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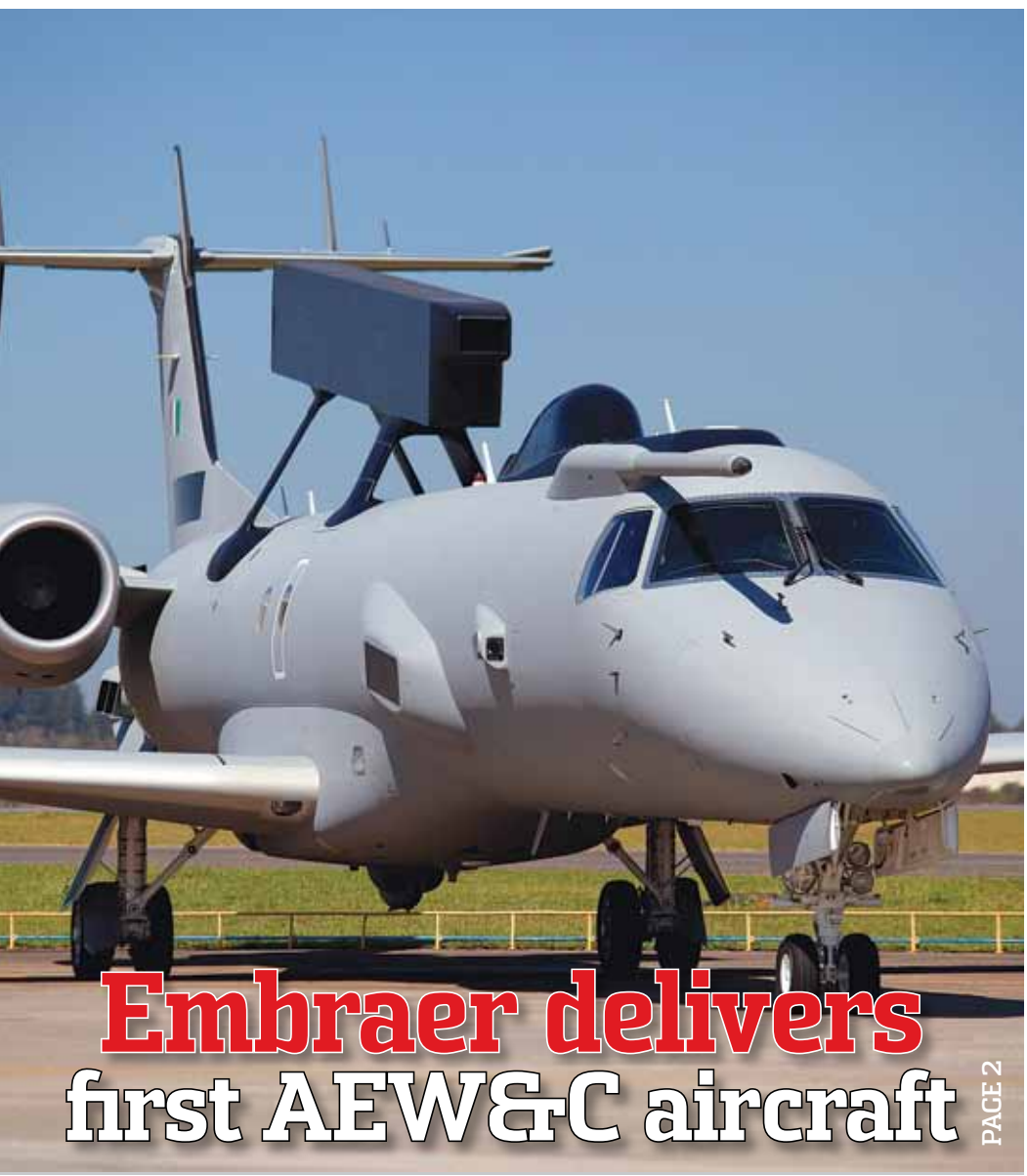

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Nuclear-powered attack submarine INS Chakra was recently commissioned into service

$50 billion build-up for Indian Navy

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Embraer delivers first AEW&C aircraft to India

Embraer Defense and Security on August 16 delivered the first EMB 145 Airborne Early Warning and Control (AEW&C) class of aircraft to the Government of India, in a ceremony held at Embraer's headquarters in São José dos Campos, Brazil. The delivery follows successful completion of ground and flight tests of the aircraft which met operational targets established by both Embraer and Centre for Airborne Systems (CABS) of Defence Research and Development Organisation (DRDO). Later on the aircraft will be delivered to the Indian Air Force (IAF) after integration of missions systems of DRDO by CABS in India.

"The collaboration with DRDO in such a complex programme strengthens the ties between Brazil and India", said Luiz Carlos Aguiar, President & CEO of Embraer Defense and Security. "We are very proud

PHOTOGRAPH: Embraer

to meet the expectations of our clients in providing CABS, DRDO with this platform."

"This EMB 145 AEW&C features major capabilities such as in-flight refuelling system, significant increase in electric and cooling capacity and a comprehensive set of structural changes to which will allow the installation of the advanced mission systems that have been developed by India's CABS along with its work centres of DRDO", said Dr Elangovan, Chief Controller R&D (Avionics & Aero) of DRDO.

Remaining AEW&C aircraft are due to be delivered to the IAF as part of a contract signed in 2008 that includes a comprehensive package for training, technical support, spare parts, and ground support equipment. These aircraft, upon entry-into-service, will join four Embraer Legacy 600 jets – currently operated by the IAF for the transportation of Indian Government officials and foreign dignitaries – and a fifth Embraer Legacy 600 which belongs to the Border Security Force (BSF), under the Home Ministry. SP

Cover:
On August 16, Embraer Defense and Security delivered the first EMB 145 AEW&C aircraft to India, which will be handed over to the IAF after integration of missions systems of DRDO by CABS in India.

Cover image: Embraer

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Time is now to tackle internal strife

There is growing concern about naxal violence spreading to different parts of the country. As per the Minister of State for Home Affairs, Jitendra Pratap Singh, 26 districts in India are 'severely' affected by left-wing extremism (LWE), pronounced in Chhattisgarh, Jharkhand, Bihar and Odisha, while there is naxal presence in West Bengal, Maharashtra, Andhra Pradesh, Madhya Pradesh and Uttar Pradesh. The need to quell further spread of LWE is urgent and the government must approach the burning issue, using the carrot and stick method.

Internal strife is popping its ugly head here and there. Assam is marred by violence, a problem not easily to go away with illegal migrants into the state. The recent violence has left the state shattered. Its ramifications are being felt elsewhere and there is mass exodus of Northeast people from Karnataka and Tamil Nadu. This certainly does not bode well for the country, which is known for unity in diversity.

In his fortnightly column, Lt General (Retd) P.C. Katoch mentions how post-26/11, Pakistan has activated its sleeper modules inducted in the 1980s and we see increasing attacks pan-India. The time to tackle these insurgencies is now.

While internal security is a major issue, the Indian military is on fast-track modernisation. At a recent press meet, Navy Chief Admiral Nirmal Verma disclosed that the government has granted acceptance of necessity (AON) for naval acquisitions worth ₹2,73,000 crore (approximately $50 billion). This makes India's naval modernisation programme one of the world's largest naval build-up.

That India is Boeing's largest international customer for C-17 Globemaster III is not surprising at all. India's defence acquisition programmes are humongous, driven by the vastness of the country and also the growing threat-perceptions in the region. India is buying 10 C-17 airlifters from Boeing, while the company awaits to hear on the deal for 22 new AH-64D Apache attack helicopters.

Work is on at a frenetic pace to deliver the 10 C-17s at the Long Beach facility in California. SP's Special Correspondent was at Long Beach, capturing the pace of work that is going on the first of the C-17s. The ceremonial riveting programme of the tail section, fuselage and forward section was a momentous occasion. The Consul General of India, San Francisco, Ambassador N. Parthasarathi, rightly mentioned: "This momentous occasion, where we see India's first C-17 take shape, further strengthens our growing relationship. As India strives to become a global reservoir of highly skilled and technologically sophisticated manpower, we will witness an escalating technology transfer, collaborative joint research and development and coproduction of defence items between our two countries."

Not just with the US, India is keen on strategic partnerships with several countries. Brazil's Embraer Defense and Security has delivered the first EMB 145 Airborne Early Warning and Control (AEW&C) class of aircraft to India. The President & CEO of Embraer Defense and Security, Luiz Carlos Aguiar summed up the partnership: "The collaboration with DRDO in such a complex programme strengthens the ties between Brazil and India." The Centre for Airborne Systems (CABS) of DRDO will be involved in integration of mission systems.

We are seeing more partnerships happening on the ground. Recently, Mahindra & Mahindra, one of India's leading business houses, and Telephonics Corporation signed a definitive agreement to form a joint venture to provide radar and surveillance systems, communication systems, homeland security systems, etc.

As the nation commemorated the 13th anniversary of Kargil victory, former Chief of Army Staff General V.P. Malik opines that the Kargil War was not the first time when Pakistan initiated a war; and we must not assume that it would be the last time. India will remain vulnerable to such threats along its disputed borders unless it builds a credible will and capability to deter and dissuade likely adversaries.

Jayant Baranwal
Publisher and Editor-in-Chief

On Schedule

India's first C-17 Globemaster III

Air Commodore Sanjay Nimesh, Air Attaché, Indian Embassy, Washington, at the 'major join' ceremony

Guests and dignitaries at the 'major join' ceremony of India's first C-17

PHOTOGRAPHS: SP's Special Correspondent

[By **SP's Special Correspondent** in Long Beach, California, USA]

The fruit of India's single largest defence contract yet with Washington took shape last month at Boeing's big military aircraft facility in Long Beach, California, with tail section, fuselage and forward section of the first C-17 Globemaster III for the Indian Air Force (IAF) ceremonially riveted together in the presence of senior diplomats, politicians and Boeing brass.

Ambassador N. Parthasarathi, Consul General of India, San Francisco, said, "This momentous occasion, where we see India's first C-17 take shape, further strengthens our growing relationship. As India strives to become a global reservoir of highly skilled and technologically sophisticated manpower, we will witness an escalating technology transfer, collaborative joint research and development, and co-production of defence items between our two countries."

Twenty IAF pilots and 10 logisticians/loadmasters are currently at the United States Air Force (USAF) base in Altus, Oklahoma, being trained on C-17 flying and loading operations. The first of 10 Indian C-17s, contracted at a cost of just over $4.1 billion (₹22,500 crore)—making it the largest defence contract between the two countries so far—is on schedule for delivery to India in June 2013. The 10 aircraft are to be based at the Hindon Air Force station from which operations are slated to enter full tempo by the end of 2014 when deliveries are completed.

While it is well known that the C-17 foreign military sales (FMS) does not contain an options clause, former IAF Chief Air Chief Marshal P.V. Naik revealed last year that the service was considering at least six more aircraft. A decision on such a follow-on order, however, will only be taken once deliveries begin next year. However, there is a catch. The Indian Government will need to take a decision no later than late next year, since Boeing, having completed deliveries to the USAF by that time, and assuming there are no fresh international orders, will begin to wind down the facility. SP

High Hopes

Boeing looks forward to get its next big contract from India, for 22 AH-64D Apache attack helicopter deal

A brand new AH-64D Apache Block III fresh off Boeing's production line in Mesa, Arizona

[By **SP's Special Correspondent** in Mesa, Arizona, USA]

Boeing waits in the proverbial wings for what it hopes will be its next big contract from the Indian military—a lucrative deal for 22 new AH-64D Apache attack helicopters, all from the latest Block III and at least some of them armed with the formidable Northrop Grumman/Lockheed Martin AN/APG-78 Longbow fire control radar (one in three US Army AH-64Ds come armed with the sensor).

At this stage, if the Indian Air Force (IAF) indeed has plans to award the contract to Boeing, it is unclear as to how many of the platforms will come with the Longbow radar. Trials conducted in India involved an AH-64D Block II with Block III components, including gearbox, fuel tanks, composite rotors, etc, in effect, a Block III but without the attendant avionics. There are also concerns about whether the fracas between the Indian Army and the IAF over the use of armed helicopters has anything to do with the process slowing down, or a decision being deferred.

Sources indicate that the procurement is on course and a winner is likely to be announced before the year is out. SP

PHOTOGRAPHS: SP's Special Correspondent

For special operations

Boeing is planning to brief Indian defence personnel on AH-6i light armed utility helicopter, which could also have prospective value for India's Special Forces and paramilitary

Boeing AH-6i test aircraft outside upcoming production line site

[By **SP's Special Correspondent** in Mesa, Arizona, USA]

In the final stages of setting up a line for the AH-6 light armed utility helicopter, Boeing plans to weigh interest in India through briefings to the Indian Army and the Indian Air Force (IAF) later this year. With Boeing Rotorcraft energies currently focused on capturing the IAF attack helicopter competition, the company is lining up data and information for presentations on the AH-6i, the export version of the light chopper originally developed by McDonnel-Douglas.

While the IAF and the Army already have their light utility helicopter procurement process on—in fact at the final stage—sources in Boeing believe the AH-6i could have prospective value for India's Special Forces and paramilitary. Like its much larger cousin, the AH-64D Apache, the AH-6i Little Bird deploys an impressive arsenal of on-board weapons, including a chain-gun, rocket pods and AGM-114 Hellfire strike missiles.

The AH-6i, with a 1-2 person crew, has a MTOW of 722-kg, can cruise at 135 knots at an altitude 18,700 feet and is powered by a single Allison 250-C30 turboshaft engine. A variant, called the AH-6S Phoenix has been pitched to the US Army for its armed aerial scout programme. So far, Saudi Arabia and Jordan have expressed interest in the platform. SP

Tender for naval utility helicopters

After inviting information in 2010, the Indian Navy has floated a tender for 56 naval utility helicopters (NUH) from global vendors. The Navy is looking to replace its Chetak and multi-role anti-submarine torpedo carrying helicopters with suitable new-build light utility helicopters. "The helicopter should be a wheeled twin-engine helicopter of modern airframe design with modern, proven, reliable and fuel-efficient engines and fully integrated advanced avionics," the Navy has stipulated in its request for proposal (RFP).

The Navy wants interested contenders to field helicopters that are IFR capable with dual controls but capable of single pilot operations (the default operational crew being 2 pilots and an aircrew man diver). The day and night missions to be undertaken by the new fleet would include (a) search and rescue, (b) casualty evacuation (CASEVAC), (c) logistics and communication duties including under slung cargo, (d) limited observation and surveillance, (e) limited electronic intelligence (ELINT) gathering, (f) anti-submarine warfare (ASW) attack with light torpedo/depth charge, (g) provide dynamic response during aid to civil authorities, (h) anti-terrorism/anti-piracy with small arms.

Indian Navy's Chetak helicopter

The Navy stipulates that the helicopter must be able to operate from small decks and larger decks up to aircraft carrier in adverse weather by day and night. Significantly, the Navy is looking to replace its single-engine Chetaks with twin-engine NUHs. SP

PHOTOGRAPHS: SP's Special Correspondent, SP Guide Pubns

IAF scouts for spatial disorientation simulator

With training truncated as a result of lack of trainer aircraft, and an increasing number of cases of disorientation being reported, the Indian Air Force (IAF) is going in for a fast-track purchase of a motion-based spatial disorientation simulator (SDS) for aircrew. The SDS will be required for demonstration of spatial disorientation, disorientation training in flight situations, flight simulation and night vision training and motion sickness desensitization. The IAF has stipulated that the disorientation illusions that the SDS should be capable of simulating must include coriolis, somatogyral, oculogyral, graveyard spin, nystagmus, autokinesis, black hole approach, dark take-off, sloped runway, among others specified in the RFP. This will be first simulator that the IAF will acquire specifically for ground training pilots in the grave threat of spatial disorientation. So far, it was included in ab initio and intermediate flight training with instructors. The IAF is looking for a dual cockpit simulator with adjustable pilot seats, duplicated flight controls, a full set of cockpit instruments, two-way communication with voice recording, simulated aircraft noise and vibrations. According to the RFP, the software must make available realistic representations of ground objects and include various terrains (such as hills, sea, snow, jungles and desert). Simulation of ground objects must include details such as power lines, wind power stations, power plants, houses, trees, rivers, dams, roads, railroads, bridges, ship, oil rig, lighthouses, etc. SP

Indian Navy for new airport surveillance radars

In an effort to ramp up navigation and surveillance systems at its airfields across the country, the Indian Navy has announced interest in acquiring an unspecified number of airport surveillance radars (ASR), including a secondary surveillance radar, for its naval air stations. The ASR will be used to detect aircraft and helicopters, automatically track them, identification of cooperative air targets with respect to aircraft identification, altitude etc, and provision of SSR data on the radar display, and weather data to the ATC. The tender is expected to be the first in a slew of radar purchases expected from the navy in the short term. The navy's brand new air station INS Baaz — India's southernmost air station — at Campbell Bay on the Nicobar Islands will receive one of these radars. The air station is currently capable of receiving only transport aircraft and helicopters, but may in the future be expanded for fighter operations. SP

PHOTOGRAPHS: Environmental Tectonics Corporation, Maj VK Singh/DPR, Raytheon

Indian Navy Sea Kings upgrade process soon

Long delayed already, the Indian Navy is likely to begin the process to choose a package to upgrade its fleet of ageing Westland Sea King Mk.42B utility/ASW helicopters shortly. The upgrade involves sprucing up the Sea Kings with new avionics, electronic warfare suites, communication kits and an all-new weapons suite, including anti-ship and anti-submarine munitions. The navy is currently weighing upgrade packages offered by the OEM AgustaWestland (backed by a consortium of European companies for the electronic suites), and Israeli packages that includes IAI-Lahav and Elbit.

The upgrade of roughly 20 Sea Kings comes at a time when the navy is near making a decision on a contract that will begin the process of augmenting and progressively replacing the old Sea Kings. The MRH competition for 16 multi-role helicopters, in which Sikorsky's S-70B Seahawk is understood to have the lead over NHIndustries' NH90. The Navy will also soon begin the process on the follow-on N-MRH competition for at least 75 helicopters — a total of 91 choppers to replace India's dwindling number of Sea Kings. The N-MRH programme will involve a competition between the Lockheed Martin MH-60R, NH90 and perhaps even the Eurocopter EC725 Super Cougar. SP

First Indian carrier not before 2017

In another major delay dogging India's most ambitious shipbuilding effort, the country's debut home-built aircraft carrier of the new Vikrant class will not be commissioned into service with the Indian Navy before 2017 – putting down a cumulative delay of six years from initial projections. The fresh projection is a two-year delay over and above the last time frame of 2015. Navy chief Admiral Nirmal Verma has indicated serious problems in the installation of gearboxes, compounded by an unfortunate road accident from Pune to Kochi in which a truck freighting generators for the brand new aircraft carrier met with an accident, compelling Cochin Shipyard Ltd to send the equipment back to the OEM for inspection and repair. When the Navy chief was asked about the follow on aircraft carrier (which may or may not be built at CSL), reported to be in line to be christened Vishal, the Navy chief said, "It's too soon to talk about that. I've got more pressing priorities now." It is known that the Vishal class of carrier will be a larger class of over 60,000 tonnes. Naval designers and planners are currently deliberating over the design philosophies that the new class will be imbued with, including aircraft launch configuration, propulsion and other dynamics. SP

Indian Navy on ship-buying spree

Apart from the 46 ships under construction for the Indian Navy, the service has obtained acceptance of necessity for 49 more ships and submarines. According to Navy Chief Admiral Nirmal Verma, these include seven more follow-on ships of the Shivalik class (Project 17-A), which are to be built at both Mazagon Dock Ltd in Mumbai and the Garden Reach Shipbuilders and Engineers Limited (GRSE), Kolkata; the navy is working towards contract conclusion before the end of March next year. Contracts for four water-jet FACs, to be built at GRSE, one more training ship, to be built at a private shipyard and two mine hunters to be built in South Korea are likely to be concluded during the current financial year as well. Six more mine hunters will be subsequently built at Goa Shipyard under ToT. Options for the Deep Submergence and Rescue Vessel (DSRV) are presently undergoing technical evaluation. Critically, approval for construction of six submarines under Project-75(I) is at the final stages of approval. Requests for Proposals in respect of four amphibious landing platform docks (LPDs), 16 shallow water anti-submarine warfare ships — the order being split between two shipyards — one survey training vessel and two diving support vessels will also be issued in the coming months. The Navy Chief emphasised that of the 46 ships and submarines presently on order, 43 are from Indian shipyards. SP

PHOTOGRAPHS: Indian Navy, DPR Defence

Arihant sea trials in a few months

The Indian Navy's first SSBN Arihant will enter a crucial phase of sea trials "in the coming months", Navy Chief Admiral Nirmal Verma declared today. "We're pretty close to putting her to sea. In submarine design, there's an element of unpredictability. It's a hugely complex exercise. Sometimes, unexpected problems do come up. But I can say that in the next few months, she'll be ready for sea trials," he said.

Under harbour and systems trials at the Shipbuilding Centre in Visakhapatnam by the DRDO and Indian Navy, the vessel is expected to undergo a rigorour routine

of trials at sea before being declared ready for commissioning and operations. The Arihant is expected to be the first of three SSBNs for the Indian Navy—the two other hulls are already in various stages of construction and fabrication.

In July, Prime Minister Manmohan Singh gave away awards for indigenous technological excellence, including to Defence Research and Development Laboratory (DRDL) scientist A.K. Chakrabarti for "outstanding contributions in the successful development of the first Submarine Launched Ballistic Missile System (SLBM) for the nuclear powered platform 'Arihant'," a referrence to the classified K-series of missiles, including the 750-km K-15 and 3,000-4,000 km range K-4 and K-5. SP

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GENERAL (RETD)
V.P. MALIK

Kargil War

Lessons and future security challenges

A strategically conscious nation commemorates its historical national security events for three reasons: to remember and pay homage to those who sacrificed their lives for the nation's future, to recall lessons that emerged from that event and to pledge for a safer and better future. When the nation celebrates the 13th anniversary of the Kargil War, it is an appropriate occasion to recall its important lessons and our capability to meet future security challenges.

The Kargil War can be remembered for its strategic and tactical surprise, the self-imposed national strategy of restraint keeping the war limited to the Kargil-Siachen sector, military strategy and planning, in keeping with the political mandate, and the dedication, determination and courage of our soldiers and junior leaders despite several deficiencies in weapons and equipment. In fiercely fought combat actions, on difficult terrain that gave immense advantage to the enemy holding mountain-tops, we were able to evict Pakistani troops from most of their surreptitiously occupied positions. Pakistani leadership was forced to sue for ceasefire and seek withdrawal of its troops from the remaining areas. Operation Vijay (code name for the war) was a blend of determined political, military and diplomatic actions, which enabled us to transform an adverse situation into a politico-military victory.

Several lessons emerged from the war, which required a holistic national security review as well as rethinking on the nature of conflict in the new strategic environment and conduct of wars. Some important lessons were:

- There may be remote chances of a full-scale conventional war between two nuclear weapon states but as long as there are territory-related disputes (currently we have them with China and Pakistan), the adversary can indulge in a proxy war, a limited border war, or both.
- Political reluctance in India to adopt a proactive strategy invariably leads us to a reactive military situation. Besides, no loss of territory is acceptable to the public and the political authority. It is, therefore, essential to have credible strategic and tactical intelligence and assessments, effective surveillance, and close defence of the border.
- Successful outcome of a border war depends upon our ability to react rapidly. The new strategic environment calls for faster decision-making, versatile combat organisations, rapid deployment and synergy amongst all elements involved in the war effort, particularly the three services.
- A conventional war may remain limited because of credible deterrence and escalation dominance. Such deterrence may prevent a war; it will also give more room for manoeuvre in diplomacy and conflict.
- A war in the new strategic environment requires close political oversight and politico-civil-military interaction. It is essential to keep the military leadership within the security and strategic decision-making loop.
- Information operations are important due to much greater transparency of the battlefield. The political requirement of a military operation and to retain moral high ground (and deny that to the adversary) needs a comprehensive media and information strategy.

In the last 13 years, the armed forces have followed up on many of these lessons. The war had highlighted gross inadequacies in our surveillance capability. Some action has been taken to improve all-weather surveillance and closer defence of border along the line of control (LoC). This capability along the line of actual control (LAC), however, has not improved to the desired level. Individual service and joint services doctrines have been revised. More Special Forces units have been added to the strength of each service.

Several lessons emerged from the Kargil War, which required a holistic national security review as well as re-thinking on the nature of conflict in the new strategic environment and conduct of wars

Higher defence management

After the war, the government had carried out a National Security Review in 2002. The Security Review had recommended creation of the post of Chief of Defence Staff (CDS) to provide a single-point military advice to the government and to resolve substantive inter-service doctrinal, planning, policy and operational issues. This is necessary because in India, turf wars, inter-service rivalries, bureaucratic delays and political vacillation in decision-making become major hurdles in defence planning which is tardy, competitive and thus uneconomical. Due to lack of political will and inter-service differences, this important recommendation was not implemented. Selective and cosmetic implementation of recommendations, without changing rules of business, has ensured a status quo in the higher defence control and its decision-making processes.

In the new strategic environment of unpredictability, enhanced interactivity and much faster planning

and decision-making, a face to face politico-military dialogue and its continuity is critical to success in strategic and operational issues. Only that can enable the required synergy and optimise defence and operational planning. Unfortunately, our political leaders remain inhibited in discussing security and defence policy issues with military leaders directly. They feel more secure behind a bureaucratic curtain and advice. As a result they are not adequately conversant with military purposes, capabilities, constraints and effects; and military leadership in peacetime, when we have to do defence planning and prepare for war contingencies, remains out of the strategic decision-making loop. The national security framework is not in sync with the needs of new security challenges or healthy civil-military relations.

This realisation has made the government order yet another review under the Naresh Chandra Committee. If the recommendations of this Committee—now under study in the government—are processed and implemented in the same old manner, India would lose yet another opportunity to make its national security more effective.

General (Retd) V.P. Malik paying tribute to Kargil martyrs at Major Sandeep Shankla War Memorial at Panchkula

Deficiencies in weapons/equipment and modernisation

When the Kargil War broke out, our holdings and reserves of weapons, ammunition and equipment were in a depleted state due to continuous lack of budgetary support, tedious procurement system, and raising of units without sanctions for weapons and equipment. To the media, I had to say, "We will fight with whatever we have."

It is evident from the letter written by the former Chief of Army Staff to the Prime Minister on March 12, 2012, that deficiencies in our war wastage reserves continue. He complained that the Army's air defence weapon systems were obsolete, the infantry was deficient of crew served weapons and lacked night fighting capabilities, and its tank fleet was devoid of critical ammunition. He alleged that there was "hollowness in the procedures and processing time for procurements as well as legal impediments by vendors." The government has failed to rectify this chronic problem which has dogged the nation for decades.

Modernisation of Indian armed forces continues to lag behind due to inadequate self-reliance, fear of scams and reluctance to procure essential equipment from abroad. Despite a large network of Defence Research and Development Organisation (DRDO) laboratories, ordnance factories and defence public sector undertakings, we continue to import 70 per cent of our weapons and equipment. The government desires that private sector invests in defence industry and obtains higher technology from abroad. But due to vested interest of the defence public sector undertakings and its bureaucratic control, it has failed to provide a level playing field to Indian and foreign private companies. The newly established Defence Acquisition Council and Procurement Board have been unable to speed up processes for development, acquisition and procurement.

Civil-military relations

A reflection on the Kargil War can never be complete without a mention of the brilliant junior leadership and morale that we witnessed during battles. There were countless acts of extraordinary valour, courage and grit to achieve what would have appeared impossible under normal circumstances. Commanding officers of many infantry battalions displayed steely resilience and single-minded devotion to duty. These legendry tales deserve mention not only in our military history books but also in the textbooks of our primary and secondary schools, to be able to inspire young children and build a strategic culture. We must remember that those who fight for the nation and sacrifice their lives deserve memory and recognition. That sustains their families more than any monetary compensation.

In the recent past, we have witnessed an unhealthy row over the age of the last Army Chief, attempted bribe to purchase Tatra vehicles from the Bharat Earth Movers Limited (BEML), and the deep-lying suspicion of the military over movement of some units for training near Delhi. The last mentioned incident reflects the lack of trust that continues to bother officials in the government after 65 years of independence and after what the armed forces have contributed to the nation.

There is deep discontent among the armed forces veterans and widows who retain an umbilical connection with serving soldiers and maintain traditional camaraderie and kinship. They feel cheated over pension disparities and anomalies. As a result, they have been organising rallies, fast unto death agitations, and surrendering war and gallantry medals to the President in order to draw public and political attention. Less visible is the unhappy feeling among serving soldiers over automatic promotion and upgradation rules that the civil services have managed to secure for themselves. The general impression is that the political leadership takes little or no interest in the welfare of armed forces and in protecting their hierarchical status in the government and society. The relationship is far from healthy.

A few days ago, the Prime Minister announced a Committee under the Cabinet Secretary to look into these anomalies and grievances. Contrary to all organisational norms, the Committee had only civil secretaries as members and no representation from the military. This has led to the Chiefs of Staff Committee lodging a fully justified but an avoidable confrontation within the government.

Lessons learnt

There is no point talking about revolution in military affairs, information systems and net-centric warfare if we cannot induct relevant weapons and equipment on time. Efforts towards modernisation of the armed forces have not borne fruit primarily due to the absence of holistic and long-term defence planning.

The Kargil War was not the first time when Pakistan initiated a war, and we must not assume that it would be the last time. India will remain vulnerable to such threats along its disputed borders unless it builds a credible will and capability to deter and dissuade likely adversaries. An enduring lesson of the Kargil War, indeed most wars, is that for national security, sound defence enables sound foreign policies. Indian civil and military leadership needs to keep this in mind. SP

The writer is former Chief of Army Staff.

PHOTOGRAPH: sanjhamorcha2009.blogspot.in

India approves $50 billion naval build-up

[By **Vishal Thapar**]


INS Vikramaditya

India will be spending at least an additional $50 billion for its naval build-up from 2012 to 2017. Outgoing Navy Chief Admiral Nirmal Verma disclosed that the government has granted acceptance of necessity (AON) for naval acquisitions worth ₹2,73,000 crore (approximately $50 billion).

This makes India's naval modernisation programme one of the world's largest naval build-ups. The $50 billion approvals include the acquisition of 49 new warships, in addition to the 46 which are already on order, as part of the Maritime Capabilities Perspective Plan 2012-17.

The tempo for the build-up has been set by the conclusion of 191 naval contracts worth ₹92,069 crore over the last three years, which have also seen the induction of 15 new ships, including top-of-the-line warships like the follow-on to the Talwar class and the indigenously-built Shivalik class destroyers.

"Over the next five years, we expect to induct ships and submarines at an average rate of five platforms per year," Admiral Verma detailed at his farewell press conference in New Delhi, calling upon public and private shipyards in India to scale up production and meet global standards of delivery. Forty-three of the 46 ships and submarines at present under construction for the Indian Navy are being built at Indian shipyards. Admiral Verma wants delivery of ships in the Delhi class category speeded up to three years.

The 49 new ships and submarines approved for the Navy include seven more follow-on ships of the Shivalik class under Project 17-A. These are to be built at both Mazagon Dock Limited (MDL), Mumbai, and Garden Reach Shipbuilders and Engineers Limited (GRSE), Kolkata. Contracts are likely by the end of the current fiscal. The construction of six more submarines under Project 75 (I) is expected to be green-flagged very soon.

Two mine hunters are to be built in South Korea, and subsequently six more at the Goa Shipyard under transfer of technology. Request for proposals (RFPs) for four LPDs and 16 shallow water anti-submarine warfare ships, two diving support vessels and one survey training ships will be issued in the coming months. Also, contracts for four water-jet FACs to be built at GRSE, Kolkata, and one more training ship to be built at a private shipyard are likely to be concluded during the current fiscal. Options for a deep submergence rescue vessel (DSRV) to ensure the safety of submarine operations are under technical evaluation.

In addition to the eight P-8I long-range maritime patrol (LRMR) aircraft due to be inducted starting 2013, eight medium-range maritime reconnaissance (MRMR) aircraft are also planned for induction. The Indian Navy is also in the market for more unmanned aerial vehicles to further augment its surveillance and reconnaissance capability at sea.

On the rotary wing front, besides the upgrade of the Sea King 42B and Kamov-28 fleets, and new multi-role helicopters (MRH) for fleet ships, the naval utility helicopter is also planned for induction by 2016 and the RFP is imminent.

PHOTOGRAPH: Seymash

To drive home the point that India's naval build-up is firmly on track, Admiral Verma pointed out that Navy has fully spent its capital budget over the past three years. The Navy is the only service whose expenditure ratio is loaded in favour of modernisation. "Today, our capital to revenue ratio stands at a very healthy ratio of 68:32," the Navy Chief said.

There's also a parallel effort to upgrade and develop infrastructure to support the build-up. Phase I of Project Seabird at Karwar was completed last year and the Navy is in the final stages of getting CCS approval for Phase IIA.

India's nuke subheads for sea trials

The Navy is poised to complete the triad of India's nuclear weapons, Navy Chief Admiral Nirmal Verma declared. The underwater arm of India's nuclear deterrence will be put to trial at sea by the end of the year, he promised.

This is an indication that the nuclear reactor on India's first SSBN, INS Arihant, will turn critical in the next few months. The nuclear-armed submarine was launched in July 2009. It's now set to fill a critical gap in India's deterrence posture. The Arihant will be armed with the K-series of SLBMs, which have been successfully tested from underwater pontoons.

"Given our unequivocal 'no-first-use' commitment a retaliatory strike capability that is credible and invulnerable is an imperative. The Indian Navy is poised to complete the triad, and our maritime and nuclear doctrines will then be aligned to ensure that our nuclear insurance comes from the sea," the Navy Chief explained. He left nobody in doubt that the Indian Navy will be taking the lead in the deterrence game.

While a tri-services Strategic Forces Command is the custodian of all of India's nuclear weapons, the Agni and Prithvi ballistic missiles are handled by Army rocket groups, and airborne strategic bombs are with Indian Air Force (IAF) units. Although the Navy has inducted the Dhanush version of the Prithvi nuclear-capable missile on a few surface warships, its real baptism as a nuclear-armed force will come only with the induction of the Arihant.

Steadily steaming ahead

Although the Navy accounts for just a little over 15 per cent of India's defence budget, it's modernisation programme appears the most focused and productive among the three services.

As many as 15 new ships have been commissioned into the Navy over the last three years. These include the three Shivalik class 'stealth' frigates Shivalik, Satpura and Sahyadri, the first of the Talwar class follow-on Russian-built stealth frigates – Teg, two fleet tankers Deepak and Shakti, the sail training ship Sudarshini and eight water-jet fast attack crafts.

The cherry on the cake was the commissioning of the nuclear attack submarine INS Chakra on January 23 this year, making India

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India enlarges scope of offsets, gives OEMs more leeway

[By **Vishal Thapar**]

Several key demands of foreign OEMs have been incorporated into India's Revised Defence Offsets Policy, which was put in place recently. The objective is to make offsets delivery more doable. Worries were being expressed by foreign suppliers over deliverability because offsets obligations for big deals like the MMRCA are to the tune of $10 billion. The OEMs have to buy or export from India permitted items to discharge offsets obligations.

The list of items available for discharge of offsets have now been expanded. These include more types of ships under the category 'Vessels of War'. Under the DPP 2011, Internal Security and Civil Aerospace were added to the list of offsetable items. The category of Internal Security has been further widened and clarified under the new heads of Inland and Coastal Security. Earlier, only 13 categories of defence items were permitted as offsets.

In another significant concession, Services will be treated as offsets. Repair will also be permissible. Earlier, only maintenance, and not repair, was allowed. This had implications for investments in maintenance, repair and overhaul (MRO) facilities. Research and Development will also be treated as an offsetable service, provided such facilities are set up at Government-recognised facilities.

A significant concession in the revised policy is the right of the OEM to change the Indian Offset Partner (IOP) as well as the offset item. Other highlights include the extension of offset banking to seven years.

Maximum time permissible to discharge offset obligations has been relaxed to two years beyond the duration of the main contract.

Also, there will be limited liability in case of default. A penalty of 5 per cent will be charged on unfulfilled obligations, with an overall cap of 20 per cent. Earlier, a five per cent compounding penalty was prescribed with no upper limit stated. OEMs stand to be barred for five years in case of non-fulfillment of obligations.

Multipliers will be offered as encouragement for introducing MSMEs as Indian Offset Partners. Transfer of technology both to the DRDO and private sector will also earn multipliers. Transfer of dual use technology will be entitled to additional multipliers.

Offset credits have been more clearly defined. The value of imported components will be discounted. In terms of investment for offsets, a clear distinction has been drawn between FDI and investment in kind.

A Defence Offset Management Wing has been introduced under the Department of Defence Production as the sole agency to ensure fulfilment of offset obligations after the signing of the contract. It'll be headed by a joint secretary. The pre-contract responsibility for approving offsets will continue to be with the Acquisitions Wing.

OEMs will be required to file a half-yearly offset discharge progress report. An annual appraisal will be done by the Defence Acquisition Council, with the joint secretary Defence Offset Management Wing submitting an annual report on progress of all offset programmes. SP

Continued from page 11

India approves $50 billion...

the first nation outside of the P-5 to be operating a nuclear submarine. This Akula class submarine on lease from Russia is being described as a game changer in the Indian Ocean region.

India's indigenous warship building programme has never looked busier. The impressive order book includes the indigenous aircraft carrier and three Kolkata class destroyers under Project 15A. While the carrier's running late, the delivery of the Project 15A destroyers appears set to commence next year on schedule, and encouraged by the progress, the Navy has signed another contract with MDL for four follow-on destroyers under Project 15B.

Four anti-submarine corvettes are being built at GRSE Kolkata. These are the first in this class, and will come with stealth features. The first of this lot is scheduled for induction early 2013, and the rest will follow at yearly intervals.

Four offshore patrol vessels (OPVs) are on the way at Goa Shipyard. And history was made by contracting five more OPVs to Pipavav. This is the first time that an order for naval ships has been placed on a private Indian shipyard. Two cadet training ships will be built at another private shipyard.

The Navy is also set to replace its amphibious fleet. Eight new landing craft are under construction at GRSE. These will replace the existing landing craft utility (LCUs), which will be phased out.

Six new catamaran hull survey vessels are being built at Gujarat's Alcock Ashdown. The six Scorpenes attack submarines are underway at MDL. As per the revised delivery schedule promises the first Scorpene by 2015, and the sixth by 2018. The three warships on order in Russia include two more of the Talwar follow-on class, and the aircraft carrier Gorshkov, currently undergoing sea trials. On July 28, landings of the MiG-29K on the deck of the Gorshkov commenced.

Ahead of the induction of the Gorshkov in its avatar as the INS Vikramaditya, all 16 MiG-29K fighters from the first lot have been delivered to the Navy. Delivery of the second batch of 29 of these carrier-borne fighters will begin this year. These will significantly enhance the Navy's airstrike capability.

A landmark event on the aviation front will be the induction of eight of the world's most advanced long-range maritime reconnaissance aircraft, the P-8i Poseidon, which start arriving early 2013.

Fleet ships are getting new multi-role helicopters. The Kamov-28 and the Seaking 42B fleets are getting weapons, sensors and avionics upgrade.

An infrastructure beef-up is also adding to muscle at sea. Phase-I of the Karwar base is complete. A new staging base was commissioned at Kavaratti in the Lakshadweep and a naval air station has been commissioned at Campbell Bay, the southernmost tip of the Andaman and Nicobar archipelago, affording India better oversight over the very busy Malacca Strait and the Six Degree Channel, which are crucial to shipping, global commerce and energy security.

Yesterday's Cindrella Service is getting battle ready. SP

Defence Minister dedicates Indian Navy's financial information system to the nation

Defence Minister A.K. Antony has dedicated the Indian Navy's Financial Information System (FIS) to the nation. Lauding the Navy's initiative as a major initiative in the field of financial management Antony said, "I hope other two services and all the other departments of the Government of India will follow this timely and useful initiative of the Indian Navy. I would like to congratulate the Navy for taking this timely initiative".

Speaking about the need for judicious utilisation of the nation's fiscal resources, Antony said, "Now our defence budget is touching nearly ₹2,00,000 crore, in actual terms ₹1,93,000 crore, and in the years to come, this will further step up every year, substantial step up is there. But even then considering the security scenario around us, we will not be able to find resources as per the aspirations of the armed forces fully". Emphasising the importance of laying out proper priorities, he said that "We have prepared the annual plan, five-year plan and the LTIPP up to 2027." Urging other armed forces to take a cue from the Indian Navy's initiative Antony said, "If the other services follow, will help you also, for a proper planning how to utilise our rare resources." Ever conscious of the need for fiscal prudence Antony stressed this aspect saying: "Every rupee that we get from the Indian taxpayer we must utilise it properly, effectively and as per the priority. That is why I feel it is a very timely initiative by the Indian Navy. It will help the entire nation even at least entire government if we can follow this initiative with all the departments of the Government of India".

The FIS, a comprehensive financial information system, will facilitate effective planning, allotment, expenditure and monitoring of the naval budget. The system links the New Delhi-based Naval Headquarters with the three Command Headquarters and various ships and establishments located far and wide across the country.

The onerous task of budget management involved monitoring allotment and expenditure across about 500 code heads being spent by 650 units across the Navy. The implementation of FIS marks a transition from the predominantly manual system of budget management and will reduce the delays and efforts involved in data collation and reporting, inherent in any manual system. By consolidating the transactions of disparate organisations across the various code heads on a single unified platform FIS will enable timely decision-making to ensure optimal utilisation of budget.

Defence Minister A. K. Antony dedicating the Indian Navy's Financial Information System (FIS) to the nation in New Delhi. The Chief of Naval Staff Admiral Nirmal Verma is also seen.

Saying that the FIS "is another step in the series of measures to bring about more probity, accountability and transparency in our public dealings and financial transactions", Antony stressed upon the need to "overcome existing constraints and enhance integration of CDAs to ensure maximum utilisation of the FIS".

The Financial Information System (Navy) is built on SAP Enterprise Resource Planning tools and has been custom configured and developed by Wipro for the Indian Navy.

Earlier during the function, the Vice Chief of Naval Staff Vice Admiral R.K. Dhowan had pointed out that the Indian Navy had fully utilised its allocated budget for the last six years. It is pertinent to highlight that the Indian Navy has consistently maintained a healthy ratio of capital budget to revenue budget. For the year 2012-13, the budget allocation for the Indian Navy stands at 68:32 for capital revenue budget. SP

Saab implements National Automatic Identification System for India's coastline

Saab announced the successful implementation of the National Automatic Identification System (NAIS) on the Indian coastline for India's Directorate General of Lighthouses and Lightships (DGLL), which will also be used by the Indian Navy, Coast Guard and DG Shipping. The National Automatic Identification Systems was recently inaugurated by the Union Minister for Shipping, G.K. Vasan in Chennai.

The NAIS provides coverage to the entire Indian coast, whereby 74 lighthouses are now fitted with the Saab systems. Automatic Identification System (AIS) provides real time merchant traffic Information and the web server allows access to live data over internet. The project comprised installation of sensors and equipment along the Indian coast for regional and national control centres. Saab implemented the entire gamut of project which included installation, commissioning, training and support, along with their Indian partner, Elcome Marine Services. The project was signed by Saab and Elcome Marine Services combine in November 2010 and it has been completed ahead of schedule in 2012.

Speaking at the launch ceremony, Magnus Persson, Vice President Operations, Saab Transponder Tech, said, "Saab is proud to be associated with India's maritime safety and security. This project is one of the largest national AIS-based coastal surveillance systems ever to be deployed. The successful completion of this contract is an important validation of Saab's position as the technology leader in AIS base stations and networks worldwide." SP

PHOTOGRAPHS: PIB, Saab Group

First Brazil ship ready for ocean voyage

Amazonas, the first of three BAE Systems-built ocean patrol vessels (OPVs) being delivered for the Brazilian Navy, departed the UK for Rio de Janeiro recently after her crew completed a rigorous programme of Flag Officer Sea Training with the Royal Navy, off the South Coast.

Nigel Stewart, Commercial Director of BAE Systems Maritime, said: "Saying farewell to the first ship in the Amazonas class is a significant stage in our ongoing relationship with the Brazilian Navy and is a source of great pride to those who worked on her. We look forward to continuing our work with the Brazilian Navy to deliver the next two ocean patrol vessels Apa and Araguari over the coming months."

The OPVs will provide Brazil with enhanced maritime capability. With a 30mm cannon and two 25mm guns, as well as two rigid inflatable boats and a helicopter flight deck capable of landing a medium-sized helicopter, the ships are ideal for performing maritime security in Brazil's territorial waters, including the protection of the country's oil and gas reserves. The vessels accommodate a crew of 80, with additional accommodation for 40 embarked troops or passengers and ample deck space for container storage. SP

RAC MiG's shipborne fighters fly from Vikramaditya aircraft carrier

JSC Russian Aircraft Corporation MiG (part of the United Aircraft Corporation) performed flights of the MiG-29K/KUB shipborne fighters from the Vikramaditya aircraft carrier, which is on trials in the Barents Sea.

The first landing on an aircraft carrier

on July 28 was performed by MiG-29KUB, piloted by RAC MiG test pilots Mikhail Belyaev and Nikolai Diorditsa. Then the pilots made the first take-off from the aircraft carrier and one successful landing on the deck. On July 29, the carrier with MiG-29KUB on board took part in the parade of the Northern Fleet, devoted to the Day of the Russian Navy.

Flights of the MiG's shipborne fighters from the carrier are carried out in accordance with the plans of India. After completing trials the carrier (before upgradation — the heavy aircraft-carrying cruiser Admiral Gorshkov) is to enter the Indian Navy and become the base for MiG-29K and MiG-29KUB supplied by RAC MiG since 2009. SP

Cassidian radar for Finnish patrol boat

Cassidian, the defence and security division of EADS, will equip the new offshore patrol vessel of the Finnish Border Guard with its proven TRS-3D naval radar. The STX Shipyard in Rauma/Finland has awarded Cassidian a contract to deliver the radar by mid-2013 for integration into the new ship.

The radar is intended to provide a reliable and comprehensive situation picture as well as safe helicopter guidance and Search-and-Rescue (SAR) missions under the extreme environmental conditions of the Finnish littoral waters. TRS-3D is a three-dimensional multimode naval radar for air and sea surveillance. It includes the ability to correlate plots and tracks of targets with Cassidian's MSSR 2000 I identification system for automatic identification of vessels and aircraft.

TRS-3D is in service with the "Squadron 2000" patrol vessels and the "Hämeenma"-class ships of the Finnish Navy. With more than 60 radars operated by navies and coast guards worldwide, TRS-3D is the market leader in its class. Among the ships equipped are the K130 corvettes of the German Navy, the US Coast Guard National Security Cutters, the US Navy Littoral Combat Ships and the Norwegian Coast Guard vessels of the "Nordkapp" and "Svalbard" class. SP

India test-fires nuclear capable Agni-II missile

The surface-to-surface 2,000-km range ballistic missile Agni-II was successfully flight tested for the Strategic Forces Command (SFC) from Wheeler Island in Bay of Bengal off the coast of Odisha.

The two-stage solid propellant Agni-II launched as part of regular SFC exercise as they reached the pre-designated target point in Bay of Bengal within accuracy of few metres. The two ships located near the target point have tracked the terminal phase of the vehicle and witnessed the final event. The radars and electro-optical tracking stations have tracked and monitored the vehicle and all the relevant parameters.

All the systems, propulsion, control, actuators, on-board computers, missile interface units and the navigation, guidance systems functioned fully to the perfection and ensured the vehicle reached the target within few metres of accuracy.

The launch operations carried out by SFC and DRDO scientists have monitored and guided all the activities. The teams were led by the Project Director Laxminarayana and the Mission Director Avinash Chander, DS & CC R&D (MSS). Dr. V.K. Saraswat, Scientific Adviser to Defence Minister, Secretary Department of Defence R&D and DG (R&D) DRDO were present during the launch and cleared the launch of the vehicle after a thorough review.

Defence Minister A.K. Antony congratulated the armed forces, DRDO scientists and the industry for the successful launch of Agni-II. Dr V.G. Sekaran, Director ASL, Dr S.K. Chaudhary, Director RCI, M.V.K.V. Prasad, Director ITR, Dr Satish Kumar, Dr D.N. Reddy, Chairman of RAC were present. SP

PHOTOGRAPHS: BAE Systems, MiG, PIB

Boeing marks 50 years of delivering Chinook helicopters

As Boeing marks the 50th anniversary of delivering the first H-47 Chinook military helicopter, the company is nearing completion of a $130-million renovation of its production line near Philadelphia that will help it meet global demand for the latest model, the CH-47F.

"The Chinook has served as the backbone of US Army aviation since the Vietnam era, revolutionising how we move troops and supplies in combat, and save lives and deliver aid in times of need," said Colonel Bob Marion, US Army Cargo Helicopter programme manager. "The latest F-model has ushered in a new era of heavy-lift capability for the US Army. With continued technology insertions, I fully expect that 50 years from now there will be a centennial celebration for Chinooks still in service."

Boeing has delivered more than 1,200 Chinooks to 18 operators around the world since delivering the first to the US Army on August 16, 1962. More than 800 are in operation today, conducting combat, cargo transport and humanitarian relief missions.

The production line updates will enable Boeing to continue to affordably increase Chinook production rates. Boeing is scheduled to deliver nearly 60 Chinooks this year and has submitted a multi-year, firm fixed-price proposal to the Department of Defense to provide 155 CH-47Fs to the US Army with deliveries beginning in 2015. SP

Over 2,500 Su-family combat aircraft exported

Su-family combat aircraft have been exported since 1964. Over 2,500 Su-7, Su-17, Su-20, Su-22, Su-24, Su-25, Su-27, Su-30 aircraft and their modifications were delivered to the Air Force of more than 30 countries.

The aircraft were delivered to different countries of Europe, Asia, Africa and South America. They are still in service in many armies of these countries. The Su-family aircraft have proved to be reliable and effective combat systems capable of performing a wide range of combat missions.

Over the past decades, as from 1996, the main export potential of the Su-family aircraft is centred on various modifications of the Su-30-type multipurpose fighters. Sales of these machines together with contracts for airborne weapons and related equipment account for up to half of all foreign military supplies of the Rosoboronexport.

In the years 2000s with the advent of the Su-30MKK and its further modification — Su-30MK2 — a significant increase in exports can be noted. This is a multi-purpose two-seat fighter able to strike air, land and sea targets. A large amount of foreign supplies is associated with the implementation of the Indian programme of development and production of the Su-30MKI multi-purpose strike fighter with the latest onboard avionics complex. Modifications of the Su-30 fighter are supplied to other countries as well.

Currently the multi-purpose Su-35 fighter undergoes tests. The aircraft has a large number of fifth generation technologies and advanced technical solutions. Its radar with an unprecedented operating range (up to 400 km), the engine with a thrust of 14.5 tonnes with thrust vector control, an early warning system for irradiation, an optical radar station, missile launch detection sensors and laser irradiation sensors give the aircraft superiority over all the other fighters of the fourth generation and the four+ generation aircraft and make it ready for any combat conditions.

Production of Su-35s for the Russian Air Force are manufactured at the Sukhoi's KnAAPO factory in Komsomolsk-on-Amur. At present the Su-35 possible deliveries are discussed with foreign customers. This aircraft ensures preservation of the Sukhoi Company's competitiveness on the world market till the start of serial production of the PAK FA fifth generation fighter aircraft.

Work on the export version of the fifth generation fighter — a prospective multifunctional fighter is in progress together with India. This aircraft has considerable export potential. SP

Airbus Military signs cooperation agreements in Portugal

Airbus Military has signed a cooperation agreement with the Ministry of Economy and various Portuguese industrial companies in fulfilment of the commitments arising from the sale of a fleet of 12 C295 aircraft for the Portuguese Air Force.

These agreements, with a value of several hundred million euros, will boost the Portuguese aerospace industry and strengthen the commitment of Airbus Military to Portugal.

On August 1 an agreement was signed in Lisbon with the Portuguese Ministry of Defence and Ministry of Economy that specified the details of the cooperation framework with Portuguese industrial companies. The agreements confirm that the assembly and production of the central part of the fuselage of the C295 will remain with OGMA, and that technical publications and the development of an improved MITS will be subcontracted to EMPORDEF-TI. SP

PHOTOGRAPHS: def.gov, Sukhoi, Airbus Military

Test flight of C-130J for Oman

A new C-130J Super Hercules for the Sultanate of Oman conducted a test flight at the Lockheed Martin facility in Marietta, Georgia. This is the first of three C-130Js on order for Oman and is scheduled for delivery later this year. Oman currently operates a fleet of three C-130Hs purchased in the early 1980s. The new C-130J will be used to support internal country operations where its ability to operate out of remote austere airstrips will be invaluable. SP

Boeing integrates next-gen joint helmet-mounted cueing system on Silent Eagle

Boeing recently validated the integration of the next-generation joint helmet-mounted cueing system II/h (JHMCS II/h) on the company's F-15 Silent Eagle demonstrator aircraft, continuing the on-schedule development of this advanced multi-role jet fighter.

The JHMCS II/h allows a pilot to aim sensors and weapons wherever he or she is looking, through the use of new head-tracking technology and a display projected onto the helmet's visor. Produced by Vision Systems International (VSI), this system provides significantly improved ergonomics and reliability, at lower cost, than VSI's prior JHMCS system. A recent flight in St. Louis demonstrated the system's enhancements and collected baseline data for the head-tracking technology.

"Both pilots who flew with the JHMCS II/h system immediately noticed that the helmet was more balanced and the smaller, lighter interface cable was less restrictive," said Greg Hardy, Boeing JHMCS programme manager.

The new head-tracking technology is significantly easier to maintain while requiring less support equipment than previous trackers. Electronics enhancements enable all processing to be done within the helmet, eliminating most aircraft-mounted equipment, which also contributes to the system's overall cost savings.

The system provides an easy transition in flight between day and night modes, greatly increasing mission flexibility. VSI also used maturing display and tracking technologies to reduce the complexity of integrating the JHMCS II/h system on an aircraft, an approach that was validated during the demonstration.

"Integrating this enhanced system onto the Silent Eagle took less than three months between 'go-ahead' and first flight," said Hardy. "This timeline was achievable because of the dedication of the industry team, the simplicity of the physical and logical integration, and the long history Boeing and VSI share on the JHMCS programme."

"Technology advancements are reshaping the military helmet-mounted display market," said Phil King, President of VSI. "The rapid validation of the maturity and effectiveness of several such technologies in this demonstration programme has shown that we can meet and exceed the performance baselines established by the extremely successful legacy JHMCS design while also providing new capabilities and reducing cost to the customer." SP

Embraer delivers the first four A-29 Super Tucano to Indonesian Air Force

Embraer Defense and Security has recently delivered four light attack and tactical training A-29 Super Tucano aircraft to Indonesian Air Force (IAF) at a ceremony held in its facility in Gavião Peixoto, São Paulo, Brazil. Indonesia is the first operator of Super Tucano in the Asia-Pacific region.

These four A-29 Super Tucano are from the initial batch of eight aircraft purchased by the IAF in 2010. The IAF has since ordered a second batch of eight Super Tucanos as part of their equipment modernisation exercise, bringing the total number of orders to 16 aircraft.

"We are honoured that the Indonesian Air force has selected the A-29 Super Tucano as the preferred choice in their fleet modernisation programme", said Luiz Carlos Aguiar, President of Embraer Defense and Security. "The Super Tucano is a mature, proven and mission-ready aircraft with more than 160 units in operation globally." SP

PHOTOGRAPHS: Lockheed Martin, Boeing, Embraer

First flight of long endurance multi-intelligence vehicle

For over 90 minutes, the hybrid air vehicle' known as the long endurance multi-intelligence vehicle, or LEMV, stayed afloat above Joint Base McGuire-Dix-Lakehurst, New Jersey.

The LEMV, like a blimp, is capable of carrying multiple intelligence, surveillance and reconnaissance payloads for more than 21 days at altitudes greater than 22,000 feet. The US Army Space and Missile Defense Command/Army Forces Strategic Command conducted the first flight test of vehicle.

"Murphy Bays" on the LEMV can carry just about any kind of sensor or equipment, and design specifications for the LEMV require the vehicle to provide up to 16 kilowatts of electrical power for those payloads.

The LEMV is intended to be used to conduct long-term intelligence, surveillance, and reconnaissance and persistent stare-type missions, and can also be used as a communications relay.

The primary objective of the first flight was to perform a safe launch and recovery of the LEMV. A secondary goal was to verify the flight control system operation. Additional objectives included airworthiness testing and demonstration, as well as system-level performance verification.

The football field-sized LEMV can operate at altitudes greater than 22,000 feet above mean sea level, has a 3,200-km radius of action, can carry a 2,750 pound ISR payload for more than 21 days, and boasts a fuel consumption that is more than 10 times less than comparable capabilities.

The LEMV is designed to be a recoverable and reusable multi-mission platform. It can be forward located to support extended geostationary operations from austere locations and capable of beyond-line-of-sight command and control.

During this first flight, the LEMV was manned, though the air vehicle can also operate unmanned. Following a planned and detailed inspection of the vehicle, there will be additional manned flights. SP

Global Hawk makes historic flight from Grand Forks

The 69th Reconnaissance Group reached another milestone recently with its first flight of a Block 40 RQ-4 Global Hawk from the flightline here. Previously, the 69th RG had only conducted flights in deployed environments.

"We at the 69th Reconnaissance Group are very proud of our first successful flight of the RQ-4 Global Hawk," said Col. J. Scott Winstead, 69th RG commander. "It reflects countless hours of hard work and preparation on the part of our airmen, civilian partners and the Federal Aviation Administration."

The RQ-4 Global Hawk is a high-altitude, long-endurance unmanned aircraft system with an integrated sensor suite that provides intelligence, surveillance and reconnaissance (ISR), capability worldwide. It complements manned and space reconnaissance systems by providing persistent near-real-time coverage using imagery intelligence (IMINT), signals intelligence (SIGINT), and communications relay equipment to more closely link our command and control to ground and air units.

Currently, the focus is on integrating the RQ-4 into the GFAFB flying environment. SP

PHOTOGRAPHS: US Army, USAF

Canada to spend $1 billion on drones

The Canadian military intends to spend $1 billion on armed drone aircraft. Senior Canadian defence leaders pitched the idea of spending up to $600 million for armed drones to take part in the Libyan war shortly before the conflict ended.

The Conservative government approved last month the issuing of a request to aerospace firms to provide details about the types of drones now available. Companies have until September 28 to provide the information.

In its request to the industry, the government pointed out the need for the unmanned aircraft to operate in the Arctic. The aircraft should also be able to carry precision-guided munitions, the government said.

"This capability will allow the (Canadian Forces) to fill critical deficiencies," industry officials were told in the request for information sent to them on July 23.

The Canadian Forces has used unarmed UAVs at various stages during the Afghan war. But it has been trying to purchase a new fleet of armed drones for years. SP

LT GENERAL (RETD)
P.C. KATOCH

Integrated homeland challenge

Disclosures by Abu Jundal reveal how intricately the Pakistani state plans and executes the proxy war against us. Leave aside 26/11 Mumbai terror attack and year 2000 Chittisinghpora massacre of Sikhs by LeT cadres in military uniform, even spectators to Indo-Pak cricket matches are used for terrorism – remember the 500 Pakistani spectators who vanished from Mohali a few years back?

Earlier this year, the arrest of two Lashkar-e-Toiba (LeT) cadres planning terror strikes in Chandini Chowk in Delhi had come from Jharkhand, were provided explosives by Maoists and for the first time the government acknowledged the Strategic United Front of Maoists. It conclusively confirms the LeT-Maoists link. Intelligence had in the past reported LeT representatives attending Maoist meetings.

Post-26/11, Pakistan has activated her sleeper modules inducted pan-India in early 1980s who have nurtured youth to radicalise and adopt the terror route. While Al Qaeda started deploying home grown terrorists in recent years, Pakistan had prepared for such operations in India decades back. An integrated terror-cum-insurgent homeland challenge is staring us in the face at point-blank range and it will be foolish not to recognise it. There should be little doubt that we will have to contend with terrorism and insurgencies in the foreseeable future. These are manifestations of asymmetric war and the response will necessary have to be synergised through the security sector with the fighting elements comprising the military, paramilitary forces (PMF), central armed police forces (CAPF), police, intelligence agencies, private security organisations, so on and so forth with the citizenry providing a billion eyes on ground for human intelligence as an integrated whole.

We are already witnessing tech savvy terrorism and sophistication in insurgent actions including state-of-the-art weaponry, communications and explosives besides changing tactics. In future, we could well witness cyber attacks on critical infrastructure, financial and kinetic attacks, dirty bombs, maritime, chemical and bio terrorism, and even radiological/nuclear blackmail to spread panic and create hysteria. In such an environment, threats will be omnipresent that can occur without warning. Our intransigence has provided an asymmetric battlefield within our homeland that is being exploited by both China and Pakistan.

The Ministry of Home Affairs' list of some three score terrorist organisations operating within India makes no mention of organisations like the Popular Front of India (PFI) that is fast emerging as a threat particularly with its links with LeT established in Kerala. Reports of the Maoists establishing in urban centres including Delhi/NCR and similar reports of the PFI should be a cause of concern. Consolidation of Islamic terrorism in India and its international links is a reality that cannot be ignored. Integration and interdependence of terrorist and insurgent organisations in India is happening at a fast pace and there is no option but to respond at the national level.

Dishing out companies of CAPF to the states along with provision of periodic intelligence inputs is not going to work. Acts of terrorism and insurgent strikes must be delinked from law and order accredited to states and response made the responsibility of the Centre. Necessary constitutional amendment, if necessary, must be done. Discussion with all political parties post publishing a white paper on integrated homeland challenges should facilitate arriving at a consensus. When the Home Minister himself recommends setting up of a Ministry of Internal Security (MIS), it indicates the existing set up is inadequate. Integrated challenges to homeland security have to be handled at the national level with a centralised framework. The MIS must have a strong NCTC linked to State Counter Terrorism Centres in every state linked through NATGRID and thereon to the fighting forces on the ground besides other measures that must be instituted for appropriate response. SP

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

Integration and interdependence of terrorist and insurgent organisations in India is happening at a fast pace and there is no option but to respond at the national level

PHOTOGRAPH: Wikipedia

Defence Minister reviews coastal security initiatives

The Defence Minister AK Antony recently reviewed the progress on various steps taken to enhance India's coastal security.

The Minister directed that the first phase of the coastal radar network (CRN), on both the west and east coast should be completed in the next two months and that he would himself visit some locations very soon. The CRN is an important component of the coastal security mechanism which will ensure monitoring and identification of maritime traffic.

The Minister emphasized that all the stakeholders should work with unified purpose and ensure that there are no gaps in the coastal security framework.

The delivery time schedules of supply of fast interceptor crafts, implementation of national command control communication and intelligence network and vessels and air traffic management system on the east coast was also reviewed in the meeting.

The Chief of Naval Staff Admiral Nirmal Verma, Defence Secretary Shashikant Sharma, Secretary, Department of Defence Production Shekhar Agarwal, Director General Coast Guard Vice Admiral M.P. Muralidharan and senior officers of Ministry of Defence, Navy and Coast Guard attended the meeting. SP

Security tightened at Indian airports

Following intelligence from the Intelligence Bureau (IB) of a possible terror attack at an airport in India, the authorities have strengthened airport security.

The Intelligence Bureau gave the names of the suspects as Murtaza Amin and his wife Rukhsana; Hamid-ul Ansari and his wife Surya Begum; two pilots and Yamin Al Meer, a former SIMI member, considered to be the mastermind.

Security has been tightened at the international airport in Ahmedabad and other airports in Gujarat following IB inputs that Pakistan-based Lashkar-e-Toiba (LeT) terrorists could attempt to hijack a plane.

The security alert was sounded at the airports after an IB report which advised higher security measures in view of fears of terrorist attacks at four airports in the country, including Ahmedabad. The airport authorities also received an alert from the Bureau of Civil Aviation.

The IB also gave state police agencies the names of seven suspects, including two pilots and two couples from Ahmedabad, adding that Ahmedabad, Jaipur, Ludhiana and Srinagar could be targeted to execute the hijacking plan. The terrorists are believed to have already surveyed the check-in, boarding and security systems. SP

Poppy cultivation funding Maoist outfits

Jitendra Pratap Singh, Minister of State of Home Affairs, has said in the Parliament that the CPI (Maoist) tacitly allow large-scale poppy/ganja cultivation in their strongholds in order to collect money from such illegal cultivation.

The outfit is collecting money from illegal cultivation of ganja and opium in some areas of Odisha, Jharkhand, Chhattisgarh and Bihar. Upon detection of such illegal activities, cases are registered and investigated by the police forces of the states concerned.

In one such instance, cultivation of poppy plants/opium was detected in February 2012, at Bandarmara village, district Jamui, Bihar, which was destroyed by the security forces. In another instance, cultivation of ganja in around 10 acres of land was detected and 113 quintals of ganja seized from a CPI (Maoist)-dominated area under P.S. Tarlaguda, district Bijapur, Chhattisgarh. SP

PHOTOGRAPHS: PIB, Wikipedia

SIMI declared unlawful

The Special Tribunal has confirmed the Ministry of Home Affairs (MHA) declaration of SIMI (Students Islamic Movement of India) as an unlawful association. The Tribunal pronounced its order on August 1, 2012. SIMI was for the first time declared an unlawful association on September 27, 2001.

The MHA, vide Notification dated February 3, 2012, had declared SIMI an unlawful association with immediate effect for two years, under the provisions of the Unlawful Activities (Prevention) Act, 1967. As per provision of the said Act, a tribunal consisting of Justice V.K.Shali, a sitting Judge of Delhi High Court was constituted to adjudicate whether there is sufficient cause for declaring the association unlawful. SP

Home Minister's statement on Assam violence

The Union Home Minister, Sushil Kumar Shinde, has stated in the Parliament that the unfortunate incidents of violence took place in Kokrajhar, Chirang, Dhubri and Bongaigaon districts in Assam from July 6, 2012 and onwards.

As per the reports received from the Government of Assam there was simmering tension between Bodo and non-Bodo communities of Bodoland Territorial Area District (BTAD) on various socio-political issues. The background of the recent spate of violence may be attributed to the incidents which took place mainly between July 6 and 19.

On July 6, Kamtapuri Liberation Organisation (KLO) terrorists fired indiscriminately at Muslimpara Gaon under Gossaigaon Police Station killing two persons belonging to the Muslim community and injuring three persons. One KLO terrorist was arrested in connection with the case registered in this regard. Though this was communicated to the Muslim people of the area, it was not believed by them and they strongly suspected the hands of Bodo miscreants in the incident.

On July 19, unknown motorcycle-borne miscreants fired indiscriminately in front of the residence of Mahibul Haque Ratul and Md. Abu Siddique both of village Magurmari and office-bearers of All Bodoland Muslim Students' Union (ABMSU), thereby injuring them seriously.

On July 20, four Bodo youth while coming from Bhatipara side towards Kokrajhar on two motorcycles at Jaipur under Kokrajhar police station were attacked by some unidentified Muslim youths with sharp weapons as a result of which they died on the spot.

The communal incidents started in full swing after this particular incident of killing of four Bodo youths. Initially the incidents were concentrated in Kokrajhar district but later on due to bandh call given by ABMSU and All Assam Muslim Students Union (AAMSU) on July 23, the tension spread to the adjoining districts of Dhubri and Chirang as well.

Further violence again took place in the districts of Kokrajhar and Chirang on August 5 and 6 resulting in the death of eight persons and injuries to two persons.

Union Home Minister Sushil Kumar Shinde and the Chairperson, National Advisory Council, Sonia Gandhi along with the Assam Chief Minister Tarun Gogoi talking to the riot victims, at Deborgaon relief camp in Kokrajhar district of Assam on August 13

As on August 8, the violence had taken a toll of 77 lives with another 50 injured (including 14 police personnel), and seven missing, affecting 244 villages, 47,936 families and 5,367 houses burnt as per preliminary reports so far. The State Government had set up 340 relief camps for affected families.

Over 170 persons indulging in violence and arsons have been arrested so far by security forces. About 309 cases have been registered in connection with ethnic violence. Special Investigation Team (SIT) with ADGP (CID) as overall in-charge has been constituted to investigate six important cases.

Comprehensive security plan has been chalked out to provide foolproof security to the affected population. About 104 fixed police pickets have been proposed in vulnerable villages of which 99 have been established. They have been given responsibility of ensuring security for the affected villages. SP

26 districts affected 'severely' by naxals

The CPI (Maoist), the main left-wing extremist (LWE) group, has been trying to expand its activities in various states of the country. The states of Chhattisgarh, Jharkhand, Bihar and Odisha are considered badly affected by LWE, according to the Minister of State for Home Affairs, Jitendra Singh.

The states of West Bengal and Maharashtra are considered partially affected. The states of Andhra Pradesh, Madhya Pradesh and Uttar Pradesh are considered slightly affected states. There is substantial improvement in the situation in Andhra Pradesh and West Bengal, whereas LWE violence has remained low-key in Uttar Pradesh and Madhya Pradesh.

It is further clarified around 26 districts in India account for nearly 80 per cent of the total LWE violence. The total number of 'violence affected' districts has to be viewed in this overall context.

During the high-level meetings held with the Chief Ministers, the Chief Secretaries and the Director Generals of Police of the LEW-affected states, the latest LWE scenario in the country is generally reviewed. In these meetings, a number of strategic and tactical issues concerning security and development interventions are discussed to fine-tune counter-LWE strategy. SP

Maruti plant may opt for CISF security

The Maruit Suzuki plant at Manesar plant may opt for additional security for its employees and production facilities. It is contemplating deployment of the Central Industrial Security Force (CISF) or a permanent presence of Haryana police at its factory premises.

In case the company chooses CISF cover it would have to give a formal request in this regard to the Ministry of Home Affairs (MHA). Only after MHA's approval would give protection to the Maruti Suzuki plant.

The CISF charges a logistics and personnel fee from the company — a monetary proposition which may not be too high for the automaker to avoid violent incidents in future.

The CISF used to provide security cover to Maruti's Gurgaon plant ever since the joint venture company was formed between the Indian Government and Japan's Suzuki Motor.

The security cover was withdrawn after the government sold its majority stake in the company. SP

PHOTOGRAPH: PIB

Mahindra and Telephonics joint venture agreement

Mahindra & Mahindra Ltd., one of India's leading business houses, and Telephonics Corporation (Telephonics) announced that they signed a definitive agreement to form a joint venture (JV) to be called Mahindra-Telephonics Integrated Systems.

The JV will provide the Indian Ministry of Defence and the commercial sector with radar and surveillance systems, identification friend or foe (IFF) devices, and communication systems. In addition, the JV intends to provide systems for air traffic management services, homeland security, and other emerging surveillance requirements.

The project envisages establishing a plant in Bangalore, which will initially manufacture and service airborne radar systems that are already being supplied to the Hindustan Aeronautics Ltd and support airborne maritime surveillance systems for the Indian Navy and Coast Guard. Telephonics supplies RDR-1400 weather avoidance radar systems for helicopters being built in Bangalore. It is also contracted to supply Boeing with APS-143C(V)3 multi-mode radar for India's P-8i maritime surveillance aircraft, and is responsible for installation of a sophisticated intercommunication system for the C-17 Globemaster contracted by the Indian Air Force.

Mahindra-Telephonics will licence technology from Telephonics for use on a wide range of products that has both defence and civil applications.

Backed by strong R&D, Telephonics has developed a state-of-the-art IFF MK-XII system, which has the capability to integrate with civil and military aircraft, as well as ground- and sea-based IFF systems. Telephonics' experience with respect to these systems in other countries will provide a platform for the JV to meet the emerging Indian customised civil and military requirements of a National IFF Programme. Telephonics has also developed secure communication systems which may be deployed on a variety of ground and airborne platforms. Telephonics has an established presence in the Indian defence and civil markets.

The mobile surveillance system is a rapidly deployable ground surveillance system which can detect human and vehicular movement during the day, at night, and in adverse weather conditions. Through networking, a central command and control system can effectively monitor a large area for vehicular and human movement.

The JV will be the first private sector company in India to manufacture airborne and maritime radars utilising licensed technology. Nearly 100 per cent indigenous capability is expected to be achieved in the near future. The JV will also be strategically poised to develop future technologies for civil and military applications. SP

Rolls-Royce and Snecma to initiate joint combat engine studies

Rolls-Royce, the global power systems company, and Snecma (Safran Group) have signed a contract with the UK Ministry of Defence to undertake studies into the next generation of UK and French combat aircraft engines, through their 50:50 Rolls-Royce Snecma Ltd joint venture, established in 2001.

Rolls-Royce and Snecma have also announced that they have signed a collaboration agreement with BAE Systems and Dassault Aviation to work together to explore concepts and technologies as part of the Anglo-French future combat air systems demonstration programme preparation phase contract.

Nick Durham, Rolls-Royce, President, Customer Business – Defence, said: "This collaboration agreement recognises the need for airframe and power and propulsion system suppliers to work together to deliver an optimised affordable solution for the next generation of combat aircraft for the UK and France. It represents an important step towards increased collaboration and, by combining the experience and expertise of Rolls-Royce and Snecma, we can contribute a huge amount to these studies."

Didier Desnoyer, Snecma Vice President and General Manager, Military Engines, said: "This joint venture will capitalise on the long-standing collaboration between Safran and Rolls-Royce on military aircraft engines such as the Adour and TP400. Carrying on this tradition of tight-knit partnership, Rolls-Royce Snecma Ltd. is uniquely placed to access the advanced military propulsion expertise of the two parent companies, based on their proven track records of developing successful combat aircraft engines." SP

Cobham increases presence in Brazil

Cobham has officially launched into the Brazilian market by the opening of a new subsidiary in São Paulo. Cobham do Brasil Ltda will provide a basis for Cobham Tactical Communications and Surveillance to develop relationships and a foundation for active engagement with customers and partners in the public and private sectors.

The new office enables Cobham to fulfil its commitment to establishing a formal presence in-country and continue to develop its relationships and partnerships with the nation's Tier-1 and Tier-2 distributors and customers alike. This supports the Brazilian defence strategy for indigenisation of key technologies in the security and defence market. Cobham's core communications technology can provide market leading capabilities for both tactical and strategic security infrastructures.

David Ashton, Vice President of Cobham Tactical Communications and Surveillance, says: "The newly established subsidiary will help Cobham commit to significant long-term investment and will reinforce our presence in a nation which has always been one of our key markets. A local office will allow us to meet the increasing need for our products, technologies and after-sale support. Cobham do Brasil will help strengthen our cooperation with Brazilian industries and support the development of strategic partnerships with public and private organisations." SP

Bowman to lead ReconRobotics' Asia-Pacific Business Development

ReconRobotics, Inc., the world leader in tactical micro-robot systems, has announced that John Bowman has been named the Director of Business Development for the Asia-Pacific region. Bowman is the founder/owner of Bowson International Limited, a 20-year-old defence products representation firm. Bowman will report to Barry E.T. Harris, Director of International Programs at RRI Global, the international headquarters for ReconRobotics based in Lugano, Switzerland.

Bowman will drive sales efforts for the entire ReconRobotics line of tactical micro-robots, including the Throwbot XT, which is widely used by military and police forces to gain immediate video and audio reconnaissance in high-risk environments. SP

PHOTOGRAPH: ReconRobotics

Jet skier skips security at JFK Airport

Daniel Casillo, 31, whose jet ski failed in New York's Jamaica Bay swam and walked into John F. Kennedy Airport, penetrating the airport's $100 million, state-of-the-art security system. He was subsequently arrested for criminal trespassing.

Casillo got past the sophisticated system of motion sensors and closed-circuit cameras designed to safeguard against terrorists. Casillo's night began innocently enough, as he and some friends were racing on jet skis in Jamaica Bay near JFK Airport when his watercraft stalled. After calling for and receiving no help, he managed to swim towards the only thing he could see, the runway lights at JFK.

He climbed an eight-foot barbed-wire perimeter fence and walked undetected through the airport's perimeter intrusion detection system and across two runways into Delta's terminal 3. He was dripping wet and wearing his bright yellow life jacket, before the security realised what had happened. SP

Boston police close to cracking two decade heist case

Early August, the Boston police searched the home of Robert Gentile, a 75-year-old alleged mobster and a man who they believe has information about the Isabella Stewart Gardner robbery.

The police found arsenal of weapons including, pistols, a shotgun, silencers, ammunition, brass knuckles, cash, fake IDs and police uniforms. Gentile has been held in prison since February on drug and weapons charges. The police, it is said, are also searching for rare paintings which were stolen from the museum.

On March 18, 1990, two thieves dressed up as police officers and robbed Boston's Isabella Stewart Gardner museum. They tied up the security guards, smashed frames, tore canvases, and made off with 13 irreplaceable masterpieces, including Vermeer's *The Concert, a Manet,* five drawings by Edgar Degas, and three Rembrandts, including his only known seascape, *Storm on the Sea of Galilee*.

No clues have been found till date and the museum offers a $5 million reward for information leading to the recovery of the works. The police believe the recent recovery and further questioning may have the answers. SP

PHOTOGRAPHS: Wikipedia, NBC News

Bulgarian security lapse, seven Israeli tourists killed

Seven Israeli tourists were killed when a bus carrying 47 tourists was bombed near Bourgas airport in Bulgaria and Israelis have termed it as a major 'security failure'.

The tourists, mostly young people, were heading for the Sunny Beach resort. The Israeli Prime Minister, Benjamin Netanyahu said: "All the signs point to Iran. Just in the last few months, we saw Iran attempting to hurt Israelis in Thailand, India, Georgia, Kenya, Cyprus and other countries. Exactly 18 years after the infernal terror attack in the Jewish community centre in Argentina [in Buenos Aires, in which 85 people were killed], the murderous terror of the Iranians continues to hurt innocent people. This is terrorist Iranian aggression revealing itself all over the world. Israel will respond forcefully to the Iranian terror." SP

Belarus top brass fired over teddy bear bombing

Chief of the Belarusian Air Defence and Air Force, as well as the country's top border guard were sacked recently by the Belarus President Alexander Lukashenko.

Dmitry Pakhmelkin and Igor Rachkovsky lost their posts, but were not removed from the military. our more senior officials got away with formal reprimands.

The sackings were a reaction to the incident earlier this month when a small plane invaded Belarusian airspace to parachute hundreds of teddy bears holding slogans lambasting Lukashenko's authoritarian government for rights violations. The stunt was carried out by Swedish politically conscious PR firm Studio Total.Lukashenko said earlier that the country's air defence system tracked the plane, but did nothing to intercept it. He did not elaborate. SP

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