SP**

Pakistan Navy establishes UAV squadron

As per latest reports, the Pakistan Navy which has deployed substantial number of unmanned aerial vehicles (UAVs) has established a squadron in Karachi. The UAVs will be stationed at Mehran naval base in Karachi. Pakistan has been producing Uqab II UAVs.

The indigenously manufactured UAVs can fly up to 10,000 feet, having a maximum range of 150 km. Carrying a payload of up to 20 kg, including a gyro-stabilised colour camera, the UAVs can last for four hours at a stretch either during day or night. **SP**

France to buy drones from Israel

France has decided to purchase unmanned aerial vehicles (UAVs) from Israel. According to reports, the French are looking at Heron TP or Eitan for surveillance purposes. After the US, Israel is ranked number two in drone manufacturing.

In the latest deal, Israel Aerospace Industries Ltd (IAI) will work with the French firm Dassault Aviation SA. According to the *Jerusalem Post,* the deal is valued close to $500 million over a number of years and could lead to additional contracts for IAI as other countries, such as Germany, seek to upgrade their UAV capabilities. **SP**

AIR MARSHAL (RETD)
B.K. PANDEY

Indo-Pak dialogue:
Empty rhetoric

Hina Rabbani Khar, a scion of a powerful political family of Pakistan and newly appointed foreign minister did charm the Indian audience with her elegance during her first visit to Delhi. Khar came with the message that Pakistan was prepared to shed the burden of history and was looking forward to heralding a new era in the relationship. However, a deeper analysis of the latest interaction between the foreign policy establishments of India and Pakistan reveals that the visit is unlikely to have any impact on the hostility between the two nations that have been in a state of perpetual confrontation during the last 64 years.

While Khar's demeanour was far more pleasing than that of her somewhat obnoxious predecessor, it could barely conceal the agenda of the Pakistani establishment. Almost immediately on arrival in India, the Pakistani Foreign Minister met with the Kashmiri separatist leaders at the Pakistani High Commission. While the interaction with the Kashmiri secessionist forces in India was held on Pakistani soil technically (High Commission), it was not only unwarranted but even to one uninitiated in the art of diplomacy, was utterly inappropriate, impertinent and even provocative. Despite her claim to the contrary, it should be clear to India that Khar is not an independent functionary in the national polity of Pakistan. The Pakistani Foreign Minister was only acting as per the agenda of the Pakistani military and the Inter-Services Intelligence (ISI) who call the shots in Islamabad and on their behalf delivering a clear message to India with regard to their position on Kashmir. Although the misdemeanour was later played down by the Pakistani diplomatic establishment, the meeting with the Huriyat leaders is bound to provide a powerful impetus to the separatist forces in Kashmir thereby impinging on the peace process.

As for the outcome of the meeting between the two foreign ministers, there were only bland statements regarding trade and travel across the Line of Control (LoC) and the need to sustain dialogue uninterrupted. On the crucial issue of terror threat from Pakistan, India not only drew a complete blank but Khar went on the offensive describing India's view on terrorism as "dated" and stated categorically that no progress was possible with the existing trust deficit. She went on to say that both the nations must shed their perceptions hardened over time and accept each other's ground realities and compulsions. On the issue of Pakistan dragging its feet in bringing the perpetrators of the 26/11 attack on Mumbai to book, Khar played the ball right back in India's court stating that even those in India guilty of the Samjhauta Express blast were yet to be punished. There was no acceptance of responsibility, sign of remorse or commitment from the Pakistani Foreign Minister about her country's approach to terrorism state-sponsored or otherwise, originating from her soil against India.

In the final analysis, despite the profound rhetoric emanating from both sides pertaining to the new era in the Indo-Pak relationship that is about to dawn upon us, there is unlikely to be any real change in the ground situation. It would therefore be futile for India to expect reduction in the level of threat from terrorism from across the western border. Complacency on the internal security front therefore could prove to be suicidal. **SP**

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PHOTOGRAPH: MEA

LT GENERAL (RETD)
P.C. KATOCH

The bug of
bugging

There was considerable commotion in the media on the reported bugging of the office of the Finance Minister Pranab Mukherjee. The Minister, as per reports, confirmed he suspected that the offices of the Finance Ministry were bugged and reportedly wrote to Prime Minister Manmohan Singh about an "adhesive-like substance" recovered from his office that might have been used to implant electronic listening devices.

Government sheepishly faced another embarrassment, which is commonplace with Rajas and Marans on the prowl. The Opposition cried blue murder, alleging a rival ministry was probably involved. The incident is reported to have happened in September 2010, with discoveries in the office of the FM, his advisor, his personal secretary and two conference halls of the Finance Ministry. Following the discovery, very strangely the Central Board of Direct Taxes (CBDT) was called in instead of the Intelligence Bureau (IB). Later, the IB scoffed the incidence away.

Surely, the Finance Minister and his staff have not taken a liking for bubble gum and sticking it under the tables and behind pictures on the wall after the day's chew up. Of course it will never emerge who was behind the alleged bugging – the Chinese, ISI, corporate sector, ministerial rivalry or political rivalry, later on account machinations for the next President and Prime Minister?

A couple of years back, Amar Singh too was up in arms for alleged tapping of his telephones. Why this commotion and hyperbole against bugging? Is anyone exempt? Phone taps may have sealed off Rupert Murdoch's tabloid but then he was not in India. M.K. Dhar, a former Joint Director IB wrote in his book *Open Secrets* that President Giani Zail Singh's office and bedroom in the Rashtrapati Bhavan were bugged throughout his tenure as the President of India. This was resorted to after the Giani as Home Minister was observed entertaining terrorists from Punjab in his official home in Delhi. As if dining and wining were not enough, they were also supplied weapons and finances – so much for the politician nexus with evils of the society. The then government in its wisdom simply kicked him up and put permanent tabs on his telephones and conversation in the topmost abode of the country. Any surprises?

The mere fact that no one has questioned the author proves its authenticity. There is a move now to usher in legislation against bugging as well but are we going to need another Lokpal to legislate it if government itself is involved and the IB exempt from RTI? Telephone tapping and eavesdropping on conversations in any case are minor compared to the ever expanding networks, computers and Internet users in India that are bugged or have sleeper bots inside. India only assembles computers with all parts being imported, mainly from China. Considerable amount of software and communication too is imported. All this leaves tremendous scope for embedding malware including during development phase. No testing facilities have been created in the country to deal with such situations.

The annual increase in bot infected computers in India has taken enormous proportions. Even Pakistan has been originating viruses like 'Sea Brain'. Cyber attacks aim at stealing nuclear, defence, economic, industrial secrets. The threat is not only from sundry hackers and criminal activity but from state-criminal network-hacker nexus that can acquire dangerous proportions, impinging seriously on security and economy of the country. Viruses and botnets are prowling the web, embedding quietly into the vulnerabilities. Ghostnet penetrated more than 1,200 systems in 103 countries including India and Stuxnet infected some 79,000 computers globally including 6,000 in India. We need holistic attention to bugging. Protests against telephone tapping are not enough. **SP**

The views expressed herein are the personal views of the author.

> **Telephone tapping and eavesdropping on conversations in any case are minor compared to the ever expanding networks, computers and Internet users in India that are bugged or have sleeper bots inside**

Children used as suicide bombers: UN Report

The United Nations Assistance Mission in Afghanistan (UNAMA) in its 2011 mid-year report on protection of civilians in armed conflict in Afghanistan has noted with concern the rising number of incidents involving child suicide bombers.

On May 1 in Paktika province, a 12-year-old suicide bomber, the youngest ever reported in Afghanistan, killed three civilians and injured 12.

Ten days later, the Taliban in statement denied "the use of children and adolescents in jihadic operations."

Although UNAMA is unable to link the use of children suicide bombers to a particular insurgent group, it noted that the Taliban's definition of children is not consistent with international standards. The United Nations Convention on the Rights of the Child (CRC) defines a child as a person under the age of 18 years, regardless of what local laws apply to children.

According to the Taliban they do not use "boys with no beards" in military operations. This vague definition may permit the use of boys younger than 18 years old in combat operations.

UNAMA calls on the Taliban to recognise the international standard for the age of a child as defined in the CRC and to pledge not to use anyone younger than 18 years old in military operations.

On June 26 in Char China district, Uruzgan province, insurgents instructed an eight-year-old girl to bring a package of explosive devices to a police vehicle. The insurgents remotely detonated the bomb, killing the girl. There were no other casualties.

Afghan security forces have made an increasing number of arrests of children suspected of being suicide attackers which may indicate that more children are being recruited, trained and used to carry out such attacks.

On May 7, the National Directorate of Security (NDS) arrested five boys between the ages of 13 and 14 who confessed to NDS they had undergone training in Peshawar, Pakistan, to carry out suicide attacks.

On March 30, authorities in Baghlan province arrested a 17-year-old boy trained as a suicide bomber and on April 2, NDS arrested a 14-year-old suspect suicide bomber, originally from Badakhshan province.

On May 20, in Nuristan province, Parun district, Chatras area, a 12-year-old child died when a suicide vest accidentally detonated during his training session.

Suicide and complex attacks

The UNAMA report stated that insurgents continued to carry out suicide attacks in populated areas. Suicide attacks saw the largest percentage increase in civilian casualties over last year's numbers at this time, with a 52 per cent increase in civilian deaths compared to 2010. Suicide attacks caused 19 per cent of all civilian deaths and 26 per cent of civilian injuries. Suicide attacks caused 831 civilian casualties comprising 276 deaths and 555 injuries. This is a 28 per cent increase in total civilian deaths and injuries from suicide attacks compared to the same period in 2010.

Suicide attacks increased in intensity with the number of attacks remaining steady but with the numbers of casualties per attack increasing. These attacks were often spectacular in nature, using multiple attackers in complex suicide attacks. Suicide attacks targeting civilians were aimed primarily at areas where people were gathered in large numbers including supermarkets, construction projects, government buildings and hospitals, without a specific military target.

This mid-year report on the Protection of Civilians in Armed Conflict in Afghanistan prepared by the Human Rights Unit of the UNAMA covers the period January 1 to June 30, 2011.

The report is compiled in pursuance of UNAMA's mandate under United Nations Security Council Resolution 1974 (2011) "to monitor the situation of civilians, to coordinate efforts to ensure their protection, to promote accountability and to assist in the full implementation of the fundamental freedoms and human rights provisions of the Afghan Constitution and international treaties to which Afghanistan is a State party, in particular those regarding the full enjoyment by women of their human rights."

UNAMA undertakes a range of activities aimed at minimising the impact of the armed conflict on civilians including independent and impartial monitoring of incidents involving loss of life or injury to civilians; advocacy activities to strengthen protection of civilians affected by the armed conflict; and, initiatives to promote compliance with international humanitarian and human rights law, and the Constitution and laws of Afghanistan among all parties to the conflict. **SP**

Nuclear forces 'leaner but meaner': SIPRI report

The Stockholm International Peace Research Institute (SIPRI) has launched the findings of *SIPRI Yearbook 2011*, which assesses the current state of international security, armaments and disarmament.

The key findings include: New levels of global resource demand could destabilise international relations; continuing cuts in US and Russian nuclear forces are offset by long-term force modernisation programmes; and the number of peace missions fell to the lowest level since 2002.

Natural resources—from a policy concern to a security concern

SIPRI Yearbook 2011 highlights growing security concerns linked to natural resources, particularly scarcities and competition created by climate change and intensifying global demand driven by the rise of China and India. Further, wealthy countries' demand for precious resources helps to fuel violence and instability in the global south. The catalytic role played by demonstra-

More than 5,000 of these nuclear weapons are deployed and ready for use, including nearly 2,000 that are kept in a state of high operational alert.

Modest cuts in US and Russian strategic nuclear forces were agreed in April 2010 under the New START treaty, but both countries currently are either deploying new nuclear weapon delivery systems or have announced programmes to do so, and appear determined to retain their nuclear arsenals for the indefinite future. Meanwhile, India and Pakistan continue to develop new ballistic and cruise missile systems capable of delivering nuclear weapons. They are also expanding their capacities to produce fissile material for military purposes.

"It's a stretch to say that the New START cuts agreed by the USA and Russia are a genuine step towards nuclear disarmament when their planning for nuclear forces is done on a time scale that encompasses decades and when nuclear modernisation is a major priority of their defence policies," says SIPRI Senior Researcher Shannon Kile.

World nuclear weapons, 2011

Country	Deployed warheads*	Other warheads	Total 2011	Total 2010
USA	2,150	6,350	8,500	9,600
Russia	2,427	8,570	11,000	12,000
UK	160	65	225	225
France	290	10	300	300
China		200	240	240
India		80-100	80-110	60-80
Pakistan		90-110	90-110	70-90
Israel		80	80	80
Total	**5,027**	**15,500**	**20,530**	**22,600**

Source: *SIPRI Yearbook 2011* * *"Deployed" means warheads placed on missiles or located on bases with operational forces.*

tions over high food prices in the so-called Arab Spring showed how resource markets can have far-reaching security impacts.

"Commodity markets and security risks are increasingly globalised—so we need cooperative international frameworks for resource governance that directly address security issues. Links between resource questions and conflict can only be broken if consumer and producer states, industry and civil society, work together," says Dr Neil Melvin, Director of the SIPRI Programme on Armed Conflict and Conflict Management.

Nuclear weapons—falling numbers, little progress towards disarmament

Eight states—the United States, Russia, the United Kingdom, France, China, India, Pakistan and Israel—possess more than 20,500 nuclear weapons, a drop of more than 2,000 since 2009.

Peace operations—fewer operations; ISAF has most of world's peacekeepers

The number of active peace operations fell in 2010 to its lowest level since 2002. However, the 52 peace operations deployed 2,62,842 international troops, observers, civilian police and civilian staff, an increase of 20 per cent on the 2009 level (2,19,278 in 54 operations).

At 131 730 troops the NATO International Security Assistance Force (ISAF) in Afghanistan deployed more personnel than all the other 51 operations combined. Non-ISAF personnel numbers actually fell by 3 per cent, from 1,35,132 in 2009 to 1,31,112 in 2010.

"The vast size of ISAF creates a misleading picture. ISAF troops are mostly engaged in counter-insurgency rather than mainstream peacekeeping. If you take them out of the equation, the peacekeeping surge of the 2000s appears to be largely over," says Sharon Wiharta, Head of the SIPRI Project on Multilateral Peace Operations. **SP**

SAARC has to be proactive in countering terrorism: Home Minister

The Union Home Minister P. Chidambaram attending the fourth SAARC Interior/Home Ministers Meeting at Thimpu, Bhutan, has called for a proactive agenda on cooperation in the neighbourhood to eliminate the threats posed by terrorists, drug traffickers, arms smugglers and others whose activities affect the safety and security of the people of the region.

Recalling the Conference of the Interior/Home Ministers of SAARC countries in Islamabad in June 2010, he said it was agreed, inter-alia, on the broad contours of cooperation to combat terrorism.

"I am sure that all of us are equally committed to our common endeavour in eliminating the menace of terrorism.

"Terrorism is the most significant existential challenge to peace and security in our region. It is the single largest hindrance to socio-economic development in South Asia. The lives and safety of our people continue to remain at significant risk from targeted, deliberate and cowardly terrorist outrages.

"Since this is a common challenge that has affected most of us, it is clear that only with the fullest cooperation amongst us can we tackle the threat of terrorism. We have no alternative but to deploy the best instruments and resources at our disposal in our fight against terrorism. It is from this perspective that we need to examine the existing mechanisms we have for countering terrorism, drug trafficking, trafficking in human beings, arms smuggling and counterfeiting including organized production and distribution of fake Indian currency notes.

"The South Asian region is perhaps the most troubled and vulnerable region in the world. The vast majority of major terrorist incidents this year – as well as last year – have occurred in this region. Terrorist groups in this region have flourished because of the support they have found from State and non-State actors. Sometimes, I think that the distinction between State actors and non-State actors is misplaced and intended to misdirect our efforts to deal with terrorist groups at the very source – the recruitment centres, the training camps and their safe havens and sanctuaries. If I may speak frankly, let me say that no State and no government can escape responsibility by pointing to non-State actors. As long as the territory of a country is used by non-State actors to prepare for terrorist attacks, that country owes a legal and moral responsibility to its neighbours and to the world to suppress those non-State actors and bring them to justice.

"What we need now is to be more proactive in implementing our resolutions in letter and spirit. For instance, there is much more we can do in sharing information on a real-time basis on terrorism and all forms of organised criminal activity. Take the case of our existing Convention on Mutual Assistance in Criminal Matters, signed nearly three years ago at the 15th Summit. If we act on the provisions of the Convention, it will facilitate evidence-sharing and the seizure and confiscation of criminal and terrorist funds." **SP**

India, Pakistan Ministers meet at Thimpu

The Union Home Minister, P. Chidambaram, and the Interior Minister of Pakistan Senator A. Rehman Malik met in Thimpu to solve some of the differences.

India referred to the requests made by the Home Ministry, some of which were pending with the Pakistani side since their last meeting. The Interior Minister of Pakistan also sought an early response to some of the queries made in the same context.

The Interior Minister of Pakistan affirmed that his Ministry was working towards an early visit of a Judicial Commission from Pakistan to India. He expressed the hope that the visit would take place at an early date. In response, the Indian Home Minister reaffirmed that India was willing to receive such a visit. India would also send a team to Pakistan, as agreed during the last Home Secretaries' meeting in New Delhi. **SP**

TSA enhancing passenger privacy

As part of its ongoing commitment to take smart steps to maintain high level security standards while also improving the passenger experience at checkpoints, the US Transportation Security Administration (TSA) Administrator John S. Pistole has announced that TSA will begin installing new software on TSA's millimetre wave advanced imaging technology (AIT) machines—making upgrades designed to enhance privacy by eliminating passenger-specific images.

The software, also referred to as automated target recognition (ATR), will auto-detect items that could pose a potential threat using a generic outline of a person for all passengers. In the coming months, TSA will install the software upgrade on all currently deployed millimetre wave imaging technology units at US airports nationwide.

By eliminating the image of an actual passenger and replacing it with a generic outline of a person, passengers are able to view the same outline that the TSA officer sees. Further, a separate TSA officer will no longer be required to view the image in a remotely located viewing room. In addition to further enhancing privacy protections, this new software will increase the efficiency of the screening process and expand the throughput capability of AIT.

"Our top priority is the safety of the travelling public, and TSA constantly strives to explore and implement new technologies that enhance security and strengthen privacy protections for the travelling public," TSA Administrator John Pistole said.

The software automatically detects potential threats and indicates their location on a generic, computer-generated outline of a person that appears on a monitor attached to the AIT unit. As with the current version of AIT, if a potential threat is detected, the area will require additional screening. If no potential threats are detected, an "OK" appears on the monitor with no outline, and the passenger is cleared.

In February 2011, TSA successfully tested the new software at Hartsfield-Jackson Atlanta International, Las Vegas McCarran International and Ronald Reagan Washington National airports. Currently, there are nearly 500 imaging technology units at 78 airports nationwide, including millimetre wave and backscatter units, with additional units planned for deployment this year. **SP**

Norway shocked by mass killing

Norway's worst massacre since World War II saw a lone man killing 76 people end July. The gunman, believed to be a right-winger, indiscriminately opened fire at the Utoeya island youth camp in Norway, hours after a bombing in the capital Oslo killed seven people.

Police have charged Anders Behring Breivik, a Norwegian dressed as a police officer, for both the incidents. He is said to have acted alone, though he e-mailed his manifesto to 1,003 e-mail addresses, about 90 minutes before he detonated a bomb in Oslo.

The Norwegian admitted to carrying out both the incidents told a court that two cells of collaborators were in his "Knights Templar" group that aimed to 'save' Europe from Muslims. The Police attorney Christian Hatlo said nothing could be ruled out on accomplices. **SP**

New fingermarks detection technology

Sheffield Hallam University has indicated that the Home Office Centre for Applied Science and Technology is interested in the university's research on fingermarks detection technology. The Home Office is co-funding a £80,000 Ph.D. studentship with the University's Biomedical Research Centre (BMRC) to allow for further testing. It is hoped that the technology will be incorporated into standard police investigation within a few years.

The new technology uses Matrix Assisted Laser Desorption Ionisation Mass Spectrometry Imaging (MALDI-MSI) to provide crime scene investigators with key extra details about suspects; such as any substances they might have touched, can provide crucial background information in a criminal investigation.

The new technology uses MALDI-MSI for the first time to produce multiple images of fingermarks that can provide extra information on a suspect. A fingermark is made up of material from the surface of the skin and from gland secretions. Conventionally, fingermarks found at the scene of a crime are lifted, often using a powder, and are compared with prints on a police database to identify a suspect. **SP**

India and US sign cyber pact

A memorandum of understanding (MoU) on cyber security has been signed between India and the US. The MoU was signed by the Secretary of Department of Information Technology, R. Chandrashekhar and the US Deputy Secretary for Homeland Security, Jane Holl Lute.

As per the agreement, the two countries will work in close cooperation and exchange information on cyber security. It enables the two countries to take concrete measures to deal with terrorists who are using different approaches to disrupt growth of nations.

The MoU seeks exchange of critical cyber security information and expertise between the two governments through the Indian Computer Emergency Response Team (CERT-In), Department of Information Technology, the Ministry of Communications and Information Technology, and DHS' United States Computer Emergency Readiness Team (US-CERT). **SP**

Raytheon gets funding for MNP programme

R aytheon BBN Technologies has received an award worth $16 million in additional funding from the Defense Advanced Research Projects Agency (DARPA) and a $3 million award in government funding from the Intelligence Advanced Research Projects Activity (IARPA).

The $16 million contract is under phase 2 of the military networking protocol (MNP) programme, assigned to create architectures, protocols and network devices that will improve network capabilities and integrity for tactical military units.

The basic aim of the MNP programme is to enhance network security and performance by providing user-level attribution for military computer networks. The programme has the ability to clearly identify individual aspects of network traffic that helps the unit commanders to adapt and reassign network resources to guarantee the swift delivery of mission-critical information to the correct individuals and units. **SP**

NATO probes hacking

N ATO has said that it was investigating claims of Anonymous, the hacker group, that data had been compromised from alliance computers. Last month, NATO said it was notified by police dealing with digital crimes that an alliance website was probably breached by hackers.

The e-Bookshop website, a separate service for the public to access alliance publications, did not contain sensitive information. **SP**

US, Russia cooperate on cybersecurity

R ussia and the US are working to reduce chances for a cybersecurity incident that could damage the countries' relationship, according to Howard Schmidt, the White House cybersecurity adviser.

The two countries have agreed to exchange technical information on problems such as botnets and have "crisis prevention" communications links by the end of the year.

"Both the US and Russia are committed to tackling common cybersecurity threats while at the same time reducing the chances a misunderstood incident could negatively affect our relationship," Schmidt wrote on the White House blog.

Russia has not signed the Council of Europe's Convention on Cybercrime, the only international treaty that promotes harmonised computer crime legislation across different countries and contact points for law enforcement. **SP**

US military publisher sites hacked

T he web servers of Gannett Government Media was hacked recently. The US publisher of websites such as the *Army Times*, *Defense News*, etc said it realised that the servers had been attacked resulting in unauthorised access to files containing information of some of its subscribers.

The company said that subscriber information had been breached while there was no compromise on inancial (e.g. credit or debit card) information. "Financial information is stored on a completely different system."

The websites include *Defense News,* Defense News TV, the *Armed Forces Journal*, the *Federal Times*, *Military Times*, *Military Times Edge*, *Army Times*, *Navy Times*, *Air Force Times*, *Marine Corps Times*, the *C4ISR Journal*, and the *Training and Simulation Journal*. **SP**

DoD faces challenges in its cyber activities

T he US Department of Defense (DoD) is in the midst of a global cyberspace crisis as foreign nation states and other actors, such as hackers, criminals, terrorists and activists exploit DoD and other US Government computer networks to further a variety of national, ideological and personal objectives.

The report identifies how DoD is organised to address cybersecurity threats; and assesses the extent to which DoD has developed joint doctrine that addresses cyberspace operations; assigned command and control responsibilities and identified and taken actions to mitigate any key capability gaps involving cyberspace operations. **SP**

RFI/RFP/TENDERS

Source: www.tenders.gov.in

FLIR H-Series monocular

FLIR's H-Series handheld thermal imaging cameras let law enforcement officers see clearly in darkness, providing an undeniable tactical advantage. Using the same technology as airborne law enforcement units, H-Series gives officers the information they need to make quick decisions, enhancing mission effectiveness, maximising operational capabilities, and improving officer safety.

People can't hide their heat, so H-Series lets officers: see suspects in total darkness; see through smoke, dust, and light fog; see better through camouflage and foliage in any lighting conditions; and see more – and see farther – than with other low-light night vision goggles and cameras.

Using a 320 x 240 thermal imaging core, H-Series provides four times the image clarity and detail of earlier systems, allowing officers to see more of their surroundings than any other night vision technology in the world. FLIR's advanced image-processing algorithms produce, crisp, clear thermal video day and night, in good weather and bad.

Best of all, H-Series is the first personal thermal imaging camera affordable enough to give every officer on the job the unsurpassed tactical advantages of full-resolution thermal imaging night vision. **SP**

FastMag Pistol

The FastMag Pistol (FMP) from ITW Military Products has been released. The unique design carries the magazine bullets forward and is compatible with most double stack 9mm, double stack.40 cal, single & double stack .4 cal magazines.

Just like its rifle cartridge siblings, the FMP is available in duty belt or PALS compatible variants. In addition to PALS compatibility, the FMP is also designed to 'double-stack' on all FastMag Gen II and FastMag Heavy. The FMP is available in black, tan 499, foliage green, and coyote brown. **SP**

A400M restraint equipment

AmSafe Bridport's innovative Airbus Military freighter solution provides for safer transportation of troops and cargo. The A400M restraint system prevents troops from being injured or killed and equipment from being damaged by cargo penetrating into the cockpit crew area in uncontrollable flight, crash and emergency landing conditions. The smoke curtain prevents smoke passage from cargo to personnel area and can be installed at two different locations. A second curtain reduces aircraft turbulence and cold air penetration when the rear cargo door is open. Lashing equipment restrains non-palletised loads, such as vehicles, and prevents movement during flight. **SP**

Enhanced thermal monocular Diana IR

Diana IR is a thermal imaging device designed to be used by the Special Forces while executing a wide variety of 'search and rescue' missions and other military operations, regardless of the environmental conditions such as storm, dense fog, smoke, dust, snow or total darkness.

The enhanced thermal monocular relies on proven technology. The optical elements of the objective are made of germanium lenses with high-durable and anti-reflex coating to withstand even the harshest conditions of military operations. The image processing electronic control unit allows visualisation in real time with 30 Hz frame rate and format 640x480 /NTSC/. The digital processing involves complex algorithms that increase the image quality and provide ultimate dynamic range. The monocular has a set of interfaces /serial, USB/ for remote control of the functions and an analogue video output port. It can be mounted on a mask, a helmet or a picatinny rail /MIL-STD-1913/ without the need for special tools. **SP**

Cassidian re-shapes its organisation to address new markets

Cassidian adapts its organisation in order to create a further empowered and streamlined customer-oriented structure across the globe. The new organisation is based on two pillars: customer proximity and programme execution. In addition, a strong focus is set on cyber security. "The ultimate purpose of this new organization is to ensure that we are more responsive to our customers, both at home and worldwide and to continue improving our level of satisfaction, values and service," stated Stefan Zoller, CEO of Cassidian.

Cassidian reacts with the new structure to an increasingly dynamic market environment, to the European budget reductions and to the business perspectives in the emerging markets and their growing security needs. The new organisation will enable Cassidian to increase its footprints across the globe, to capture new dynamic market segments such as cyber security, to improve efficiency and programme management and to gain more flexibility.

In the course of the transformation no operational plants or parts of operational plants will be relocated. **SP**

DRS Technical Services office at Charleston

DRS Defense Solutions announced that its Technical Services business unit has opened a new office in Charleston, South Carolina, to better support its customer, the Space and Naval Warfare Systems Command (SPAWAR).

"DRS Technical Services is committed to strengthening our partnership with SPAWAR," said Jim Scott, Vice President and General Manager, Global Enterprise Solutions line of business. "We are extremely pleased for the ability to provide SPAWAR with the high quality of service and support that they expect and deserve." **SP**

General Dynamics acquires Fortress Technologies

General Dynamics has completed its previously announced purchase of Fortress Technologies, Inc, a provider of secure wireless networking equipment for the US military and other government customers. The value of the cash transaction has not been disclosed.

Fortress Technologies produces a portfolio of mesh networking products that enable secure wireless network capabilities for battlefield logistics, convoy, command post and soldier applications. Built on commercially available technologies, Fortress Technologies' ruggedised products improve soldiers' combat effectiveness and survivability by increasing their access to information.

"The acquisition of Fortress accelerates our ability to deliver a wider array of secure, Wi-Fi-based tactical wireless communication systems for military and government users worldwide," said Chris Marzilli, President of General Dynamics C4 Systems. **SP**

Rolta acquires emergency response company

Rolta has acquired the public safety and emergency response company ACLS Systems, FZC through complete asset purchase. ACLS software solutions are deployed and field proven homeland security applications for computer-aided dispatch ("CAD"), mobile and emergency response needs.

K.K. Singh, Chairman and CEO of Rolta, said "Rolta's Homeland Security Solutions provide users with a highly configurable, security-based, situation-awareness platform, which allows security operations personnel, command and control centres, intelligence analysts and others to collaboratively interpret information and make well-informed actionable recommendations. Our customers in this segment will indeed benefit from this acquisition as we work to make our world more secure and safe." **SP**

SECURITY EVENTS

Military Vehicles Exhibition & Conference
9-11 August
Cobo Convention Center, Detroit, MI, USA
www.militaryvehiclesexpo.com

Armoured Vehicles South Africa
22-24 August
Sheraton Hotel, Pretoria, South Africa
www.armouredvehiclesevent.co.za

DEFTECH 2011
24-25 August
Manekshaw Centre, Swarna Jayanti Marg, Delhi Cantt, New Delhi
www.ciidefence.com/deftech2011. asp?id=12

2nd Annual Modeling & Simulation Summit
29-31 August
Venue to be Confirmed, Orlando, Florida, USA
www.modelingandsimulationevent.com

Soldier Equipment and Technology Expo - Fort Bragg
30 August -1 September
Fort Bragg Club, North Carolina, USA
http://www.soldierequipmentexpo.com/ Event.aspx?id=479034

Future Artillery Asia
6-7 September
Swissôtel Merchant Court Hotel, Singapore
www.futureartilleryasia.com/Event. aspx?id=494266

Submarine Operations & Requirements Asia
7-8 September
Venue to be confirmed, Kuala Lumpur, Malaysia
www.submarinesasia.com

DSEi - Defence and Security Equipment International
13-16 September
ExCeL, London, UK
www.dsei.co.uk

3rd Annual Aviation Security 2011
18-21 September
Grand Millennium Hotel, Dubai, UAE
www.aviationsecurityme.com

Michael Jackson's 'health files' breached

The UCLA Ronald Reagan Medical Center was asked to pay $95,000 as penalties for multiple breaches by two employees and two contract workers for 'improperly accessing' the health files of a deceased patient, reportedly that of Michael Jackson. The Medical Center has fired all the four employees.

According to reports, UCLA officials had informed the legal team of Michael Jackson that his medical files had been improperly accessed after his unexpected death in June 2009.

The prestigious hospital, media reports indicate, has struggled to protect the privacy of its celebrity patients, including Britney Spears, Farrah Fawcett among others. **SP**

Fort Hood shooting reveals security lapses

The November 2009 shooting at Fort Hood, the most populous US military installation in the world, was quite scary as a single gunman killed 13 people and wounded 29 others.

The sole suspect Nidal Malik Hasan, a US Army major serving as a psychiatrist, has been charged with 13 counts of premeditated murder and 32 counts of attempted murder. Hasan is an American-born Muslim of Palestinian descent.

Subsequently, the Pentagon issued a report recommending that there be better screening of military personnel for signs that they may become violent. The report said, there's no requirement to screen soldiers for violent tendencies prior to their deployment, and post-deployment screenings rely primarily on soldiers to report their own symptoms on questionnaires. Maj. Nidal Hasan, who's accused in the Fort Hood shootings, was about to be deployed to Afghanistan when he allegedly opened fire on his fellow soldiers. **SP**

Helicopter jail break foiled as guards crack secret Sudoku codes

In June of last year, a retired 67-year-old schoolteacher Brian Lawrence used codes hidden in a Sudoku puzzle to plan a daring escape from jail by helicopter. The plan was for a helicopter to drop down in a part of Parkhurst's Prison grounds not protected by nets and Lawrence to dash from his cell to the waiting chopper.

The prison staff spotted lemon juice writings on Sudoku puzzles. Lemon juice writings are invisible until the paper it is on is heated up from underneath. After the messages were solved, Lawrence was transferred to another prison. He was jailed in 2005 for killing a friend of his ex-lover and hiring a hitman to murder two more. **SP**

Police impostors steal paintings

Two men dressed as police officers knocked on the security entrance side door of the Isabella Stewart Gardner Museum in Boston in 1990. The security guards let them in thinking they were police only to learn that they were not.

Though the duo apparently did not brandish any weapons, they managed to overpower the two guards. They handcuffed the guards, bound them with duct tape and left them in the basement. After that, they went through the museum's Dutch Room on the second floor and stole three Rembrandt paintings, including the Dutch artist's only seascape, "Storm on the Sea of Galilee." **SP**

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