DRIFTING WITH INSURGENCIES: A VIEWPOINT

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AN SP GUIDE PUBLICATION

ISSN 2230-9268

₹55.00 (INDIA-BASED BUYER ONLY)

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INDESEC 2011 SPECIAL

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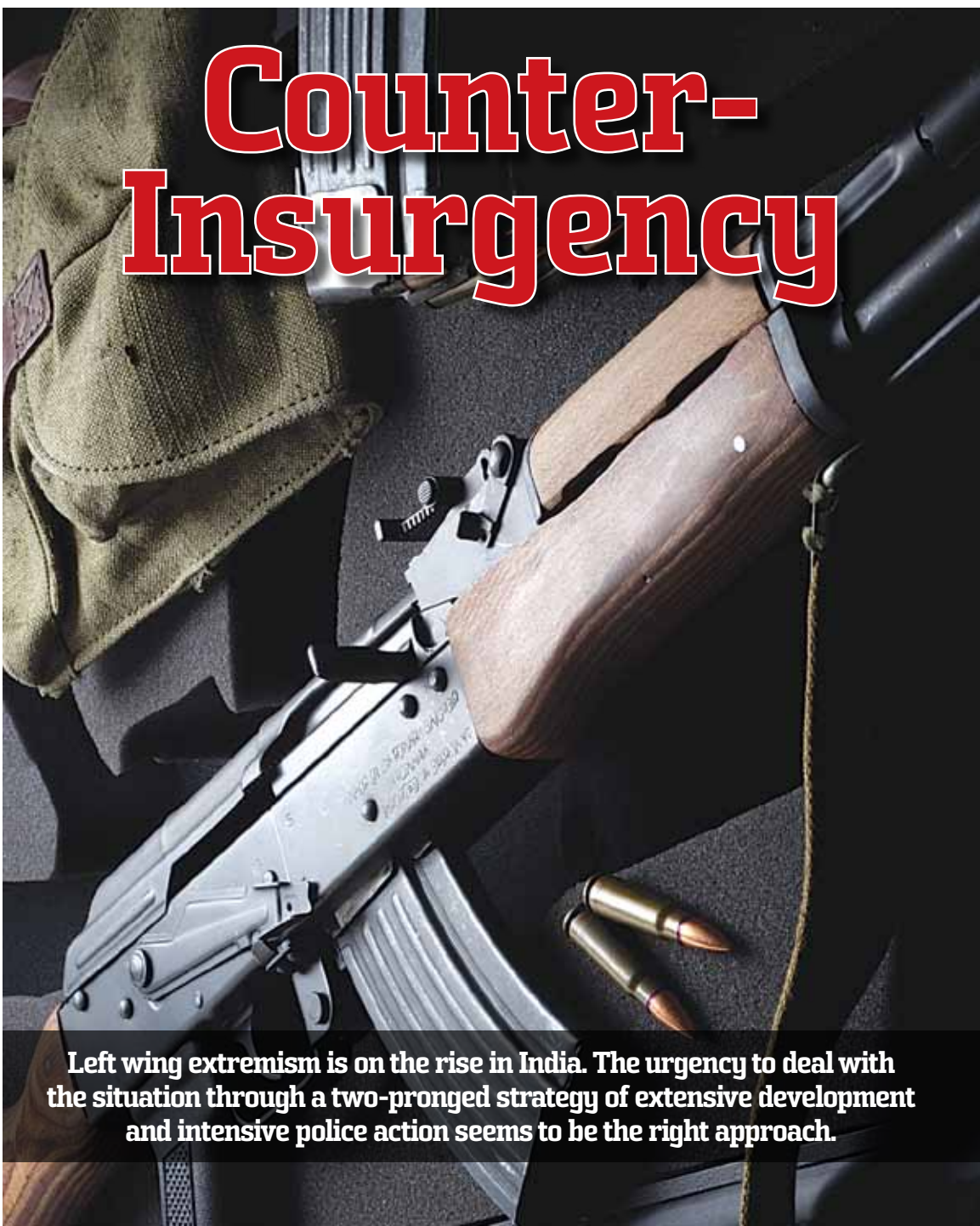

Left wing extremism is on the rise in India. The urgency to deal with the situation through a two-pronged strategy of extensive development and intensive police action seems to be the right approach.

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ANNUAL SUBSCRIPTION
Inland: ₹1,150 • Foreign: US$ 325

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Owned, published and printed by Jayant Baranwal, printed at Kala Jyothi Process Pvt Ltd and published at A-133, Arjun Nagar (Opposite Defence Colony), New Delhi 110 003, India.

SP GUIDE PUBLICATIONS
www.spguidepublications.com

The buzz of the drones

The use of drones in intelligence, surveillance and reconnaissance (ISR) activities and in attacks is par for the course now. The US has deployed drones to the maximum effect in Afghanistan, Iraq and even in Pakistan. While the Indian armed forces are equipped with drones, the government has announced July induction of unmanned aerial vehicles, drones if you may, in naxal infested areas. The requirement of drones both by the armed forces and also those in the homeland security would be phenomenal.

Prime Minister Manmohan Singh recently stated that the Maoist insurgency is the biggest internal threat. Lt General (Retd) P.C. Katoch in his fortnightly viewpoint has reminded that the roots of the Maoist menace remain politico-socio-economic and that a military solution is not the answer.

There is an interesting article, borne out of research by engineers at the University of California. They are mimicking the movement of bird wings to help improve the manoeuvrability of drones. Future research could be on combining wing twist, flapping, or other wing morphing aspects of the perching problem that UAVs currently have. Being able to perch UAVs autonomously on features in the environment (tree tops, buildings, telephone poles, etc.), and then to take off again as required, is immensely valuable and significantly increases mission duration.

In this issue, as the team from SP Guide Publications heads for the Paris Air Show, we are looking at synergies that Europe and India can have in the area of security. One of the talking points will of course be the medium multi-role combat aircraft (MMRCA) campaign which shifts to Paris as the two finalists from Europe will be at their Show best. The CEO of Cassidian Air Systems, Bernhard Gerwert in an interview gives the edge of Eurofighter Typhoon over Dassault's Rafale. While who holds the edge will be determined sometime during the year, according to the Chief of Air Staff, Air Chief Marshal, P.V. Naik, the campaign nevertheless is reaching an exciting phase.

Meanwhile, the Jaguar re-engining programme has run into a kind of roadblock with Rolls-Royce exiting from the request for proposal (RFP), thus creating a single-vendor situation, unacceptable as per the Defence Procurement Procedure. Air Marshal (Retd) B.K. Pandey deals with this conundrum.

Moving to internal security, Indesec, the definitive exhibition for those in the homeland security business, gets underway in Delhi on June 20 and many companies will be showcasing their products and solutions as there is a huge domestic market. The Union Home Minister, P. Chidambaram, has emphasised on beefing up homeland security through increased budgetary allocations. The Director General of Mechanised Forces, Lt General D.S. Siddhu in an interview also points out to the role of the armed forces in internal security situations and how in addition to the conventional roles, ever growing urbanisation has resulted in the likelihood of being involved in urban warfare and resultant consolidation operations.

The security scenario indeed is getting complex and the need for constant information flow, actionable intelligence and technologies can never be understated and fortunately the governments are giving attention to these aspects. *SP's M.A.I.* will continue to be a part of this exercise. SP

Jayant Baranwal
Publisher and Editor-in-Chief

US Army awards Lockheed Martin contract for precision strike rockets

Lockheed Martin has received a $445 million follow-on contract for guided multiple launch rocket system (MLRS) unitary rockets from the US Army Aviation & Missile Command. This is the US Army's sixth purchase of the precision munition, with almost 2,000 GMLRS rockets fired in support of US and allied military operations to date.

The contract includes 735 GMLRS Unitary rocket pods (six rockets per pod) and 508 Reduced-Range Practice Rocket pods for the US Army and US Marine Corps, as well as GMLRS pods for foreign military sales (FMS) customers including Japan, Jordan, Singapore and the United Arab Emirates. Specific numbers of rocket pods for the FMS customers were not disclosed. Work on the contract will be performed at the company's facilities in Camden, Ark., and Dallas, Texas. Deliveries are scheduled to begin in December 2012.

"Our enemies fear the precision that GMLRS delivers," said Lt Colonel Drew Clanton, the GMLRS Product Manager at the US Army's Precision Fires, Rockets and Missiles programme management office in Huntsville. "The US forces can increase their standoff distances without losing accuracy, which is paramount to our efforts to destroy threats while limiting collateral damage."

GMLRS provides dependable precision strike, a capability demonstrated currently in Afghanistan, and continues to exceed operational-readiness requirements.

"GMLRS continues to be one of the most powerful and precise assets for artillery today," said Scott Arnold, Vice President for Precision Fires at Lockheed Martin Missiles and Fire Control. "Its heavy use in combat shows our customers trust GMLRS because it's reliable and delivers incredible precision, enabling faster and more effective missions."

The GMLRS Unitary rocket is successfully meeting the needs of the US Army, US Marine Corps and British Army artillery units in theater. The program also is looking ahead to meet evolving customer requirements by testing new technology in their IRAD-funded GMLRS programme, which will integrate advanced capabilities that will keep GMLRS the world's premier long-range precision artillery rocket. SP

PHOTOGRAPH: Navantia

Navantia's "Juan Carlos I" arrives in Istanbul

End May, the Spanish Navy's ship, LHD "Juan Carlos I", arrived in Istanbul for a stopover during her first resistance voyage started on May 2. The aim of this cruise around the Mediterranean was to check functioning of equipment and systems during long navigation periods as well as to enable internal crew training.

During this period various flight operations were carried out, for which three helicopters and a "Harrier AV-8B Plus" were embarked. She also carries a landing force made up of 100 Marines, various vehicles and 2 LCM-1E amphibious assault craft, also built by Navantia.

The LHD "Juan Carlos I" was designed and built by Navantia and delivered to the Spanish Navy in September 2010. SP

DRS Defense Solutions bags terrestrial transport contract for Afghanistan and Iraq

DRS Technical Services, a DRS Defense Solutions line of business, announced that its global enterprise solutions (GES) business unit has been awarded two task orders to provide X-band satellite connectivity and terrestrial transport services to US Forces serving in Southwest Asia.

The awards, which are valued at more than $48 million, were made by the Defense Information Systems Agency (DISA) under Defense Information System Network (DISN) Satellite Transmission Services-Global (DSTS-G) task orders. These task orders ensure that DRS Defense Solutions will continue to provide in-theater support to the Department of Defense.

The terms of the award call for DRS Defense Solutions and its suppliers – Intelsat General Corporation, Paradigm Secure Communications, and Xtar – to provide a package of managed services which include remote terminals, high-speed modems with advanced coding, ground stations, fibre connectivity and terrestrial equipment for high data-rate X-band links, including a total throughput of 620 Mbps satellite links.

DRS Technical Services will also be providing operations and maintenance support services for the remote terminals.

"These awards underscore the importance of our work in Southwest Asia," notes Dr Mitchell Rambler, President of DRS Technical Services. "Our strong presence in theatre allows DRS to provide a broad range of communications services to our nation's warfighters, directly contributing to their safety and mission success." SP


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Handheld computing systems from DRS Technologies for US Army

DRS Technologies has announced that the DRS Tactical Systems business unit received a cost-plus fixed-fee award for the development of an ultra-rugged handheld device for the US Army's Joint Battle Command – Platform (JBC-P) programme.

The company received the order from the Communications-Electronics Research, Development and Engineering Center (CERDEC). As one of two companies selected for this contract, DRS will develop a solution for dismounted situational awareness requirements for soldiers and marines that is interoperable with the current force XXI battle command brigade and below (FBCB2) and blue force tracking (BFT) system.

As part of the requirement, the handheld system must include an ultra-rugged computing device, software, suite B security, and have the ability to support various communications solutions in order to receive and send friendly force position location and provide communication capability to and from soldiers and marines.

DRS Tactical Systems located in Melbourne, Florida, will design and manufacture the systems with initial prototype deliveries scheduled for September, 2011.

"We are pleased in being selected to develop a system that puts critical network connectivity and situational awareness right in the hands of our soldiers and marines," said Mike Sarrica, Vice President and General Manager of DRS Tactical Systems.

"This programme will demonstrate the advantage of a government-industry team that leverages the speed, cost-effectiveness and innovations of the commercial market, and makes them available as a capability to meet the mission command requirements of joint battle command –platform."

DRS Tactical Systems is a global leader in ultra rugged, commercial-off-the-shelf-based computers, displays & embedded workstations, handheld devices, tablet computers, and integrated peripheral products. The products of this DRS group have been incorporated into the US Army's FBCB2 programme, the US Army's movement tracking systems (MTS) programme, the US Army's common hardware/software II and III programme, and the United Kingdom's Bowman integrated battlefield communications system programme. SP

'Tat Suraksha' adds muscle to coastal security

The three-day-long joint coastal security exercise conducted in the Andaman Sea concluded early June. The central and state maritime stakeholders—Andaman & Nicobar Administration, Marine Police, State Police, Fisheries Department, Forest Department, Port Management Board (PMB), Directorate of Shipping Services (DSS), Light House authorities, Customs alongwith Navy and Coast Guard Components of Andaman and Nicobar Command participated in the exercise.

The exercise was conducted in two phases. In the first phase officials from all agencies participated in simulated drills— 'table-top exercises' in board room to fine-tune their standard operating procedures (SOPs) for Coastal Security.

The second phase was 'tactical phase' wherein live situations were simulated in which stakeholders reactions were assessed for future improvement. The exercise was also utilised to create awareness about the usage of toll free telephone number 1093 dedicated for reporting coastal security issues. The highlight of the exercise was cross deployment of Navy, and Coast Guard personnel in order to understand the working environment of each service. SP

Geospatial intelligence for edge

Intelligence plays a very prominent role in the decision making process of any nation or organisation. Security, foreign and other policies too at different levels are dependent on and closely linked to intelligence gathering capabilities.

The global, regional and domestic security scenarios and the changed nature of modern wars due mainly to the evolution of new technologies, have had a direct impact on our internal and external security management. This in turn has necessitated a review of our organisations, training and methods of planning and war fighting including the acquisition of intelligence.

In this background, the seminar on GeoIntelligence Asia 2011 held recently in Delhi gains significance. Organised in partnership with the Directorate General of Information Systems of the Indian Army, the seminar had an eminent panel of speakers from across the world. The Chief of Army Staff, General V.K. Singh, was the chief guest.

The seminar offered substantive information with ample time for networking. Through the voices of key decision makers, technology innovators, and industry leaders, GeoIntelligence Asia 2011 examined the programmes, systems, and initiatives that are transforming military and homeland security strategies, and focused on how GIS (geographical information system), GPS (global positioning system), imagery, 3D visualisation, and spatial data contribute to mission success in internal and external security operations.

The various defence establishments and government agencies in the Asian region and beyond involved in developing and exploiting geospatial technologies added to the value of this gathering. The seminar added to the promotion of capabilities and expertise of mapping and geospatial technologies being developed regionwide, particularly with regard to surveying, mapping, and GIS Solutions aimed at multiple aspects of defence and homeland security. SP

PHOTOGRAPH: Indian Coast Guard

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PHOTOGRAPH: Anoop Kamath

'I visualise a broader mandate for the Mechanised Forces in the future'

*In an exclusive Interview with **SP's M.A.I., Lt General D.S. Siddhu**, Director General Mechanised Forces, flags the modernisation and upgrading efforts of the Mechanised Forces of the Indian Army.*

***SP's M.A.I.* (SP's): In the context of the future threats and challenges, have any new roles been defined for the Armoured Corps and the Mechanised Infantry?**

Lt General D.S. Siddhu (DGMF): The security environment facing our nation is in a state of constant flux. There is a need for close monitoring of the changes taking place within and outside, especially in our close neighbourhood. We are constantly reviewing our military preparedness based on these changes. The Mechanised Forces need to constantly evolve, develop and adapt to the changing "capability cum threat" spectrum, in order to remain 'operationally relevant' at all points of time and to maintain the deterrence value.

I visualise a broader mandate for the Mechanised Forces in the future. We are likely to be employed in a broad spectrum of operational scenarios, ranging from operations in amphibious and mountainous terrain to various overseas deployments as part of an UN mandate. In addition, ever growing urbanisation has resulted in the likelihood of being involved in urban warfare and resultant consolidation operations.

SP's: What are the basic parameters which you consider essential and vital for designing the future MBT of the India Army?

DGMF: Based on the operational requirements, perspective planning and technologies available at present as well as in the future, the basic contours and the road map of the futuristic main battle tank (FMBT) have emerged. The preliminary staff qualitative requirement (PSQR) for the FMBT is evolved after taking the views of all the stakeholders. The efforts towards indigenisation/absorption of transfer of technologies (ToT) and the lessons learnt play a major part in development of the FMBT.

SP's: What is the current status of procurement of light tank for the Indian Army?

DGMF: The relevance of armour has expanded from the erstwhile manoeuvre warfare to operations in difficult terrain, amphibious operations and fourth generation warfare. Consequently, a need has been felt to customise our equipment profile to meet the specialised requirement. To that effect, the light tank is being proposed to meet different operational requirements. Currently, doctrinal and technical issues are being deliberated. Thereafter, the qualitative requirements will be finalised.

SP's: Has any new equipment been planned for the reconnaissance troops and platoons of armoured regiments and mechanised infantry battalions respectively to make them more effective?

DGMF: The Indian Army is looking at the procurement of a light armoured vehicle designed to meet the requirements of the reconnaissance troops and platoons. This vehicle will have the required mobility and agility over all types of terrain as also survivability, it will be equipped to carry out reconnaissance tasks during day as well as night in all weather conditions. Electronic control displays will integrate all on board systems for ease of management and efficiency.

SP's: Russians have made the ICV BMP-3 which has a 100mm 2A70 semi-automatic rifled gun as its main armament fires an anti-tank guided missile from the same barrel. Is the IA planning for a future ICV on this pattern?

DGMF: BMP-3 though a versatile equipment, but its physical attributes impinge on its deployment and floatation capability. Indian Army has planned for a futuristic infantry combat vehicle (FICV) to replace the BMP-2 with key operational and performance parameters envisaged in the Indian context. The project is a pioneer in 'Make Hi-Tech' category where for the first time the defence industry has invited participation by private established agencies. The project is in an advance stage for development of a prototype. We are of the view that our operational requirements can be met with a weapon mix of a cannon, machine gun, missile firing capability and an automatic grenade launcher. SP

AIR MARSHAL (RETD)
B.K. PANDEY

Jaguar re-engining conundrum

Since the middle of the last decade when the "Open Tender" system under the Defence Procurement Procedure (DPP) for the purchase of military hardware was introduced, cancellation of tenders by the Ministry of Defence (MoD) appears to have become a routine affair. The most recent case pertains to the request for proposal (RFP) for a new engine for the fleet of Jaguar aircraft for the Indian Air Force (IAF).

Of the fleet of Jaguars described as deep penetration strike aircraft (DPSA), acquired for the IAF in the late 1970s from the UK, around 125 remain in service. The ageing fleet is in need of major mid-life upgrade to remain as a frontline combat aircraft. The aircraft currently powered by two Adour Mk 811 turbofan engines has a rather unfavourable thrust to weight ratio and hence is inherently underpowered. This feature has an adverse impact on the performance envelope especially in the demanding hot and high operating environments. Thus, apart from the upgrade of avionics and other systems, the Jaguars need new and significantly more powerful engines.

With the aim to gainfully utilise the residual airframe life of 10 to 15 years or so, a decision was taken a few years ago to replace the Adour 811 engines with more powerful ones. Thus, an RFP for new engines of higher thrust was issued by the MoD on November 26, 2010, to two of the engine manufacturers—Rolls-Royce, the supplier of Adour 811 engines currently fitted on the Jaguar aircraft of the IAF, and to the American aerospace major Honeywell that produces the F125IN which is regarded as a possible replacement.

Rolls-Royce initially offered the Adour Mk 821 which in fact is only an upgraded version of the Adour Mk 811 and although it can deliver higher thrust, it is not actually a new engine. In the strictest sense, there is a possibility that the Rolls-Royce offer could therefore be considered to be technically non-compliant. However, the Adour Mk 821 offered certain advantages. Firstly, it was a product of proven technology and has a high degree of commonality with two other engines from the same company in use in the IAF—the Adour Mk 871 turbofan fitted on the Hawk Mk132, and its predecessor, the Adour Mk 811 turbofan engines that power the Jaguar fleet.

As compared with the engine currently fitted on the Jaguar, the F125IN turbofan from Honeywell delivers 30 per cent higher thrust. Honeywell claims that the F125IN would offer "improved pilot safety, lower maintenance costs and outstanding reliability". Honeywell also claimed that the modular construction of the F125IN and its integral dual full authority digital engine control (FADEC) system would provide substantial savings to the operator in life-cycle costs. It is however not clear whether or to what extent an ageing airframe will be able to fully and gainfully exploit the significantly higher level of thrust the two F125IN engines are capable of delivering.

The F125IN fitted on a Jaguar was successfully demonstrated to the IAF in 2007. Honeywell has moved forward since then acquiring its own Jaguar airframe and has completed design of its standard engines for production and is now ready for flight demonstration. Rolls-Royce opted to withdraw from the contest rather than be eliminated, resulting in a "single vendor situation". Now, as dictated by the provisions of the DPP, the MoD has been compelled to withdraw the RFP.

The three options are – to make a fresh proposal and re-tender with modified technical parameters which is time-consuming negotiations; or to follow the FMS route that would obviate the need for "open tender" and inviting bids from a number of vendors. Recent history of deals pertaining to the procurement of defence equipment indicates that the FMS route has the best chance of successfully inducting urgently required defence hardware.

The third option is to scrap the re-engining programme for the Jaguar fleet and gradually phase out the aircraft, an option that may not be readily acceptable to the IAF. SP

Honeywell claims that the modular construction of the F125IN and its integral dual full authority digital engine control system would provide substantial savings to the operator in life-cycle costs

PHOTOGRAPH: SP Guide Pubns

Eurofighter's hard sell

The campaign for Indian Air Force's acquisition programme of 126 medium multi-role combat aircraft (MMRCA) is hotting up for a European showdown. It is between European consortium's Eurofighter Typhoon and France's Dassault Rafale. At the Paris Air Show, we believe, the two finalists will be campaigning in their own ways. Here the CEO of Cassidian Air Systems, ***Bernhard Gerwert*** *outlines the plans for Eurofighter.*

SP's M.A.I. **(SP's): How do you view the development and the short-listing of Eurofighter and Rafale?**

Bernhard Gerwert (Gerwert): We are very pleased to continue the Eurofighter Typhoon campaign in India. During rigorous field evaluation trials, our combat aircraft has demonstrated its outstanding capabilities to the Indian Air Force. We are confident that at the end of the selection process, the Government of India will be convinced that the most capable and advanced multi-role combat aircraft on the market is the best choice for safeguarding the nation's security in the next decades.

SP's: Europeans once again seem to be leading one of the mega deals in India. How optimistic can you be for this market?

Gerwert: The Eurofighter partner companies are optimistic at the prospect of winning India as a strategic partner because we can offer India the most modern combat aircraft available on the world market. Eurofighter has a life span of more than 40 years ahead. This means there is a tremendous in-built growth potential, in which we would like India to participate as a new partner of the entire programme.

Our industrial partnership offer exemplifies our unique value proposition to India: Unprecedented transfer of cutting-edge technology and at the same time we are keen on winning the country as a manufacturing and development partner for the global Eurofighter programme. Plugging India into the global value chain of the Eurofighter programme will boost the development of an indigenous aerospace and defence industry in India. Getting the best combat aircraft technologies and becoming a partner in its further development, is an opportunity for India which no competitor can match. With Eurofighter Typhoon, India will gain access to a wide array of sensitive technologies from four leading defence and aerospace companies in Europe.

SP's: As the major partner in the Eurofighter programme and campaign leader in India, how do you view the MMRCA offset conditions?

Gerwert: We are confident of meeting the offset requirements of the Indian Government set at 50 per cent. We are engaged in intense discussions with the Indian industry and other stakeholders to firm up various collaborative models which will enable us to meet our offset obligations to the utmost satisfaction of our customer. Even when we submitted the Eurofighter offset offer in August 2008, we already had signed more than 20 MoUs with major Indian defence and aerospace companies, both public and private. However, our aim is not just to comply with the RFP obligations. We have gone a step further and propose India the unique opportunity for an unmatched industrial partnership which would make it a full participant in the Eurofighter Typhoon programme.

SP's: Do you think the Indian industry can handle 50 per cent of the offset arrangement?

Gerwert: Yes. We started to work on preparing India's industry to meet the challenge of acquiring new state-of-the-art capabilities. In fact, we have initiated an industrial engagement plan in India to ensure a successful transition to the MMRCA. We will move very quickly in case India selects our combat aircraft. To ensure success in terms of time, material, quality and budget, we are ready to engage with HAL and support small- and medium-sized companies in India to absorb the envisioned technology transfer and offsets. The Eurofighter partner companies will offer India's public and private industry, and research and development organisations a customised technological road-map ensuring the transfer of technology and expertise. This relates not just to the traditional area of production but also to design, development and engineering.

SP's: In the event Eurofighter becomes the final choice, what special commitment would you make to India?

Gerwert: With the full support of the Governments of Germany, the UK, Spain and Italy we propose to make India an integral participant in the Eurofighter Typhoon programme. That is an unmatched commitment. It also opens up an entirely new potential for cutting-edge defence exports from India. Together with Europe's top defence companies – EADS, BAE Systems and Finmeccanica – India could thus co-develop and co-produce future capabilities for the Eurofighter. These capabilities can then also be exported to other countries. Such a collaborative effort would greatly accelerate the development of India's aerospace and defence industry and an independent study forecasted that the selection of Eurofighter Typhoon would create more than 20,000 high-skilled jobs in India. SP

PHOTOGRAPHS: Eurofighter

India picks Globemaster III, biggest defence deal with US

The Cabinet Committee on Security presided by the Prime Minister, Dr. Manmohan Singh has cleared the proposal to buy Boeing Company's 10 C-17 Globemaster-III giant strategic airlift aircraft, the biggest ever Indo-US defence deal at $4.1 billion (₹18,450 crore). As per the contract, 10 Globemasters are to be delivered to the Indian Air Force between 2013 and 2015.

The Globemaster-III can carry a maximum payload of 77.5 tonnes, which can include combat vehicles, artillery guns and battle-ready troops and has a range of 9,200 km. "They can carry twice the load of our present IL-76 `Gajraj' aircraft. Importantly, they can also operate from short airstrips," the Air Chief Marshal, P.V. Naik has been quoted in the media.

The foreign military sale (FMS), approved by the U.S. Congress in May 2010 – establishes India as the C-17's largest international customer. According to the agreement, India will take delivery of its C-17s in 2013 and 2014.

"The C-17 will elevate India's leadership in the region," said Dinesh Keskar, President, Boeing India. "With its tactical and strategic capabilities, the C-17 fulfills India's needs for military and humanitarian airlift. The important transaction reaffirms our close relationship of several decades with India and also highlights our commitment to the strategic partnership between the two countries."

"This agreement is a reflection of the outstanding partnership India's Ministry of Defence has with the U.S. Air Force, which worked very hard to help India strengthen its airlift capabilities with the C-17," said Jean Chamberlin, Vice President and General Manager, Boeing Mobility. "The aircraft's ability to transport large payloads across vast ranges, land on short, austere runways, and operate in extremely hot and cold climates makes it ideal for the region."

Boeing will support India's C-17 fleet through the C-17 Globemaster III sustainment partnership, a proven multinational performance-based logistics programme. The GSP "virtual fleet" arrangement ensures mission readiness by providing all C-17 customers -- with varied fleet sizes -- access to an extensive support network for worldwide parts availability and economies of scale when purchasing materials.

"Boeing is pleased that the IAF has selected the C-17 to support its airlift mission," said Mark Kronenberg, Vice President of International Business Development for Boeing Defense, Space & Security. "We look forward to partnering with India as we move forward with the agreement's 30 percent offset programme, which will help strengthen India's aerospace and defense capabilities." SP

PHOTOGRAPHS: USAF, SP Guide Pubns

IAF on course: CAS

Air Chief Marshal P.V. Naik took over as Chief of the Air Staff, Indian Air Force, in May 2009, and after having spent a major part of his career tackling challenges facing the IAF, will retire on July 31 this year. Excerpts of the interview with SP's:

SP's: What is the latest on the medium multi-role combat aircraft (MMRCA) programme as you had mentioned that the contract would be signed before September 2011?

CAS: The Eurofighter Typhoon and the Rafale have been shortlisted. I am hopeful that the remaining processes will also happen as per our timelines. If there are no glitches, then the contract should get inked early. We expect to induct the first MMRCA squadron in three years from the date of signing of contract. The option clause for procurement of additional MMRCA exists in the request for proposal (RFP) and a decision would be taken subsequently.

SP's: Is the IAF revamping its air defence system?

CAS: Some of the radars on our inventory are reaching the end of their useful life and we plan to reinforce our AD cover with the induction of new radar and sensors. The induction of medium power radars has already commenced. IAF will also be inducting multi-purpose rifle sight (MPRs), low level transportable radars (LLTRs) and low level light weight radars (LLLWRs). The total percentage of legacy sensors will reduce below 20 per cent by 2014-15.

SP's: Is there a lull in the international air exercises?

CAS: It is not accurate that there is a lull in participation in international engagements. We had joint exercises with France and UK last year and would be exercising with Oman this year. Our yearly engagement with Singapore continues, in addition to Republic of Singapore Air Force participation SP

Prithvi (P-II) missile test flight

The surface-to-surface Prithvi (P-II) Missile was successfully flight tested on June 9 from the launch complex-III, ITR Chandipur, Balasore, Orissa. The launch was carried out as part of the regular training exercise of the armed forces.

Prithvi-II, the first indigenous surface-to-surface strategic missile, capable of attacking targets at ranges of 350 km, reached the predefined target in the Bay of Bengal with a very high accuracy of better than 10 metres. All the radars, electro-optical systems located along the coast have tracked and monitored the missile throughout the flight path, DRDO said. The entire launch operations of the missile were carried out by the armed forces, monitored by the scientists of DRDO. The flight test of the Prithvi-II met all the mission objectives and was like a textbook launch. Dr V.K. Saraswat, Scientific Adviser to Raksha Mantri and Secretary Defence R&D, witnessed the launch operations and congratulated the armed forces and scientists for the successful flight test. SP

PHOTOGRAPH: DRDO

Raytheon-Boeing submit plans for joint air-to-ground missile programme

Raytheon Company submitted its proposal for the US Army and Navy's joint air-to-ground missile (JAGM) competition and responded as a prime contractor. Raytheon is teamed with Boeing for the JAGM programme.

Raytheon and Boeing have proven capabilities that were showcased in the JAGM technology demonstration phase. The team enters the competition with an unmatched 3-for-3 record of success in the contractually required guided test vehicle flights. One of the reasons for the team's success is the use of a proven, tri-mode seeker incorporating semi-active laser, uncooled imaging infrared and millimetre wave guidance.

"Instead of cobbling together bits and pieces of hardware from legacy programmes, we offer a fully integrated tri-mode seeker that provides an exceptionally reliable, low-risk path to engineering and manufacturing development," said Bob Francois, Raytheon Vice President of Advanced Missiles and Unmanned Systems. "Rather than complicating matters by using a cooled seeker, we worked in close concert with our customers to determine smarter and simpler ways to arrive at a superior system solution. The uncooled seeker on the Raytheon-Boeing JAGM is just one example of that, and our overall system solution integrates targeting information from powerful aircraft onboard sensors with our advanced seeker to provide exceptional capability."

JAGM, designed to replace three legacy systems, offers the war-fighter improved lethality, range, operational flexibility, supportability and cost savings compared with older, Cold War-era weapons including all variants of the Hellfire missile. SP

Lockheed Martin submits proposal of JAGM

Lockheed Martin has also submitted a proposal in response to the government's request for proposal (RFP) for the next phases of the joint air-to-ground missile (JAGM) programme.

"Lockheed Martin's JAGM builds on Hellfire, Longbow and Javelin, three of the most trusted precision-guided weapons on the battlefield today," said Frank St. John, Vice President of Tactical Missiles at Lockheed Martin Missiles and Fire Control. "Our JAGM offering will provide US Army, Navy and Marine Corps warfighters with the next product in that line, an affordable weapon that will offer the decisive edge in combat." SP

ATK introduces hostile fire indication capability

ATK announced that its recently-developed hostile fire indication (HFI) capability upgrade for the AAR-47 missile warning system has been approved by the Department of the Navy for fleet introduction. In addition to the AAR-47's longstanding, combat-proven ability to detect incoming missile threats, the new HFI capability provides enhanced protection through detection of smaller-calibre weapon fire and rocket propelled grenades. ATK is the first company to deliver this key capability as part of a proven missile warning system.

With ATK's unique HFI capability added to the AAR-47, military aircrews flying helicopters and fixed-wing aircraft can detect a wider range of threats to their aircraft, and quickly respond with countermeasures. The HFI will be provided as a software upgrade and requires no hardware modifications to the aircraft or existing AAR-47 components. The upgrade is scheduled for delivery to the fleet later this year. SP

Engineers look to the birds for the future of UAVs

[By **Andrea Siedsma**]

Engineers at University of California (UC), San Diego, are mimicking the movement of bird wings to help improve the manoeuvrability of unmanned aerial vehicles (UAVs).

UAVs are often used for surveillance of a fixed target in military and civilian applications. In order to observe a stationary target, a fixed wing UAV must remain airborne over the object, thus expending energy for propulsion and reducing operational time. In addition, the aircraft may need to loiter at significant altitudes to avoid detection, and thus require complex sensors to observe the target far below. Rotary wing aircraft may be able to land on a perch for surveillance, but are generally less efficient for cruising flight than a fixed wing solution. A fixed wing aircraft capable of spot landing on a perch would be an ideal solution capable of efficient cruising and versatile landing for longer surveillance missions. Because the target is nearby, simple sensors could be used onboard the perched aircraft.

The problem of perching has already been solved by nature. Birds routinely land on small surfaces, using wing morphing and flapping techniques. The UC San Diego engineers, led by mechanical and aerospace engineering professor Tom Bewley and graduate student Kim Wright, analysed in slow motion several videos of birds landing to generate a working hypothesis for how wing morphing and flapping can be used for spot landing.

"One of the key behaviours observed in the birds was their use of wing sweep for pitch control in both forward flight and stalled landing approaches," she said. "Birds can move their wings in a myriad of ways, providing a level of aerodynamic control that is unmatched by UAVs," Wright said.

Wright and her team built a small remote controlled UAV with variable wing sweep and tested it using computer modeling, and an onboard micro-controller as a flight data recorder. Their initial testing validated the concept of using wing sweep for pitch control of the aircraft.

The biologically-inspired aircraft design is similar in scale to the birds the engineers observed (barn owl, hawks, large parrots, crows) and has similar wing loading and airfoil characteristics. The fuselage and tail surfaces of the prototype UAV were primarily constructed from balsa wood and foam using standard hobby aircraft construction techniques. The wings were formed using composite construction utilising carbon fibre, fibreglass, high density foam, and rip stop nylon. Carbon fibre tubing was used for the shoulder joint structure, and fibreglass reinforcement was used in heavily stressed areas on the fuselage.

Future research could address combining wing twist, flapping, or other wing morphing aspects of the perching problem that UAVs currently have. Being able to perch UAVs autonomously on features in the environment (tree tops, buildings, telephone poles, etc.), and then to take off again as required, is an immensely valuable and significantly increases mission duration.

"Combining these aspects into a fully actuated, intelligent UAV would be the ultimate goal," said Wright, who nabbed first place for this research under a poster titled "Investigating the use of wing sweep for pitch control of a small unmanned air vehicle," during the Jacobs School's Research Expo 2011. "A small UAV that could manoeuvre and land like a bird would be a valuable tool for surveillance and search and rescue. This project has brought the aerospace community a small step closer to that goal."

Wright said the future of UAVs is diverse. UAVs are quickly becoming popular tools for the armed forces, but there are also a myriad of civilian applications, which are rapidly developing, such as wildfire monitoring, search and rescue, and traffic observation.

Bewley added that sensor-equipped UAVs play an important emerging role for the tracking and accurate forecasting of the movement of large environmental plumes, such as the ash plume from the volcano in Iceland and the radioactive plume from the nuclear accident in Japan.

"There are several important scientific problems that need to be worked on to advance our capability to respond to such events," Bewley said. "Two of the key underlying computational algorithms, state estimation (that is, synchronising a large computer simulation of the environmental plume with the measurements taken in the recent past) and adaptive observation (that is, optimising the trajectories of the sensor-equipped UAVs in the near future in order to minimise forecast uncertainty) are under intense scrutiny by our lab. Initial experimental testing of these algorithms were performed by our lab in a parking lot at UC San Diego last summer, initially using small surface vehicles probing a heavy plume that hugged the ground. Doing analogous tests in airborne plumes that do not hug the ground requires UAVs that can loiter for long periods of time." SP

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PHOTOGRAPH: USCD

Skylark missions in diverse areas

Elbit Systems has completed a series of successful tests of its Skylark I LE mini/man-pack UAS using the Dominator hardware to control and operate the UAS.

During the tests, the Skylark was operated by a new cutting-edge lightweight forward ground control station (FGCS) which utilises the dominator organic hardware solution. This new operational concept answers the modern battlefield's requirements for interoperability and SWAP (size, weight and power), enabling infantry forces to execute more complex missions in diverse arenas while offering enhanced operational flexibility.

Reducing more than 15 kg of the contemporary Skylark ground control system, the FGCS is comprised of four main components aside from the UAS, all of which are geared on the soldier's vest: FGCS computer (PDU), tactical hand-held display, operator stick and an active Skylark Rambo transducer that fits as an additional radio into the soldier's vest. For covert and/or "on-the-move" operations, an eyepiece can be used instead of the hand-held display.

The FGCS allows dismounted soldiers to carry minimum gear for optimal operational efficiency, as the UAS can be launched by dispatcher units, transferring control of the operation to the forward units when the UAS reaches their range. Offering a new operational concept, this new lightweight ground station solution is ideal for covert and special operations where a small hardware signature is required. The tests confirmed the usability of the new hardware configuration and the preservation of all unique Skylark highly autonomous operation to the required mission range. SP

Hermes 900 UAV wins first export sale

Elbit Systems reported today the first export sale of its Hermes 900 UAV to a customer in Latin America (although the identity of the country has not been confirmed, the country is believed to be Chile). The UAV system selected by Chile also includes DCoMPASS payload systems and an unidentified radar systems.

The Chileans have developed their military requirement for UAS for several years but only after the earthquake that devastated the country in 2010 the need for advanced, rapid response aerial surveillance system received a high priority.

The Chilean choice followed evaluation of two classes of UAS. At the high end were the Hermes 900 and Heron from IAI, both already were selected by the Israel Defense Forces. At the lower (tactical) level were Hermes 450, and Aerostar from Aeronautics Defense Systems. The Hermes 900 will be operated by the Chilean Air Force (Fuerza Aérea de Chile – FACH). SP

PHOTOGRAPHS: Elbit Systems

Controp launches multi-sensor payload for small UAVs

Controp has added a new product, the new M-Stamp, a multi sensor payload for small unmanned aerial vehicles (UAVs). Due to the fact that small UAV (SUAV) manufacturers are now developing small UAV platforms that can stay airborne for longer – even five or six hours – so there was a new requirement for a high quality stabilised picture that could come from an easy-to-operate lightweight multi sensor camera payload which is dedicated for longer flights on SUAVs and can cross over from day-to-night or vice-versa.

Controp introduced the M-Stamp wherein there is no need to change payloads when transitioning from daytime to nighttime. The new M-Stamp includes a day camera, an uncooled dual FOV TI camera and a laser pointer all in a compact payload weighing less than 1.2 kg. Controp introduced the concept that there need not be such a vast trade-off between size/weight and quality of image. With the right technology – which Controp developed – one could get a clear and stabilised image from an easy to operate low-cost low-weight payload. SP

AGI's software for UAS

AGI will demonstrate its software capabilities for unmanned aircraft missions, border protection and space-based ISR at the Paris International Air Show.

AGI software provides UAV/aircraft mission planners and operators complete situational awareness when analysing and modeling mission routes. The software realistically models sensors, radars, satellite communications, image collection times, terrain interference and capabilities of other vehicles in one 3D theatre. SP

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Drifting with insurgencies

The Maoists are on the rampage again, upping the ante – using tonnes of explosives to blow up anti-mine vehicles and using mortars for the first time against hapless Central Police Organisation (CPOs). Concurrently there are media reports about rampant corruption in executing the public distribution system (PDS) in insurgency-affected areas.

A cross-section of those who matter would seek solace in a US Congressman attributing inactive Afghan nation building to lack of oversight and corruption. Then we cannot even be like China which simply executes those responsible for adulterated baby milk. Now that the Army has started doing jungle training in the region, some would be hoping the Maoists accelerate CPO killings, so that the Army can be handed over the problem.

The usual gradual ploy can well unfold—call the nearest Army unit for 'assistance' after/during a major Maoist attack, after which neither MoD nor Army will contest subsequent deployments. Then comes the question who is 'assisting/supporting' the Maoists? Surely not the Army one can say with confidence, even as Panetta gives evidence to Pakistan of their Army assisting Islamist militants. But in the case of India, is there a polity-Maoist nexus? While the CPI (Maoist) may have been formed by the Maoists' Communist Centre in Bihar and the People's War Group in South India joining hands, at what level do the CPI, the CPI(M), the CPI (ML) and the Maoists converge under the same communist ideology is a moot question that no one looks into. After all one can witness their sharing platforms on many occasions pan-India, during elections and even in Delhi as the hierarchy looks away – an euphemism for a thriving democracy.

You dare not lathi-charge the marauding Gujjars uprooting rail tracks or Tikait's bullock carts forcing Delhi to a standstill but don't mind tear gassing, baton charging, manhandling sleeping men, women and children around midnight in a tented enclosure. You dare not take action against Hurriyat's Geelani and cohorts talking of balkanizing India for that would undermine democracy.

So, master Geelani now has a Facebook page for tourists alleging Kashmir was never a part of India and that India since 1947 has killed half a million people in Kashmir (1,00,000 in last 20 years), 10,000 have gone missing, 7,000 women have been dishonored, 2,700 mass graves have been discovered, 50,000 children have been orphaned, 35,000 women widowed and 15,000 women forced to live lives of half-widows and 1,465 Kashmiris are languishing in jails. Yet, no one dare raise a voice against this Mr Two Percent; a Libya-Pakistan international study has established 98 per cent of Kashmir population does not want to join Pakistan. Geelani enjoys the life of a celebrity, slush with Pakistani funds—what a great democracy!

When and how many times did Prime Minister Manmohan Singh state that the Maoist insurgency is the biggest threat to India? More importantly, how many times will he have to repeat it in future as we continue to drift along and hope the problem wishes itself away? How many times does the hierarchy need to be reminded that the roots of the problem are politico-socio-economic and military solution is not the answer?

Can't we grasp what is amiss when the finger points straight at misgovernance and maladministration? The Maoist insurgency is no child's play and lull periods should not be misconstrued. Pakistan and China will both like to see it accelerate and Maoist takeover in Nepal will provide further detonation. About time the government comes out with periodic comprehensive White Papers on insurgencies in J&K, North East and Maoists, complete with their status, security forces modernisation, assessments, action plans and the like. The people of India deserve this. SP

How many times does the hierarchy need to be reminded that the roots of the problem are politico-socio-economic and military solution is not the answer?

PHOTOGRAPH: Indianvanguard

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 demonstrations 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. 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 Strategic Arms Reduction Treaty (START), 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. 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 forces, 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.*

PHOTOGRAPH: amelec-uk.com

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 1,31,730 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 Senior Researcher Sharon Wiharta, Head of the SIPRI Project on Multilateral Peace Operations. SP

Tackling naxal menace

The Home Minister, P. Chidambaram on June 15 reveiewed the anti-naxal operations in Orissa and Chhattisgarh with the respective Chief Ministers Naveen Patnaik and Raman Singh and offered intensified campaign against left wing extremism through a two-pronged strategy of development and police action.

The Home Minister said that violent incidents have been reported in areas falling under 270 police stations in 64 districts in 8 States. However, the number of incidents and the number of casualties is lower than in the corresponding period last year. Up to June 14, 2011, the number of incidents was 811 compared to 1,025 last year, resulting in 270 deaths (473 last year), including 190 civilians.

CPI (Maoist) and other left wing extremist groups continue to target civilians and kill them after branding them as 'police informers'. Of the 190 civilians killed this year, 72 were branded as police informers, he stated. Besides the groups have been targeting infrastructure and businesses. This year there were 13 attacks on railway property; 18 telephone exchanges and towers were attacked; four panchayat bhavans and 12 school buildings were destroyed; and 82 roads and culverts were also damaged.

There have been 125 encounters between security forces and left wing extremists and 78 extremists have been neutralised. Besides, 883 extremists have been arrested, 243 have surrendered and 315 arms have been recovered.

On the development side, under the Integrated Action Plan of 2010-11 and 2011-12, ₹55 crore has been allotted to each of the 60 affected districts.

The government has also announced deployment of unmanned aerial vehicles in naxal-infested areas to assist the security forces in quick intelligence, surveillance and reconnaissance activities. SP

Tatas to showcase bullet-proof Sumo

Tata Motors will be displaying the Tata LBPC (bullet-proofed Tata Sumo) at Indesec in an effort to enhance visibility of Tata's range of vehicles amongst end-users and system integrators. Tata Motors will also be showcasing their 4x4, 6x6 and 8x8 platforms to equipment manufacturers.

Tata Advanced Systems provides solutions for defence, homeland security and disaster management through technology development.

India has "fast-tracked" the acquisition of equipment and items necessary for a robust homeland security setup. As such, it has sought offers from various companies and assurances from multiple countries to provide the much needed equipment and articles. These include bomb detection and disposal equipment, explosives detectors, deep search metal detectors, personal protection, riot protection equipment, disaster management equipment, sub-surface imaging systems, blast guard barrier systems, bomb resistant trash receptacles and bullet-proof vehicles, and under-vehicle surveillance solutions, among others. SP

Nova rolls out electro-optic systems

Nova Integrated Systems recently rolled out its first production unit of the electro-optic stabilised POP 200 system integrated, calibrated and tested in India, in technical collaboration with IAI-Tamam. The rollout ceremony was held at Nova's state-of-the-art electro-optic and radar integration facility in Hyderabad.

The ceremony was presided over by Dr Prahlada, Distinguished scientist and chief controller eero programmes, DRDO. Nova Integrated Systems handed over to Shaul Shahar General Manager IAI-Tamam Division, the first electro-optic stabilised POP 200 system.

Mr. Shahar said, "We are very proud of this collaborative achievement. The new facility will be utilised by IAI-Tamam and Nova for the benefit of the Indian armed forces."

The facility, the first of its kind in the Indian private sector, has been set up by Nova to offer indigenous design development, manufacture and life-cycle support capabilities to the Indian defence and paramilitary forces.

The POP 200, a compact, modular, lightweight electro-optic system, designed for a variety of surveillance and observation roles, is gyro-stabilised in two axis (pitch over yaw) and has a sensor bay that can be configured for specific missions with specially designed sensors "Slices", incorporating high resolution FLIR and high magnification colour CCD, laser rangefinder, target marker etc, offering an enhanced image processing, correlative automatic target tracking and target acquisition capability.

A unique modular design enables easy in-the-field reconfiguration and provides the user with real-time operational flexibility with applications upon: UAVs; light reconnaissance aircraft; military and police helicopters; ground vehicles, and static pole installations for border protection. SP

Morpho's explosives detection systems in airports

Morpho Detection, part of Morpho, Safran group's security business, has installed six explosives detection systems (EDS) at Terminal 3 of the Indira Gandhi International Airport, one of the largest airport terminal buildings in the world.

The CTX 9400 DSi systems are the first in India to utilize the advanced imaging capabilities of computed tomography (CT) technology for aviation security. This technology not only helps to ensure the security of travellers but also has a low false alarm rate, allowing screeners to positively identify threats while expeditiously examining all baggage.

The facility has the capacity to handle 12,800 bags per hour, and the CTX 9400 DSi will play an integral role in maintaining passenger safety while also increasing efficiency in the baggage screening process. SP

IATA reveals checkpoint of the future

The International Air Transport Association (IATA) unveiled the first mock-up of a 'checkpoint of the future', designed to enhance security while reducing queues and intrusive searches at airports, using intelligence-driven risk-based measures.

The main concepts of the checkpoint are—strengthened security by focusing resources where risk is greatest; supporting this risk-based approach by integrating passenger information into the checkpoint process; and maximising throughput for the vast majority of travelers who are deemed to be low risk with no compromise on security levels.

How does it work?

The checkpoint of the future ends the one-size-fits-all concept for security. Passengers approaching the checkpoint will be directed to one of three lanes: 'known traveler', 'normal', and 'enhanced security'. The determination will be based on a biometric identifier in the passport or other travel document that triggers the results of a risk assessment conducted by government before the passenger arrives at the airport.

The three security lanes will have technology to check passengers according to risk. "Known travelers" who have registered and completed background checks with government authorities will have expedited access. "Normal screening" would be for the majority of travellers. And those passengers for whom less information is available, who are randomly selected or who are deemed to be an "elevated risk" would have an additional level of screening.

Screening technology is being developed that will allow passengers to walk through the checkpoint without having to remove clothes or unpack their belongings. Moreover, it is envisioned that the security process could be combined with outbound customs and immigration procedures, further streamlining the passenger experience.

Next Steps

Through the International Civil Aviation Organisation (ICAO), 19 governments, including the United States, are working to define standards. "We have the ability to move to the biometric scanning and three-lane concept right now. And while some of the technology still needs to be developed, even by just re-purposing what we have today, we could see major changes in two or three years time," said Giovanni Bisignani, IATA's Director General and CEO. SP

Northrop Grumman highlights global security capabilities at Le Bourget

Northrop Grumman Corporation will highlight its industry-leading global security capabilities at the Paris International Air Show, including unmanned aircraft systems, defence electronics and performance-based logistics.

Northrop Grumman will participate in a series of media briefings during the air show covering a range of its capabilities, including unmanned systems, defence electronics, C4ISR, sustainment and life-cycle optimisation and engineering.

The highlights will include presentations on the company's Global Hawk high-altitude, long-endurance unmanned aircraft system (UAS), Euro Hawk UAS, a state-of-the-art, high-altitude, long-endurance signals intelligence (SIGINT) system, MQ-8B fire scout vertical unmanned aircraft system (VUAS) and E-2D advanced Hawkeye manned aircraft. Fire Scout is a multi-role UAS that can carry various payloads that provide unprecedented situational awareness and precision targeting support. The advanced Hawkeye is a game-changer for Navy battle management command and control, with a two-generation leap in radar sensor and robust network-enabled capability. SP

Indesec, window of opportunity

For the fourth time, Delhi will host the international Indesec 2011 exhibition at Pragati Maidan from June 20 to 22. The event being held in association with Assocham and the Ministry of Home Affairs will focus on India's urgent need to procure the most advanced technological solutions in order to meet the homeland security requirements. The event will be inaugurated by the Minister of State for Home Affairs and Communications & IT, Gurudas Kamat.

Tejinder Singh, exhibition director, said that Indesec will showcase products and solutions for cyber, coastal , airport, border, surveillance and infrastructure security. The profile of exhibitors include Tata Motors, Panasonic, Mistral Solutions, Shri Lakshmi Defence Solutions, Streit Group, Lacroix Defence & Security, Ericsson, Getac Technology Corporation, CAE, Saab Systems Grintek, and SIBAT, Camero Tech, Maresco Technologies & Temmek Optics Ltd from Israel, among others.

Lt General R.K. Loomba, Director General, Military Intelligence, Army Headquarters said, "Terrorism in the present day is a worldwide phenomenon. It is in the interest of all security forces in the country to adapt quickly to the technically challenging scenarios. It is heartening to see Indesec taking a quantum leap forward in this regard. I appreciate the efforts made by Indesec for the educative technology on display." SP

KritiKal offers automatic number plate recognition system

KritiKal Solutions will focus on two of its product offerings – KLiPR and Trazer during Indesec 2011 held at Pragati Maidan, New Delhi from June 20. KLiPR is an automatic number plate recognition system which is ideal for standard as well as non-standard licence plates. It finds its application in access control in high security areas, parking management etc.

Trazer Suite is a video-based real-time traffic analyser and enumerator, which tracks, classifies and gives a count of vehicles in each respective category. Besides exhibiting these product offerings, KritiKal will showcase its design services capabilities in the fields of defence and aerospace through demonstrations of the work done in these fields, which includes aerial mosaicing through UAVs, providing secure communication through cryptography, etc. SP

Cartner says security software market grew 12 per cent in 2010

Worldwide security software revenue totaled $16.5 billion in 2010, a 12 per cent increase from 2009 revenue of $14.7 billion, according to Gartner, Inc. The 2010 results show that overall vendor revenue demonstrated a rebound in growth after a sharp fall in performance in 2009 due to the slow economy and tight IT budgets.

"Products within the security market are undergoing rapid evolution, in terms of both new delivery models — with security as a service showing increasing popularity — and new technologies being introduced, often by startup companies," said Ruggero Contu, principal research analyst at Gartner. "Key vendors continued to expand their product portfolios, buying companies where appropriate and expanding their reach into emerging markets."

Growth across the security segments showed great levels of variation, with more mature areas, such as end-point security and web access management, showing single-digit growth, while security information and event management (SIEM) and secure web gateway products experienced double-digit growth.

Symantec retained its market share lead and accounted for nearly 19 per cent of total security software revenue in 2010. Performance of the largest players varied considerably; Symantec, Trend Micro and IBM recorded below-average growth, while other larger players, such as EMC, experienced above-average growth. SP

EU tightening cyber security

The European Union (EU) has commenced work on creating a single security team to have better coordination when it comes to response to cyber attacks. The EU has set up a preliminary 10-member group to oversee the effort to set up the EU computer emergency response team (EU-Cert).

The team will provide an overview of security threats to the Parliament, Commission, Council and other EU agencies.

The need for a quick response team gained currency as recently information systems of the European Commission and European Parliament had come under cyber attack. The EU is strengthening its defence to such attacks. The EU computer emergency response pre-configuration team (EU-Cerpct) that is doing the preliminary EU-Cert work will be drawn from the European Commission, the European Parliament, the Council, the Committee of the Regions and Economic and Social Committee, and Enisa. SP

IMF investigating cyber attack

Following a recent cyber attack, the International Monetary Fund (IMF) has set in motion investigation to find out from where it emanated and also to ensure that the IMF systems were protected from any kind of cyber attack.

Security experts said the source seemed to be a "nation state" aiming to gain a "digital insider presence" on the network of the IMF, the inter-governmental group that oversees the global financial system.

Earlier this year it was revealed computers at France's finance Ministry had been hacked and were silently redirecting data to websites in China, apparently in an effort to steal documents relating to February's G-20 summit.

An internal memo issued on June 8 from the IMF's chief information officer, Jonathan Palmer, told staff that suspicious file transfers had been detected and that an investigation had shown a desktop computer "had been compromised and used to access some Fund systems". SP

Military initiative on US cyber security

As the threats from cyber space increase, various agencies in the US, including the military, are coming together to counter the threats. Robert J. Butler, deputy assistant secretary of defense for cyber policy, who briefed Senators recently said that the Defense Department would intensify security aspects of military domains and would also closely collaborate with the Departments of Homeland Security and Justice to guard and patrol the rest of America's cyber territory.

Philip Reitinger from the Department of Homeland Security said that the military would lead the initiatives in cyber security as it has unparalleled technical expertise and cyber expertise.

Butler stated that the US armed forces are "critically dependent" on the civilian power network, telecoms, transport and many other sectors run using computer networks. "Just as our reliance on critical infrastructure has grown, so have the threats," Butler told the Senate Homeland Security Committee. SP

Corporation unveils first Cyber Integration Center for trusted cloud computing

Harris Corporation, an international communications and information technology company, today held a ribbon-cutting ceremony unveiling the new Harris Cyber Integration Center (CIC), a next-generation data center that provides trusted cloud computing for enterprise clients with critical cyber infrastructure through a secure cloud service, in collaboration with the IT industry's market leaders. The 140,000-square-foot integrated technology and service facility is located in the Mid-Atlantic region.

"The Harris Cyber Integration Center is the foundation for our Trusted Enterprise Cloud services and a critical enabler to our work as a cyber integrator," said Dan Pearson, executive vice president and chief operating officer, Harris Corporation. "Today we celebrate the tremendous efforts of hundreds of Harris professionals and solution partners who designed, engineered, and constructed this world class facility and its integrated technology systems."

The Center was designed from the ground up to offer technology and services that are engineered to meet the highest industry and government standards for reliability and security. These standards include NIST 800-53 High, ISO 27001, SAS 70 and compliance and automation frameworks including S-CAP, HIPAA, PCI, and Sarbanes-Oxley. In addition, the facility was awarded Tier-3 certification for high availability by the Uptime Institute, LEED Silver certification for energy and environmental efficiency, and a Green IT "Audacious Idea" award for its innovative water management and conservation system. SP

RFI/RFP/TENDERS

Indian Army

Tender: **Fielding two Sangram wargaming modules**
Branch: Army War College
Publication date: May 19
Last date: June 18

RFI: **Procurement of 40 High Mobility Vehicle (HMVs) 6X6**
Branch: MGO
Publication date: June 1
Last date: June 27

RFI: **Dual Technology Mine Detectors**
Branch: E-in-C Br
Publication date: March 21
Last date: June 30

RFI: **125mm Smoothbore Barrel for Tank T72**
Branch: DGMF
Publication date: June 1
Last date: June 30

RFI: **Spatial Disorientation Simulator**
Branch: Army Aviation
Publication date: May 20
Last date: July 20

RFI: **Mine Protection Gear (MPG)**
Branch: E-in-C Br
Publication date: May 23
Last date: August 31

Source: *www.indianarmy.nic.in*

Indian Navy

Tender: **Implementation of Telepresence system**
MoD (Navy)
Publication date: June 7
Last date: July 12

Source: *www.indiannavy.nic.in*

Indian Air Force

Tender: **Spares for AN 32 Aircraft**
Air Headquarters
Publication date: April 4
Last date: June 23

Tender: **Spares for Mi 8 Helicopter**
Air Headquarters
Publication date: April 13
Last date: June 23

Ministry of Home Affairs

Tender: **Wet Lease of Twin Engine Light/Medium Duty Helicopter**
MHA
Publication date: April 18
Last date: June 23

DRS Technologies produces low-consumption thermal camera

DRS Technologies announced its reconnaissance, surveillance and target acquisition (RSTA) business unit has produced an advanced, full-featured thermal camera that consumes less than one watt of power to produce a thermal image.

Slightly smaller than a golf ball, the Tamarisk 320 occupies less than 30 cubic centimetres of space and, depending on the selected configuration, weighs as little as 30 grams (just over one ounce). It is available with a variety of lens focal lengths and horizontal fields of view.

DRS RSTA developed the Tamarisk 320 thermal camera, which it will manufacture at its facilities in Melbourne, Florida and Dallas, Texas. The thermal imager detects infrared (heat) energy that is emitted by persons, objects and structures. It produces clear imagery for the viewer, even through smoke, dust, haze, light fog and total darkness.

DRS' original equipment manufacturer (OEM) customers plan to incorporate the imager in a variety of applications including security and surveillance, unmanned aerial vehicles, portable handheld devices, and other commercial applications.

"This latest innovation extends RSTA's standing as the thermal imaging industry's technology leader and largest producer of uncooled detectors in the world," said RSTA President Terry Murphy. SP

Surveillance through cell phones and computers

Zicom Electronic Security Systems has launched Qube Camera, a technological breakthrough, which enables remote monitoring of homes and offices on mobile phones and computers. Designed on the globally acclaimed IP surveillance platform, the Qube Camera enables remote monitoring of homes and offices spaces using cell phones and computers, thus securing ones assets.

Zicom Electronic Security Systems has launched the Qube Camera which is expected to revolutionise the security industry, considering the different kinds of threats that exist. The camera has a night vision mode supported by 6 infrared LED's that are effective up to a distance of five metres and activates automatically in low light environments. SP

Otokar's new armoured vehicle ARMA

Turkish leading and largest privately owned tactical vehicles manufacturer Otokar has introduced the new 6x6 tactical armoured vehicle ARMA.

ARMA is the newest product family within the Otokar's the tactical wheeled armoured vehicle range with modular multi-wheel configuration. ARMA provides superior tactical and technical features with an outstanding cost among competitive products. The high level of ballistic and mine protection and also the design allows the integration of various types of mission equipments, ARMA is an adaptable platform for evolving mission needs in a modern battlefield.

The 6.4 m long, 2.7 m wide and 2.2 m high ARMA 6x6 variant has an 19 tonnes combat weight and carries a driver, commander and eight dismounts in its fully NBC protected hull. The vehicle is C-130 air transportable in standard configuration. SP

PHOTOGRAPH: DRS Technologies

General Dynamics declares dividend

The board of directors of General Dynamics has declared a regular quarterly dividend of 47 cents per share on the company's common stock, payable August 5, 2011, to shareholders. The board also authorised management to repurchase up to 10 million shares of the company's issued and outstanding common stock on the open market.

The company is a market leader in business aviation; land and expeditionary combat systems, armaments and munitions; shipbuilding and marine systems; and information systems and technologies. SP

General Dynamics to acquire Fortress Technologies

General Dynamics announced that it has entered into a definitive agreement to acquire Fortress Technologies, a provider of secure wireless networking equipment for the US military and other government customers. The value of the cash transaction, which is expected to be accretive to General Dynamics' earnings beginning in 2012, has not been disclosed.

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

IAI sales grows by 11 per cent in Q1

Israel Aerospace Industries (IAI) has reported sales for Q1 2011 touching $855 million, compared to $769 million in Q1 2010, an increase of 11 per cent. Export sales (80 per cent of sales) totaled $680 million, a growth of 9 per cent compared to Q1 2010. Sales to the military market reached approximately $628 million, an increase of 8 per cent compared to Q1 2010. The gross profit totaled $113 million (13 per cent of sales), compared to $112 million (14 per cent of sales) in Q1 2010, reflecting the impact of the 6 per cent appreciation in new Israeli Shekel. SP

USIBC hails C-17 purchase

The US-India Business Council (USIBC), a business advocacy group representing some 400 top US companies, has hailed India's decision to purchase 10 Boeing C-17 aircraft, valued at more than $4.1 billion.

"This is testament to India's appreciation of US technology and confidence in the United States as a long-term defence sales partner," said USIBC President Ron Somers noting that the purchase would make the Indian Air Force the owner and operator of the largest fleet of C-17s outside of the US. "US defence sales to India began only a decade ago, at a value of less than $200 million for radar equipment. We have come a long way since then," Somers said noting "US-India defence sales today have now crossed the $9 billion mark and continue to grow." SP

Raytheon announces cash dividend

Raytheon Company has announced that its board of directors has declared a quarterly cash dividend of $0.43 per outstanding share of common stock. The cash dividend is payable on August 11, 2011.

Raytheon Company, with 2010 sales of $25 billion, is a technology and innovation leader specialising in defence, homeland security and other government markets throughout the world. With a history of innovation spanning 89 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. SP

SECURITY EVENTS

INDESEC 2011
20-22 June
Pragati Maidan, New Delhi
www.indesec-expo.com

Future Artillery India
20-22 June
Le Méridien New Delhi, India
www.FutureArtilleryIndia.com

Military Vehicles Canada
27-29 June
The Ottawa Convention Centre, Ottawa, Ontario, Canada
www.militaryvehiclescanada.com

International Defence Logistics and Support Conference
27-29 June
La Plaza, Brussels, Belgium
www.wbresearch.com/internationaldefencelogistics/home.aspx

Cyber Warfare & Security Summit
27-29 June
Washington Marriott Wardman Park, Washington DC Metro Area, USA
www.cyberwarfareevent.com

MAST Europe 2011
27–29 June
Parc Chanot, Marseille, France
www.mastconfex.com

Military Logistics Summit
27-30 June
Washington Marriott Wardman Park, Washington, DC, USA
www.militarylogisticssummit.com

IMDS-2011 (International Maritime Defence Show)
29 June-3 July
TBC, St. Petersburg, Russia.
www.navalshow.ru

BRIDEX 2011 (Brunei International Defence Exhibition)
6-9 July
Negara Brunei, Darussalam
www.bridex2011.com/08venueMain.html

SAFE 2011 (5th International Exhibition on Internal and Homeland Security)
7-9 July
Halls 9, 10, 11A, Pragati Maidan, New Delhi, India
www.ciionline.org

Cameron Diaz 'riskiest' celeb on the Net

In 2010, Cameron Diaz was the 'riskiest' celebrity on the Internet. Search for a photo or the latest gossip of Cameron Diaz on the Net and the probability was high of the PC getting infected with a payload of malware fans.

McAfee which had released the list of celebrities that cybercriminals used to trick people into hitting malicious websites. Diaz topped the 2010 list, edging out 2009's riskiest celebrity Jessica Biel to the number 3 spot. Actress Julia Roberts came in second.

Being No. 1 in this case means that anyone searching for Diaz downloads and photos has a 10 per cent chance of stumbling onto a web site that's tested positive for viruses, spyware, adware, and spam. Combining the terms "Cameron Diaz" and "screensavers" yielded search results in which 19 per cent of the sites discovered were brimming with malware.

McAfee uses its SiteAdvisor ratings to compile which sites are riskiest when looking for celebrities. The list typically looks at actors, athletes, musicians, politicians, and other members of the rich and famous. Movie stars and models were at the top on the risky scale, while US President Barack Obama and Republican Senator Sarah Palin were among the safest to search for, coming in at No. 49 and No. 50, respectively. SP

Unarmed man hijacks plane

In 2006, a terrifying lapse in aircraft security allowed an unarmed man to hijack a passenger jet with more than 100 passengers aboard. The man strolled from his seat on the Turkish Airlines plane and simply pushed aside a stewardess who had opened the cockpit door to serve drinks to the crew.

He then told the pilot he had accomplices on board who would blow up the plane if his demands were not met. The flight was diverted from Istanbul to Brindisi airport in southern Italy where the hijacker apologised, requested political asylum and was arrested. He turned out to have no weapon or accomplice.

The incident showed that the introduction of locked, reinforced cockpit doors is ineffective unless airline crew follow rigorous drills when opening and closing them. SP

Chinese submarine gets within firing range of US aircraft carrier

In 2006, a Chinese submarine left the US Navy hassled. The US Navy which had deployed a battle fleet on exercises found that a Chinese Song Class submarine surfaced close by the USS Kitty Hawk. Normally during such exercises, the US deploys at least a dozen warships to provide a physical guard.

The 160 ft Song Class diesel-electric attack submarine sailed within viable range for launching torpedoes or missiles at the carrier. Senior Nato officials said the incident caused consternation in the US Navy.

It also led to tense diplomatic exchanges, with shaken American diplomats demanding to know why the submarine was "shadowing" the US fleet while Beijing pleaded ignorance and dismissed the affair as coincidence. SP

Angry fan bursts into English football team's locker room

That excited and angry fans want to get closer to their heroes in sports, to praise them or admonish them, is not new. There have been instances galore of fans breaching security and doing what they intended to do.

Last year, an angry fan burst into the England team locker room in Cape Town after the football team drew with Algeria. FIFA, the football body, said such security lapses were 'unacceptable' and tightened security at all football events. The fan had an angry exchange of words with David Beckham. The team complained to FIFA as it happened before Prince William and Prince Harry were scheduled to visit the team. SP

PHOTOGRAPHS: Wikipedia, www.hollywoodactress.org

47

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