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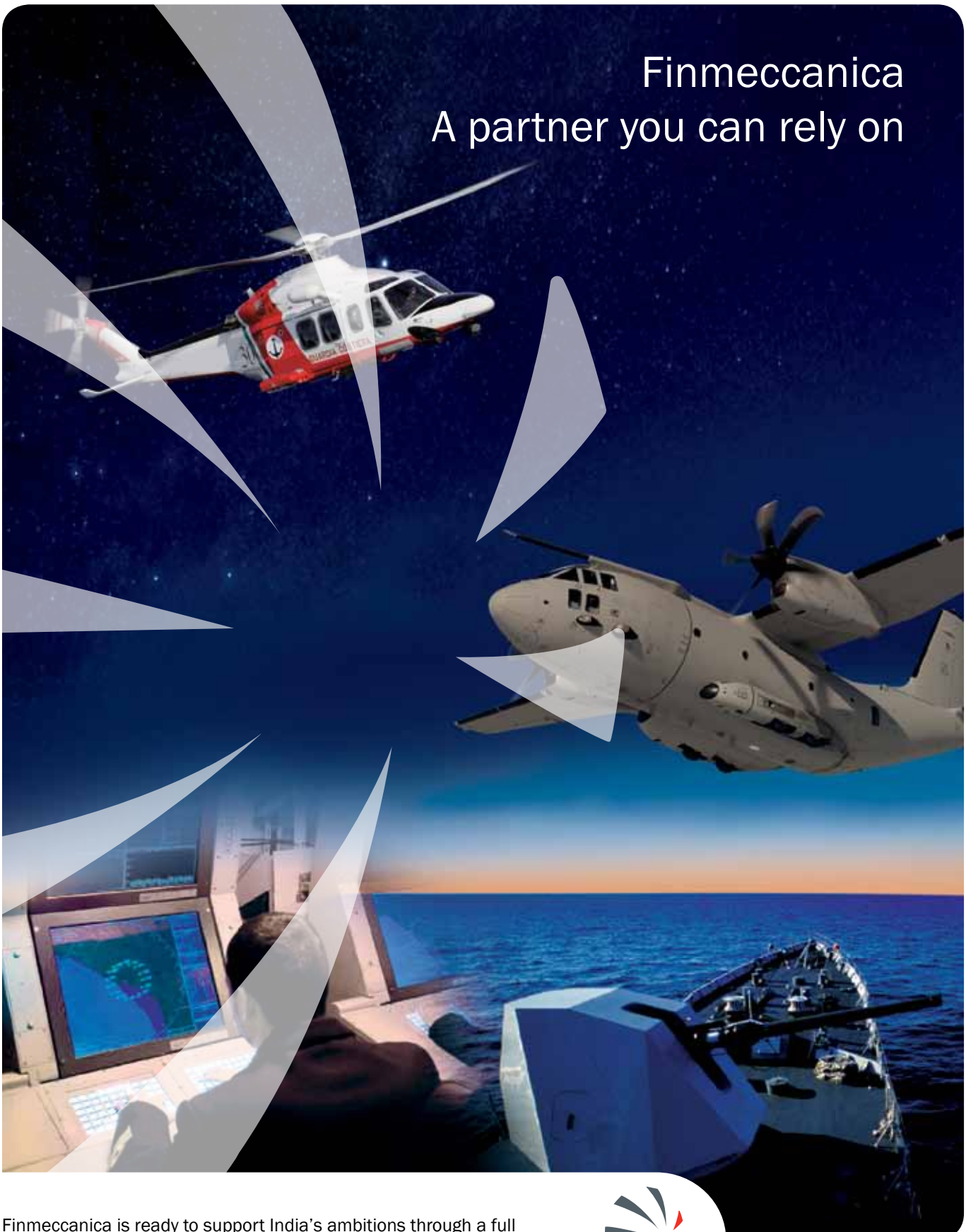

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Budget is fine, acquisitions should be fast

The budgetary allocation for Defence is up by 17 per cent, keeping pace with the aggressive modernisation programme of the armed forces. The allocation is ₹1,93,407 crore for 2012-13, up from ₹1,64,415 crore. The total outlay for military hardware is over ₹79,500 crore while the major chunk goes for salaries and day-to-day expenditure.

The 'big-ticket' deals are the 126 medium multi-role combat aircraft (MMRCA); 145 ultra-light howitzers; 197 light utility helicopters and other weapons and systems. Experts, however, have pointed out how the acquisitions are more for the Indian Air Force and the Indian Navy and less for the Indian Army which is 'people-intensive.'

In comparison, China has increased its defence budget by a whopping figure at $106.4 billion, the second largest defence budget in the world after the United States. This, indeed, is a matter of concern not just to the immediate neighbourhood but to the geopolitics of the region.

In the light of this and also the incursions in the north and north-west region, India's modernisation of the armed forces gains more currency. What sadly is lacking in India is that all its modernisation programmes are heavily overseas are lagging behind. With the defence offsets opening up doors, it is hoped that there will be technology transfers, running parallel to the indigenous development programmes. Indian defence sector needs to realign its business processes and the move of the government to restructure the Hindustan Aeronautics Limited (HAL) is welcome.

At last, we hear the Defence Minister, A.K. Antony asking the aerospace behemoth HAL to realign its business processes for strategic alliances and joint ventures, as also, to step up R&D efforts to remain globally competitive. The decision to set up a committee to look into HAL restructuring is a welcome move.

In the SP's Exclusives we have a report on the status of the acquisition of ultra-light howitzers for the Indian Army. What is required is quick and transparent decision-making to keep pace with the technological needs of the armed forces.

These needs have been aired often and it is hoped that the powers that be understand the urgency in creating an eco-system for the defence industry to flourish in India. The Defexpo which is happening in Delhi from March 29 to 31 is one such platform.

SP Guide Publications, which is the sole media partner for Defexpo, will be providing exclusive coverage of the event, through its various publications. On the first three days of the event, *SP's ShowNews* will be the window of Defexpo.

Happy reading!

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Publisher and Editor-in-Chief

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HELINA air-launched ATGM begins trials

The air-launched version of India's Nag anti-armour missile, HELINA (helicopter-launched Nag) is set to begin a crucial round of firing trials towards establishing its capabilities as a potent anti-tank weapon. The missile is currently ready to be tested from a special ground launcher for the lock-on after launch (LOAL) firing mode and air launches from a HAL Dhruv Mk.2, the platform it is ultimately intended for, apart from the light combat helicopter. The ground tests are to take place in Rajasthan shortly, following recent ground tests near Pune. A single firing test has been carried out from a Dhruv, though guided tests will take place only towards late 2012 when the HELINA fire control system is fully integrated with the Dhruv Mk.3 WSI, recently christened Rudra. Future tests will all take place in Pokhran.

The HELINA is considered one of the most important smart weapons being developed and tested at present, considering the deep interest in a short stand-off strike weapon. The Defence Research & Development Laboratory (DRDL) plans to extend the range of the HELINA from 7-km at present to a more than 20-km range strike weapon for combat aircraft and helicopters. HELINA Project Director K.S. Vara Prasad indicated a year ago that his team is building a "miniaturised inertial navigation package" to enhance the existing weapon without adding weight or too much cost. The project director has also revealed that a feasibility study is officially on to integrate the HELINA onto the Rustom-H MALE UAV being developed by the Aeronautical Development Establishment (ADE). SP

Army wants light specialist vehicle

After scouting the Indian and foreign markets for the last few years, the Army has announced afresh its interest in procuring an undisclosed number of a common light specialist vehicle (LSV) for all arms in a 3,500-kg unladen weight class category with a payload capacity of 900-1,200 kg. The Army had originally expressed its interest in such vehicles back in August 2010. The Army has stipulated in its information request that the LSV needs to be capable of performing reconnaissance and patrol roles for all arms, provide space and cross mobility in all terrains (including high altitude and deserts) to small parties/teams (approximately six) and operately independently in the battle field.

The Army has so far been given an opportunity to try out a series of LSVs both Indian and foreign-made. Indian contenders are likely to include the Mahindra Axe and Tata LSV, while the foreign offerings include the Defender series from Land Rover. Trials will be conducted across terrain in three different theatres since the selected vehicles are likely to be purchased in large numbers for use across arms. Variants of the LSVs with weapons fitment capabilities will also be incorporated once the tender is finalised this year.

The Army has been quite impressed with the Indian-made offerings that have been displayed at the last few Defexpo exhibitions. Sources say that the size of the order also means it would make eminent sense to purchase a vehicle developed and built in India to the Army's specifications. SP

Indian Army activates second BrahMos unit

The Indian Army has activated a new supersonic cruise missile unit with the operationalisation of its second BrahMos Mk.2 regiment in the desert sector of Rajasthan. A third regiment, armed with the BrahMos Mk.2 is under way. The Army's first BrahMos formation is armed with the Mk.1 weapon. The Army received the ground systems with mobile launchers, command post, replenishment systems, fire control systems with sophisticated electronic hardware & software and with multiple communication systems for its second regiment at a ceremony in November last year.

At the time, the Army's DG Artillery had said, "The universal weapon system due to its versatility and user friendly operation has emerged as the most reliable system for the Indian Armed Forces which has been demonstrated in the successive successful launch trials. We have guns for near range and Smerch Rockets for a range of 75 km. But beyond 75 km range, BrahMos is the only system which has added tremendous fire-power capability to Indian armed forces for targets as deep as 300 km." The BrahMos has the capability to attack surface targets flying as low as 10 metres. With a cruising speed of Mach 2.8, and has a maximum range of 290 km it is considered one of the most potent high performance weapons in the country. SP

PHOTOGRAPHS: Livefist, Mahindra, PIB

M777 ULH procurement progressing

The government has made indications that it is moving forward with the procurement of 145 BAE M777 ultra-light howitzers (ULH), but that it is still to complete a thorough evaluation of the guns. In February 2011, a month after Army chief General V.K. Singh had stated that Army would conclude a contract for new artillery guns before the year was out, the MoD ordered a probe into allegations of malfeasance, enshrined in an anonymous complaint that contained attached photocopies from the classified field evaluation trials (FET) report.

While the MoD has not revealed what the probe's findings are, the Defence Minister's answer in Parliament suggests that the government is moving ahead with the procurement. The government has stated that the field evaluation of the ULH comprises three parts — user trials, DGQA trials and maintainability trials. Of these, it is now apparent that only the first was conducted and the remaining was put on hold as a result of the departmental inquiry into allegations of wrongdoing. "The performance of the gun can be ascertained only after evaluation of all three trial reports," the Minister told Parliament.

BAE Systems, the company that makes the M777 primarily for the US Army, recently named Dean McCumiskey as Managing Director and Chief Executive of BAE Systems' India operations with effect from this month.

The company also confirmed that "Discussions between the Indian and US Governments are ongoing in relation to a possible sale of BAE Systems' ultra-light M777 howitzer, in support of the Indian Army's modernisation programme." SP

Naval LCA refused certification

More bad news for the India's first carrier-borne fighter programme with the Centre for Military Airworthiness and Certification (CEMILAC) demanding that several major modifications be made to the LCA-Navy before certification can happen for flight. The troubled programme, already nearly two years behind on its schedule for a first flight, is still slated for a flight soon according to the programme team headed by Commodore (Retd) C.D. Balaji, though it has become unclear precisely when this may happen. The first prototype, NP-1 missed its most recent window a first flight in late January, and immediately came in for heavy criticism from the Chief of Naval Staff Admiral Nirmal Verma, who told journalists

in Port Blair that the Aeronautical Development Agency (ADA) had accorded priority to the air force variant of the Tejas, ignoring the naval variant.

"There have been many promises made by the ADA, but they have failed us," he is quoted to have said. It has been an endless flow of bad news from the programme from the time the first prototype was ceremonially rolled out in July 2010. What worries scientists — and the navy in particular — is that the modifications necessary to make the LCA-Navy an operational fighter jet — may actually be major and structural in nature. It is already known that the aircraft suffers design deficiencies in terms of weight, the strength of its landing gear and certain control laws like sink rate. While European consortium EADS has been providing a technical consultancy to the programme, it is unclear if the aircraft's issues have been sorted out. As reported earlier, in an irony for India's first carrier-based fighter effort, the LCA Navy Mk.1 may never actually land on an aircraft carrier deck, since the navy has unofficially pronounced it too underpowered for safe carrier operations. Therefore, India's first home-built carrier-borne fighter jet may actually be the LCA Navy Mk.2, powered by a GE F414 turbofan, which meets the thrust requirements set down by the navy. SP

Tejas LSP-7 finally flies

After a worrying gap of over 16 months without a new airframe getting airborne, the indigenous Tejas light combat aircraft programme took a tentative step forward this month with the debut flight of the much anticipated seventh aircraft from the limited series production (LSP-7). The single-seat air force fighter variant is the first of a pair of airframes that the IAF will put through user trials. In a statement, the DRDO says, "This test flight is significant for the programme, as LSP-7 build standard is close to the initial operational clearance (IOC) standard. Accordingly, LSP-7 aircraft, along with LSP-8 will be offered to the Indian Air Force for user evaluation trials (UET)."

According to the programme team, the flight had a list of firsts: it was for the first time that production test schedule was used for the first flight of a limited series production airframe, and perhaps more significantly, it was the first flight of the Tejas that did not involve a chase aircraft to observe and monitor the flight, which the DRDO attributed as "an indicator to the level of confidence in the machine." The 28-minute flight, commanded by with Group Captain K.K. Venugopal was used to check out performance of virtually the entire gamut of the aircraft systems including crucial hybrid Indo-Israeli multi-mode radar (MMR), helmet mounted display system (HMDS), autopilot and instrument landing system (ILS).

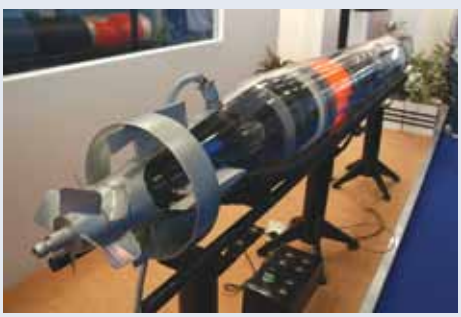
The LSP-8 is expected to make its first flight later this year and will join the test programme, and will be the airframe put forward for final operational clearance (FOC) in 2014. Earlier this month, Defence Minister A.K. Antony updated Parliament on the Tejas programme, saying, "₹11,845.2 crore have been sanctioned by the Government of India to ADA for the development of Tejas till date and the total expenditure incurred so far is ₹5,051.46 crore. IAF plans to induct six LCA squadrons by the end of the 13th Five Year Plan." SP

PHOTOGRAPHS: USAF, DRDO

Indian Navy to receive indigenous light torpedo Shyena

On March 3, the Indian Navy received its first advanced light torpedoes (TAL) Shyena, developed indigenously by DRDO's Naval Science & Technology Laboratory (NSTL). The weapon, deployable from a helicopter or from a triple-tube launcher on surface vessels, has been designed as a light-weight anti-submarine system. The TAL has taken its time in development, but will now be part of the Navy's frontline weapon arsenal.

The Navy, impressed with its performance and its 95 per cent indigenous component, has ordered 25 units, but is likely to sign up for more soon. According to its makers, the TAL is an "electrically propelled, self-homing torpedo which can hunt submarines with a speed of 33 knots with endurance of six minutes in shallow and deep waters. The torpedo weighs around 220 kgs." The TAL is built to operate at depths of a few hundred metres and designed to "home in on targets by passive/active homing and explodes on impact to destroy/damage the target submarine". Once deployed, the TAL is built to perform pre-programmed search patterns for available targets.



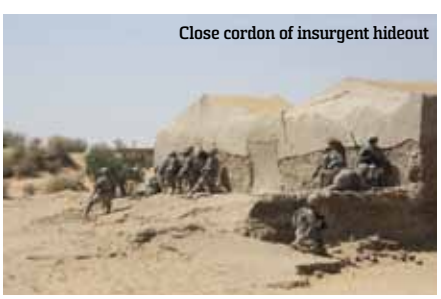
The TAL, developed under the Advanced Experimental Torpedo programme, underwent technical trials between 1994 and 1998 and user trials from 1998-2000. User evaluation tests with designed and engineered models of the TAL took place in 2003-05, following which the Navy was convinced of the system's capabilities and ordered 25 units. The TAL is currently being manufactured by the Bharat Dynamics Ltd at its Visakhapatnam unit. The more ambitious Varunastra heavyweight torpedo is still in development and is likely to take a few more years before being declared operational. SP

Exercise Yudh Abhyas 2012

The Indo-US land forces engagement has progressed substantively. Starting at the first Yudh Abhyas exercise seven years ago at the basic platoon level, the exercise held this year has evolved into an advanced command post and field training exercise.

Spread across two locations under the Army's South Western Command since early March, this years Yudh Abhyas had a US Army contingent from the US Army Pacific (USARPAC), part of their Pacific Command (PACOM) and troops from the 2nd Squadron 14th US Cavalry Regiment from 25th Infantry Division, Hawaii, along with a platoon of Strykers. The Indian Army fielded a similarly-sized mechanised infantry unit. According to the Army, "The event is all the more interesting as a number of key surveillance, communications and improvised explosive devices detection (IED) and neutralisation technologies, available with both sides have been fielded in the exercise."

The exercise involved several key elements of close joint engagement for offensive objectives. For instance, as part of the field training element codenamed Desert Lark, troops from both sides performed a joint cordon and search drill to neutralise suspected insurgents in a specially constructed training area at the ranges in an abandoned village in the Mahajan Field Firing Range in Rajasthan. The dramatic drill had the Indian and US troops establishing a physical cordon by deploying their respective combat vehicles at night, followed by a ground push by troops to zero in on and flush out insurgents. Helicopter support was part of the drill for injection and evacuation of the crew, and to provide air support. Several elements of the drill were reminiscent of the final manoeuvres employed during Operation Neptune Spear, the mission that eliminated Al Qaeda chief Osama bin Laden in Abbottabad, Pakistan. It may be noted that a similar manoeuvre was also performed by the Indian Army troops at Exercise Vijayee Bhava last year in Rajasthan.



Close cordon of insurgent hideout

Armoured Assault during the exercise

Indo-US troops interacting with each other

The command post exercise, codenamed Sarvada Saviours, which took place at Bathinda focused on a major area of interest for both armies – explosive ordnance and IED disposal in a hostile environment. The exercise involved sappers from both sides and dealt with the innumerable challenges they face in countering the assymetric threat posed by IEDs and street-side bomb attacks. The non-operational element of the exercise involved infrastructure development in strife-torn regions and inaccessible areas and, crucial to both sides, the execution of rescue and relief operations during natural calamities. According to the Army, the command post exercise in particular provided an excellent opportunity to both sides to understand functioning of Engineer Brigades with special emphasis on operations under United Nations mandate in troubled areas.

Desert Lark and Sarvada Saviours was witnessed by an Indian and US Army delegation, headed by Lt General Gyan Bhushan, GOC-in-C South Western Command, and Lt General Francis "Frank" Wiercinski, commander of the US Army Pacific, as also the co-chair of the Executive Steering Group (ESG) for Indo-US army training events and exchanges.

The weapons and systems involved at Yudh Abhyas included Stryker special vehicles, anti-armour and infantry weapons from the US side. The Indian Army fielded BMP armoured personnel carriers, IAF Mi-17 helicopters and support systems. SP

PHOTOGRAPHS: SP's Special Correspondent, Indian Army

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LT GENERAL (RETD)
P.C. KATOCH

Double jeopardy for Pakistan

No matter how sincere the effort of Prime Minister Yousaf Raza Gilani and President Asif Ali Zardari, revival of true democracy in Pakistan is a distant dream even if General Ashfaq Kiyani is not interested in an outright military coup. The military is too strong to get cowed down with the events like killing of Osama bin Laden or terrorist attack on PNS Mehran Air Base resulting in destruction of two P3C Orion aircraft and killing of SSG and Marines.

Indo-Pak relations will continue to be subject to Pak Army-ISI-LeT machinations much as the Afghan-Pakistan relations will be subject to Pak Army-ISI-Taliban machinations, with the lever in the hands of Kiyani. The news that Zaheer-ul-Islam, the new DG ISI is not an Islamist (read radical) is fooling us. He may come from 5 Corps at Karachi but prior to that he served a full tenure with ISI as DG (C) and would be party to all that has been done by the ISI in those years.

G. Parthasarthy, former Indian Ambassador to Pakistan, recently said, "Both the Air Force and Navy are far more tech savvy and less fundamentalist than the Army in Pakistan. But, whether fundamentalist or not, the army officer Corps is pathologically anti-India." Both Gilani and Hina Rabbani have been eloquent in stating that Pakistan will not interfere in Afghanistan and that the issue of treating Afghanistan as Pakistan's "strategic depth" is passé but then is the Pakistan Army on board? Pakistan (including Pak Taliban)-Afghanistan-US talks are presently underway. Pakistan has reportedly made it clear that they want Pak Taliban part of the Government in Afghanistan, minimal Indian presence in Afghanistan confined to development projects and no Indian military involvement in even training the Afghan National Army.

The Pak Taliban is for strict rule of 'Shariya' and vehemently state they can walk out any time reneging on whatever promises made. Some of our intelligence sources talk of signals coming from Pakistan that the ISI is trying to mellow down and curb the Pak Taliban. Can we be so naïve so as to believe this? When Pakistan has been taking the US for a ride all these years despite Indian warnings to the US, how can you expect her to change course post-2014 when US and NATO forces thin out from Afghanistan, talk of complete pullout likely being a political gimmick of President Obama. When you cannot trust Pakistan how can you trust Pak Taliban?

It is more significant to note that the ride on which Pakistan took the US included targeting the NATO-led ISAF supply lines repeatedly through Taliban, targeting US bases in the heart of Afghanistan killing Americans through the Haqqani network and facilitating Chinese military advisors to assist Pak Taliban fight NATO troops along the Afghanistan-Pakistan border. All this despite the billions of dollars worth of aid and massive weapon systems Pakistan received from US under pretext of being the frontline partner in the Global War on Terror.

US-NATO thinning from Afghanistan and Chinese strategic footprints in Pakistan and POK would certainly be euphoric to the Pak Military-ISI-Taliban-Al Qaeda-LeT combine, adverse effects of which will emerge in Afghanistan and India in times to come, no matter how many deceptive tactical pauses. An Urdu paper in Pakistan has already talked of the possibility of Pakistan leasing Gilgit-Baltistan areas to China for 50 years. Look at the horrific brutal killings of Shias within Pakistan. The undeniable fact is that terror capability in Pakistan is being constantly energised through institutionalised radicalisation. When the US has only been able to obliquely accuse Pakistan of murder till now, it is double jeopardy for Pakistan post-2014. SP

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

The undeniable fact is that terror capability in Pakistan is being constantly energised through institutionalised radicalisation

ILLUSTRATION: Anoop Kamath

Defence budget up by over 17 per cent

The Defence budget has been substantially increased in the 2012-13 Union Budget and the allocation is ₹1,93,407 crore, up from ₹1,64,415 crore, a jump of over 17 per cent.

As India has gone in for aggressive modernisation programme of the armed forces, the total outlay for procuring modern weapons systems and military hardware is over ₹79,500 crore. The major acquisitions that will be accounted for in the budgetary allocation are the 126 medium multi-role combat aircraft (MMRCA); 145 ultra light howitzers (ULH); 197 light utility helicopters and other weapons and systems. But the major chunk of the budget goes for salaries and day-to-day costs pegged at ₹1,13,829 crore.

This allocation is based on the present needs and any further requirement for the security of the nation would be made, Finance Minister Pranab Mukherjee said.

However, India's defence expenditure still remains just 1.9 per cent of the projected GDP for 2012-13, much less than the 3 per cent the armed forces is asking for. On the other hand, China hiked its defence budget to over $100 billion. SP

Indian firms win first Scorpene subcontracts

DCNS, a world leader in naval defence, signed through DCNS India a contract with SEC Industries worth ₹310 crore (approximately €50 million) for the local manufacture of equipment for the P75 Scorpene submarines.

DCNS India signed a contract with SEC Industries for the manufacture of equipment (hull hatches, cofferdam doors, knuckle hoses, ballast vent valves, high pressure air cylinders, weapon handling and storage system). Over the coming years, SEC will manufacture equipment under a TOT provided by DCNS India and they will be progressively delivered to our customer, Mazagon Dock Limited (MDL), for integration onboard the P75 Scorpene submarines.

"The contract with SEC is part of the indigenisation programme implemented by DCNS India under the P75 Mazagon Purchased Materials (MPM) contracts. Through this... we are developing strong industrial partnerships and capabilities for the P75 and future programmes. Together with our partners, we are positioning ourselves for the long term", declared Bernard Buisson, Managing Director of DCNS India.

The concerned equipment are highly specific due to the physical constraints they will face onboard the submarines. As for the recent deliveries from Flash Forge, the local production will follow DCNS' strict quality standards to ensure the submarines' optimal performances with maximum safety over the long term. SP

PHOTOGRAPHS: SP's Special Correspondent, USAF

Defence Minister clarifies on DPP

Acquisition of weapons and equipment for defence forces is a complex activity and is carried out in accordance with the provisions of Defence Procurement Procedure (DPP). As per broad timeframe given in DPP, it takes about 80-137 weeks to complete the various stages of procurement and conclude the contract, the Defence Minister A.K. Antony has said in the Parliament.

However, delays sometimes occur in procurement cases due to several reasons, such as insufficient and limited vendor base, non-conformity of the offers to the request for proposal (RFP) conditions, field trials, complexities in contract negotiations and long lead time for indigenisation. Defence acquisitions are normally based on fixed price contracts. There are contractual provisions for penalties including imposition of liquidated damages for delay in execution of contracts.

To counter systemic and institutional delays, procedures are continuously reviewed and refined on the basis of experience gained during the procurement process. SP

China's defence budget crosses $100 billion

China has reportedly increased its defence budget by a whopping figure, raising alarm in various quarters, including in India, Philippines, Japan and Taiwan. After an 11.2 per cent hike, China's defence budget now stands at a whopping $106.4 billion, second largest defence budget in the world after the United States.

China already has the world's largest military with its People's Liberation Army (PLA) having over two million personnel. Justifying the hefty allocation to defence, National People's Congress spokesman Li Zhaoxing said: "You see, China has 1.3 billion people, a large territory and long coastline. But our defence spending is relatively low compared with other major countries." SP

India, China, Japan maritime cooperation

India, China and Japan have recently agreed for better coordination amongst their Naval ships deployed for anti-piracy operations in the Gulf of Aden. As per the convoy coordination plan implemented with effect from January 1, 2012, one of the Navies is designated as a "Reference Navy" for a period of three months, which first proposes its escort schedule for a three months period. The other Navies then de-conflict their escorts schedules with the dates of the Reference Navy. The Reference Navy is rotated every three months in alphabetical orders.

This information was given by Minister of Defence A.K. Antony in a written reply to Moinul Hassan in the Rajya Sabha. SP

BAE Systems wins US contract for armoured vests and components

BAE Systems has been awarded a four-year US Defense Logistics Agency (DLA) contract to produce tactical vests equipped with soft body armour for men and women of the armed services who serve in harm's way. The vests hold hard-armour plates and soft-armour ballistic inserts, which provide soldiers with advanced protection. The improved outer tactical vests offer soldiers lighter-weight equipment with advanced features and increased mobility in the field.

The contract, awarded by DLA Troop Support, covers the production of outer tactical vests and improved outer tactical vests, plus associated components.

"This award reinforces our position as a valued partner in the body armour market," said Don Dutton, Vice President and General Manager of Protection Systems at BAE Systems Support Solutions. "DLA continues to see demand for sustaining these life-saving products, as well as the value and quality that all of our equipment affords."

The company has received an initial $48 million in orders, which are expected to be completed by February 2013. The total value of the contract orders could reach approximately $267 million over the next four years. SP

Elbit Systems to showcase cutting-edge solutions at Defexpo India 2012

Elbit Systems will feature a variety of its next-generation systems at Defexpo India 2012 (Israel Pavilion, Booth 11.10B) in New Delhi. A broad array of the company's capabilities demonstrating full system interoperability will be demonstrated via a new and impressive multimedia presentation. Visitors to the company's booth will have an excellent opportunity to view displays, live demos and media presentations of the company's core technologies and cutting-edge solutions.

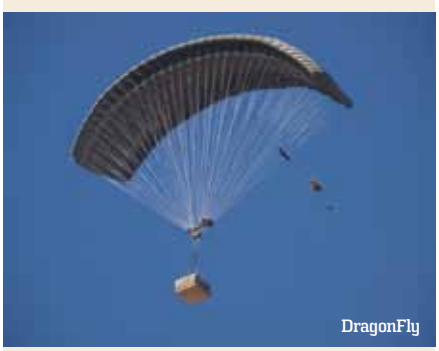
The new multimedia presentation, "Fire Support in Action" will feature a live combat scenario demonstrating how Elbit Systems' products and systems, focusing on its artillery and mortar arrays, provide ultimate fire support and self-protection for manoeuvring forces in closing sensor to shooter loops. The presentation will allow viewers to experience a dynamic "live" combat mission with dramatic special effects, replicating how the systems work in fully realistic views. Like previous Elbit Systems' presentations, which have won prestigious international awards for their innovative approach, this one promises to be just as memorable and exciting. Among the systems participating in the presentation: ATHOS and ATMOS artillery, Cardom Mortars, 30mm unmanned turrets (UT), Precision Guided Munitions (PGM), Hermes® 900 and Skylark® I-LE UAS, Combat NG, IR Centric, Engager, PAWS, DIRCM and more. SP

Digital Army Program

HDT Global to showcase latest GPADS technology at Defexpo 2012

HDT Global is exhibiting its guided precision aerial delivery Systems (GPADS) during Defexpo 2012 in New Delhi. The GPADS solution, developed by the HDT Airborne Systems Group, has the greatest GPADS capability, providing systems with the best glide ratio worldwide.

HDT Global provides the defence community with the largest array of GPADS, with glide ratios between 3.75:1 and 4:1 and impressive payload-carrying capabilities. GPADS use GPS guidance to autonomously deliver payloads to specific locations and are particularly useful for missions to remote areas where resupplying troops on the ground is a dangerous undertaking. HDT Global's array of GPADS include the MicroFly, FireFly, DragonFly and MegaFly, with the ability to carry payloads from 100 lbs to 42,000 lbs.



DragonFly

"As the only company able to provide a complete aerial delivery solution across such a great weight range, HDT Global is excited to showcase our superior GPADS capabilities at Defexpo," said JC Berland, chief technology officer of HDT Airborne Systems.

Both the FireFly and DragonFly have been selected by the US Army for the 2K and 10K joint precision aerial delivery system (JPADS) programmes of record. The MicroFly and the FireFly are currently in use with international military allies and now offer high altitude low opening (HALO) capabilities to enhance special operations missions. More than 2,000 FireFly have been fielded under the 2K JPADS programme. SP

PHOTOGRAPHS: Businesswire, Elbit Systems, HDT Global

Northrop Grumman delivers targeting pod

Northrop Grumman Corporation has announced the recent production and delivery of the 100th Litening G4 targeting pod. Litening G4 is currently in full production to accommodate separate indefinite delivery, indefinite quantity contracts with the US Air Force and Marine Corps. The total value of the Air Force Lot 1/2 and Marine Corps Lot 2/3/4 Litening G4 production contracts is greater than $575 million. These contracts allow procurement of new Litening G4 pods as well as upgrades of existing Litening AT Block 1 configuration pods to the advanced Litening G4 configuration.

"The delivery of the 100th G4 pod is an important milestone," said Jim Mocarski, Vice President of EO/IR Targeting

Systems at Northrop Grumman's Electronics Systems Sector. "Most importantly, our customers have the assets they need to support both deployment and their active bases in the US. We have also demonstrated that our production capability is mature and capable of meeting their future requirements."

The Litening G4 advanced targeting pod is the newest addition to the company's Litening family of targeting pods, delivering the latest advancements in sensor, laser imaging and data link technology. G4's technologies include full 1Kx1K forward looking infrared, 1Kx1K charge-coupled device and short wave infrared laser imaging sensors, colour symbology, tracker improvement and enhanced zoom. These advancements deliver more accurate target identification and location at longer ranges than previous generations of Litening targeting pod systems while reducing pilot workload. SP

PHOTOGRAPHS: www.f-16.net, Navistar, US Navy

Navistar Defense receives MRAP installation order

Navistar Defense, LLC received an award to conduct the installation work associated with its January order to upgrade 2,717 International MaxxPro mine resistant ambush protected (MRAP) vehicles with a new vehicle chassis. The $21 million contract from the US Army Contracting Command is just one of Navistar's many reset offerings aimed at revitalising existing defence assets for future missions.

"We are focused on increasing the capabilities of our existing fleet with minimal impact to defence funding," said Archie Massicotte, President, Navistar Defense. "The vehicle reset line we established for this installation work can also be utilised to restore older vehicles to like-new condition. Therefore, we are poised and ready to reset vehicles returning from deployment – either here at our facility or overseas."

The installation contract retrofits vintage MaxxPro vehicles with a new rolling chassis. This chassis enhancement includes the addition of the DXM™ independent suspension, a MaxxForce 9.3 engine, 570 amp alternator and driveline, while leaving a residual chassis with a beam axle that can be reused. The retrofits will be conducted in West Point, Mississippi, and work is expected to be completed by the end of May 2012.

The company has fielded nearly 9,000 MaxxPro vehicles and continues to anticipate needed vehicle capabilities, enhancements, reset and reuse options for its entire fleet of 32,000 vehicles. SP

US Navy awards $1.4 billion contracts for four LCS ships

The US Navy issued contract modifications to Lockheed Martin and Austal USA under their respective littoral combat ship (LCS) block buy contracts to add funding for construction of two littoral combat ships each.

This is the third funding increment for each contractor under their previously awarded, fixed-price incentive "block buy" contracts for the design and construction of up to 10 LCS Flight 0+ ships. The two block buy contracts provide for the acquisition of a total of up to 20 littoral combat ships from fiscal year 2010 through fiscal year 2015, subject to availability of appropriations.

Under the block buy contract with Lockheed Martin Corporation, $715,000,351 was added for construction of two fiscal year 2012 LCS ships. Under the block buy contract with Austal USA, $691,599,014 was added for construction of two fiscal year 2012 LCS ships. These ships will be built at Marinette Marine Corporation in Marinette, Wisconsin, and Austal USA in Mobile, Alabama, respectively. SP

ReconRobotics announces USMC Recon Scout order

ReconRobotics has been awarded a contract for 126 Recon Scout XT micro-UGV kits by the US Marine Corps (USMC) through the Robotic Systems Joint Project Office (RS JPO).

The $1.7 million order is the largest USMC order for the company to date, and delivery is expected by 30 April.

'Driving this series of orders are soldier requirements for throwable micro-robot systems that are much smaller and easier to deploy than the 30 to 60 lb Small Unmanned Ground Vehicles (SUGVs) that were widely used over the last decade,' the company said.

'Unlike the SUGV, the 1.2 lb (540 g) Recon Scout XT micro-robot is deployed at the fire-team level, i.e. one robot for every four to five soldiers, to provide situational awareness and standoff distance as the team clears compounds, investigates suspected IEDs, or searches attics, culverts and crawl spaces.'

The XT can be thrown from some 120ft, and is able to see in the dark. The system serves to transmit video reconnaissance through walls and doors to a small handheld operator control unit held by the operator at a distance from the area being surveyed. SP

Lockheed Martin completes delivery of components of THAAD

Lockheed Martin has completed delivery of all hardware and components associated with the terminal high altitude area defence (THAAD) weapon system's first US Army Battery.

In December, THAAD delivered its 24th interceptor, completing the first THAAD Battery (A-4 ADA). Two THAAD batteries have been activated at Fort Bliss, Texas. The first THAAD Battery (A-4 ADA Battery) was activated in May 2008. The second THAAD Battery (A-2 ADA Battery) was activated in October 2009. The Army anticipates activating a third Battery in late 2012.

"The Lockheed Martin THAAD team is proud to deliver this important capability to the warfighter," said Mat Joyce, Vice President and Programme Manager for the THAAD weapon system at Lockheed Martin. "We remain focused on ensuring the THAAD system remains reliable, affordable and effective." SP

Raytheon awarded US Army contract to counter rockets

The US Army awarded Raytheon Company a $79.2 million contract to develop a system that will detect and destroy incoming rockets. The solution is called the Accelerated Improved Intercept Initiative (AI3). Development will culminate in a demonstration in 18 months, followed by low rate initial production.

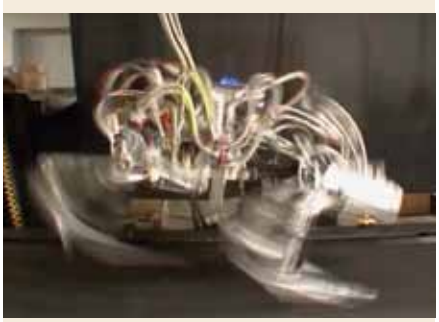
"Rocket attacks have cost many US and allied warfighters their lives, which is why Raytheon is committed to getting this system developed and fielded as soon as possible," said Dr Thomas R. Bussing, Vice President of Raytheon Missile Systems' Advanced Missiles and Unmanned Systems product line. "Our goal is to save soldiers' lives."

Raytheon will develop and demonstrate the intercept of rockets in flight with the AI3 Battle Element, consisting of an interceptor, which Raytheon will develop, and a government furnished launcher, fire control system, and command and control system. SP

DARPA's "Cheetah" sets land speed record for legged robots

The use of ground robots in military explosive-ordinance-disposal missions already saves many lives and prevents thousands of other casualties. If the current limitations on mobility and manipulation capabilities of robots can be overcome, robots could much more effectively assist warfighters across a greater range of missions. DARPA's maximum mobility and manipulation (M3) programme seeks to create and demonstrate significant scientific and engineering advances in robot mobility and manipulation capabilities.

The M3 programme pursues four parallel tracks of research and development: tool design, improvement of production methods and processes, improvement in control of robot mobility and manipulation, and prototype demonstration.



The "Cheetah" robot galloped at speeds of up to 18 miles per hour (mph), setting a new land speed record for legged robots. The previous record was 13.1 mph, set in 1989.

The robot's movements are patterned after those of fast-running animals in nature. The robot increases its stride and running speed by flexing and un-flexing its back on each step, much as an actual cheetah does.

The current version of the Cheetah robot runs on a laboratory treadmill where it is powered by an off-board hydraulic pump, and uses a boom-like device to keep it running in the centre of the treadmill. Testing of a free-running prototype is planned for later this year.

While the M3 programme conducts basic research and is not focused on specific military missions, the technology it aims to develop could have a wide range of potential military applications. SP

PHOTOGRAPHS: ReconRobotics, Lockheed Martin, Darpa

Impenetrable defence

It is impossible to discuss the issue of full-fledged state security without a reliable air and missile defence system. This is sort of an axiom. Especially nowadays when there are so many examples of armed conflicts whose outcome has been decided by massed air strikes.

For those who have a notion of problems related to building air and missile defence systems for administrative and industrial installations and troops, real threats are seen in both aerodynamic air vehicles and ballistic missiles. Integrated solution to the problem is found as a system capable of engaging the whole range of airborne targets. All major world arms manufacturers are actively working on this. And Russians have made the best progress here.

Buk-M2E multichannel medium-range air defence missile system

Russia, a traditional leader in this technology, promotes via Rosoboronexport a wide range of modern anti-air assets able to reliably protect administrative and political institutions, infrastructure installations, troops formations and military bases, minerals field production facilities, etc. It makes versatile air defence equipment comprising the Buk-M2E medium-range and Antey-2500 long-range air defence missile systems.

One battalion of the Buk-M2E multichannel medium-range air defence missile system can engage simultaneously 24 air targets approaching from any directions at the range of up to 45 to 50 km. It is designed to engage strategic and tactical aircraft, cruise missiles, helicopters and other aerodynamic air vehicles within the entire operational envelopes (from 0.015 km to 25 km) under intensive enemy electronic countermeasures and counterfire. The system is also effective when engaging maritime and ground-based radio-contrast targets.

The famous Antey-2500 system provides air target engagement at the range of 350 km and at the altitude of up to 30 km. It is designed to protect major administrative, industrial and military installations, troop groupings from massed air strikes delivered by any modern air attack assets including aircraft of all types and ballistic missiles with launch range of up to 2,500 km, as well as cruise missiles. In other words it sifts a great number of threats of all types at the distant approaches. Having all its elements mounted on the unified all-terrain tracked chassis, the Antey-2500 system can deploy from the march and be ready for fire within 5 minutes.

Summing up, it means that Russian-made air and missile defence systems can be smoothly integrated into existing air defence systems of any country and substantially enhance fighting capacity of its armed forces. Reliability, high quality, automation, unique combat performance and, what's more important, guaranteed security – those are benefits for countries protected by these highly effective weapon systems. SP

Antey-2500 long-range air defence missile system

A striking force for special operations units

Tigr

Troops capacity - **up to 10 persons**

Weight - **7,600 kg**
Maximum speed - **140 km/h**
Payload weight - **1,200 kg**
Cruising range - at least **900 km**

220-hp turbocharged diesel engine

Automatic tyre pressure electronic control system

Armour protection according to **STANAG 4569** - Level 2*

* A modification with Level 3 armour protection can be made on customer request.

The Tigr makes no excuses for any road. Be it sticky mud, dust storm, highland or cramped urban jungle – it just breaks through it to the target. Tigr's running gear is derived from that of the famous BTR-80 type APCs proven in many wars and combat operations. Its armour withstands a hail of 7.62-mm bullets. That's why the Tigr is so dangerous ... For all outlaws.

Rosoboronexport is the sole state company in Russia authorized to export the full range of defense-related and dual-use products, technologies and services. The official status of Rosoboronexport secures the guaranteed state support in all operations.

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Antony asks HAL to realign its business processes

The Defence Minister A.K. Antony has asked the Hindustan Aeronautics Limited (HAL) to realign its business processes for strategic alliances and joint ventures, as also to step up R&D efforts to remain globally competitive.

Addressing a meeting of the Parliamentary Consultative Committee attached to his ministry, Antony said HAL should partner with design laboratories like DRDO and CSIR for the development of indigenous aircraft, engines and systems. He said, what is more, HAL should adopt best practices followed by the global leaders in the field of project management, quality control systems, vendor deployment and supply chain management.

HAL, the leading defence public sector undertaking, has a turnover of over ₹13,000 crore and is set for a quantum jump with the planned acquisition and production of light combat aircraft, light utility helicopter, medium multi-role combat aircraft, fifth generation fighter aircraft, multi-role transport aircraft, basic trainer aircraft in its assembly lines in the coming years.

Antony said the opening of defence production to the private sector and the introduction of offset clause in defence procurements should provide the necessary fillip to the entry of several players from the private sector into the aircraft industry.

Keeping in mind the mammoth role that the HAL would assume in the coming years in the aerospace industry and the challenges that it would face, the government has set up an expert group under the chairmanship of B.K. Chaturvedi, Member, Planning Commission, to suggest measures to strengthen and restructure HAL.

The expert group has already met twice and is expected to submit its report soon. Among other things, the group will suggest how best the spinoffs from HAL order book can be earnest to ensure better involvement of the private industry in the defence sector.

It will also suggest measures to enhance the synergies between HAL, the private defence sector and the civilian industry. The expert group will assess the future technological and human resource requirements of HAL keeping in view the upcoming and emerging futuristic aeronautical technologies.

Taking part in the discussion the Members of Parliament appreciated the role played by HAL in the defence arena of the country over the years. They, however, pointed out certain shortcomings such as the delay in the induction of the light combat aircraft in the Indian Air Force, in the development of Kaveri Engine, in phasing out of MiG-21 aircraft and lack of an aggressive strategy to export HAL products.

Replying to queries, Antony said the government has taken a number of measures to acquire the most modern aircraft for the Indian Air Force in the coming years. Some of the aircraft have already been inducted into IAF and others are in the pipeline. Antony was optimistic that from 2020 onwards most of the airframes and platforms of the IAF would have incorporated new technology.

Speaking at the meeting, the Minister of State for Defence Dr M.M. Pallam Raju said HAL today faces multifarious challenges. He said while the organisation has evolved over the last 70 years by producing some of the finest human resources and products, in future, HAL would increasingly play the role of system integrator.

The MPs who attended the meeting included Manish Tewari, Naveen Jindal, Suresh Kalmadi, Brijbhushan Sharan Singh, Kalkesh N. Singh Deo, Dr Murli Manohar Joshi, S.S. Ramasubbu, Dr Shashi Tharoor, Balwant alias Bal Apte, Dr Mahender Prasad, H.K. Dua and Ishwar Lal Jain. SP

Russian Defence Ministry to buy 92 Su-34 fighters

The Russian Defence Ministry has signed a deal for 92 Su-34 Fullback fighter-bombers from the Sukhoi aircraft maker. The deal under which the warplanes are to be delivered by 2020 was signed by Defense Minister Anatoly Serdyukov and Sukhoi General Director Igor Ozar.

This is one of the largest warplane contracts under the government arms procurement programme and it will help replace all of the Su-24 bombers currently in service with the 4+ generation aircraft, Serdyukov said.

The ministry previously said a total of 70 Su-34s will be delivered by 2015. SP

Japan to acquire a Eurocopter EC225

The Japan Ministry of Defence recently signed a contract with Eurocopter to acquire an EC225, a heavy twin-engine helicopter from Eurocopter's Super Puma family. It had a fleet of three EC225s, and one of which submerged during the Great East Japan Earthquake and Tsunami. The procurement of the new 11-tonne helicopter is meant as a replacement for the damaged aircraft. The EC225 for the Ministry of Defence will be delivered in February 2015.

Offering high cruise speed, long-range coverage and high level of comfort thanks to the spacious cabin and low vibration, this aircraft is popularly used for passenger transportation and search and rescue missions all over the world.

"The strength of the EC225 was clearly demonstrated during the disaster relief efforts, which was very much appreciated by our customers," said Stephane Ginoux, President & CEO of Eurocopter Japan. "Recent procurements of this model by the Japan Coast Guard, Tokyo Fire Department, and now the Ministry of Defence, have given great recognition to the capability of the EC225. Eurocopter Japan will also continue to provide efficient services to ensure undisrupted operations for our customers." SP

PHOTOGRAPHS: PIB, Sukhoi, Eurocopter

Boeing delivers P-8A Poseidon production aircraft to US Navy

Boeing has recently delivered the first production P-8A Poseidon aircraft to the US Navy in Seattle. The P-8A is the first of 13 anti-submarine warfare, anti-surface warfare, intelligence, surveillance and reconnaissance aircraft Boeing will deliver as part of a low-rate initial production (LRIP) contract awarded in 2011.

"Delivering this capability to the warfighter is the ultimate goal and we're proud to be able to meet our commitment and hand over the P-8A 'keys' to the Navy fleet," said Chuck Dabundo, Boeing Vice President and P-8 Programme Manager. "This is a great day for Boeing, our supplier teammates and our Navy customer."

A derivative of the Next-Generation 737-800, the Poseidon is built by a Boeing-led industry team that includes CFM International, Northrop Grumman, Raytheon, Spirit AeroSystems, BAE Systems and GE Aviation.

The Navy plans to purchase 117 Boeing 737-based P-8A aircraft to replace its P-3 fleet. Initial operational capability is planned for 2013. SP

Rolls-Royce and USAF launch fuel savings flight tests on C-130

Rolls-Royce, the global power systems company, and the United States Air Force will soon begin flight tests of an engine upgrade for the T56 turboprop engine, which powers the C-130H transport aircraft. The Series 3.5 upgrade is designed to deliver both fuel savings and reliability improvements, as well as improved life cycle costs.

Rolls-Royce has delivered upgrade kits to be installed on an Air Force C-130H test aircraft, with flight tests scheduled to begin by mid-year. The enhancements use proven technologies from other Rolls-Royce commercial and military engines, including new blade materials and advanced turbine airfoil aerodynamic designs.

The engine upgrade programme is expected to deliver significant benefits to the Air Force's C-130H fleet, enabling the aircraft to continue operation until 2040 while delivering fuel savings of 8 per cent; along with improved reliability and performance. The Series 3.5 enhancement will also improve "hot and high" performance.

Approximately 220 C-130H aircraft are eligible for upgrades.

"We recognise the US Air Force has a goal of improving energy efficiency, and Rolls-Royce has invested to help this valued customer meet its goal. In doing so, we improved engine reliability and performance, which will enable the Air Force to extend the life of its C-130 fleet for decades while potentially saving billions of dollars," said Patricia O'Connell, President, Customer Business, Rolls-Royce Defense.

An Air Force analysis estimated long-term savings of $3.5 billion from the Series 3.5 enhancements over the lifetime of the fleet. The engine upgrade can be accomplished as part of a conventional engine overhaul, and does not require any aircraft or engine control system modifications.

The engine upgrades will help the Air Force to achieve its goal of reducing consumption of aviation fuel by 10 per cent by 2015. SP

India plans first Rafale squadron by 2015-16

The first squadron of medium multi-role combat aircraft (MMRCA) consisting of 18 aircraft is expected to be inducted into the IAF within three to four years of signing of the contract with its supplier.

In reply to a question on delivery of MMRCA, Defence Minister A.K. Antony told Lok Sabha: "First squadron of MMRCA consisting of 18 aircraft is expected to be inducted within three to four years of signing of contract."

"The remaining 108 aircraft will be manufactured under licence by the Hindustan Aeronautics Limited (HAL) and are expected to be inducted over the following seven years," he added.

The request for proposal (RFP) for procurement of MMRCA was issued to six manufacturers of fighter aircraft. Of the six proposals received in response, proposal of Dassault Aviation for Rafale and EADS Germany for Eurofighter Typhoon were found compliant to the technical requirements in field evaluation trials.

"The Contract Negotiations Committee (CNC) which is currently in progress found the proposal of Dassault Aviation as the lowest in terms of cost. Final decision will be taken after the CNC submits its recommendations," Antony told the House.

He also said the IAF is in the process of inducting additional Su-30MKI aircraft, light combat aircraft (LCA), medium lift helicopters, advanced light helicopters as well as C-130J and C-17 transport aircraft to augment its combat aircraft, helicopter and transport aircraft fleet. SP

PHOTOGRAPHS: Boeing, USAF, Dassault Aviation

UAV by city SMEs to be showcased at Delhi Defexpo

An unmanned aerial vehicle (UAV), developed by Delhi-based Small and Medium Enterprises (SME) association, will be showcased at the Defexpo 2012 in New Delhi. The UAV which has been named E-5 is said to be the first off-the-shelf UAV developed by a professional body.

With a weight of 2.5 kg, the UAV can be backpacked and hand launched by the user from the destined location. The battery-operated and electrically propelled unit has a maximum speed of 50 kmph and can endure up to 45 minutes. The maximum altitude that it can fly up to is 1,500 metres above the ground level.

It is equipped with a way point based GPS system, 2.4 GHz and 900 MHz radio links and day use CCD camera. The UAV has a range of 10 km and can be provided with additional equipment such as extended range, endurance, night vision camera (the first ever in the country), pan and tilt camera and digital link. SP

Camcopter S-100 maiden flight with Schiebel's new heavy fuel engine

Schiebel announced the first flight of a heavy-fuel powered Camcopter S-100 UAS (unmanned air system). The flexibility this engine provides will further add to the wide capabilities of the unmanned helicopter.

After extensive development, the S-100 successfully made its maiden flight with the new heavy fuel engine at Schiebel's range near the production facility in Wiener Neustadt, Austria. The Schiebel-designed engine fulfilled all expectations and series deliveries are scheduled to start in the fourth quarter of 2012.

Typical for the innovative and advanced design of Schiebel products, the heavy fuel engine provides customers with the ability to use JP-5 (F-44), Jet A-1 (F-35) and JP-8 (F-34). This is a flexibility that is not available in other tactical VTOL UAS.

"Schiebel has continuously raised the bar for manufacturers serving the UAS industry. We listen to our customers, and then we build the features they ask for," said Hans Georg Schiebel, Chairman of the Schiebel Group. "The new fuel options will be a big advantage to all our customers worldwide across all markets, offering them even more flexibility."

The basic power plant of the Camcopter S-100 is a Wankel-type (rotary piston) engine, which runs on 100 octane-grade avgas (aviation gasoline) and is rated at 50 HP. Recent engineering developments have led to the gasoline version of the engine being certified to operate on 95 octane lead-free petrol without loss of power.

The new heavy fuel engine is fully interchangeable with the current engine and upgrade is possible by just replacing the core engine with some accessories of similar specifications and flight performance. In offering lower logistic effort and supporting the single-fuel concept that requires using only one fuel while deployed, this new engine is ideal for maritime applications. SP

PHOTOGRAPHS: Schiebel, US Army

Iran's new drone

Iran has manufactured a new drone which is capable of carrying out military and border patrol missions. The new remote-controlled aircraft, called Shaparak (Butterfly), has a maximum operational radius of 50 kilometres (31 miles), and a maximum flight ceiling of 15,000 feet (4,572 metres), according to Reza Danandeh Hakamabad, the aeronautics engineer in charge of the project.

The aircraft is capable of three-and-half hours of non-stop flying, and can carry an eight kg (17-pound) payload. The unmanned aircraft is powered by a two-cylinder engine, and is equipped with three digital color cameras, that can transmit high-resolution footage to the base on the ground.

Iran successfully tested a home-made radar-evading UAV with bombing capabilities in June 2009. In February 2011, Iran inaugurated the production line of two home-made UAVs with bombing and reconnaissance capabilities. The two high-tech drones named 'Ra'd' (Thunder) and 'Nazir' (Harbinger) are capable of conducting long-range reconnaissance, patrolling, assault and bombing missions with high precision. SP

AAI wins contract to support shadow UAVs

AAI Corp. was awarded an $18,09,00,000 cost-plus-incentive-fee contract. The award will provide for the sustainment services in support of the RQ-7B Shadow unmanned aircraft systems. Work will be performed in Hunt Valley, Maryland; Afghanistan and Australia with an estimated completion date of October 31, 2012. One bid was solicited, with one bid received. The US Army Contracting Command, Redstone Arsenal, Alabama, is the contracting activity. SP

Qatar buys SUAVs from Turkey

In an effort to boost defence industry exports to Islamic states, Turkey has recently sold 10 mini drones to Qatar, a senior procurement official has said. The small unmanned aerial vehicles (SUAVs) were exported under a general agreement made during the International Defense Fair (IDEF), in Istanbul in May 2011, for the sale of Turkish defence goods to Qatar worth $120 million within a year.

This $25 million sale will become the first export of SUAVs by Turkey, and they will also be the first drones in Qatar's inventory. The SUAVs, called "Bayraktar," are made by Naykar Makina, which also produces the "Malazgirt" mini helicopter and the tactical "Caldiran" unmanned aerial vehicle. SP

Boeing Phantom Eye conducts medium-speed taxi test

Boeing announced that the Phantom Eye high altitude long endurance (HALE) unmanned aerial vehicle has conducted its first medium-speed taxi test. The hydrogen-powered aircraft is designed for persistent intelligence, surveillance and reconnaissance (ISR), and communications.

Phantom Eye, travelling atop its launching cart system, reached speeds of up to 30 knots as ground teams relayed directions and information using Boeing's advanced common open-mission management command and Control (COMC2) software.

"The aircraft performed well and the data collected will help populate our models," said Drew Mallow, Boeing Phantom Eye Program Manager. With its 150-foot wingspan, Phantom Eye is designed to fly at an altitude of up to 65,000 feet and stay airborne for up to four days while carrying a 450-pound payload.

"Phantom Eye's hydrogen-powered propulsion system, matched with its exceptional fuel economy and robust endurance, ushers in a new realm of possibilities for potential customers' long-endurance ISR missions," said James Dodd, Advanced Boeing Military Aircraft Vice President, Boeing Phantom Works. SP

Sagem wins maintenance contract by French army

Sagem (Safran group) has just signed a contract with SIMMAD, on behalf of the French Ministry of Defence, to provide in-service maintenance for the Sperwer SDTI tactical drone systems deployed by the French army.

The contract covers all maintenance, repair and technical support services for systems in service with the army until 2014.

It also includes an order with Robonic Oy, the Finnish subsidiary of Sagem, for two Kontio towed pneumatic catapult systems (type MC2555LLR). Lighter and smaller than the first-generation catapults, these units will reduce the system's footprint, decrease operating costs, facilitate catapult operations, and increase the payload to extend the drone's endurance.

In addition to the new catapults, Sagem has made other upgrades to improve the system's capabilities and meet the army's evolving needs: integration of NATO standard 4609 interoperability modems in the ground stations, higher-performance aircraft, and the delivery of portable remote video terminals (RVT) to improve image reception.

Sagem's Dijon and Poitiers plants will produce the optronics modules for this contract, while the company's Montluçon plant will work on the ground segment and the aircraft.

Sperwer drones have been deployed in Afghanistan since 2003 to support NATO's air-land forces. In the French army, they are operated by the 61st Artillery Regiment, which has been deployed in Afghanistan since November 28.

Sagem has produced 25 complete Sperwer tactical drone systems to date, including 140 aircraft. SP

PHOTOGRAPHS: Boeing, Wikipedia, US Defence

AeroVironment receives order for RQ-11B Raven

AeroVironment, Inc. has announced it received a new $11,095,872 cost-plus-fixed-fee sole source contract award on March 1, 2012 from the United States Army. The order comprises Army, Marine Corps and Foreign Military Sales contractor logistics support for Raven systems. The logistics support services are scheduled to be delivered through February 28, 2013.

"AeroVironment's UAS logistics operation supports systems deployed worldwide to ensure a consistently high level of operational readiness," said Tom Herring, Senior Vice President and General Manager, Unmanned Aircraft Systems. "The Raven system continues to be an important asset for US and allied armed forces."

The RQ-11B Raven unmanned aircraft system comprises a 4.2-pound, backpackable, hand-launched sensor platform that provides day and night, real-time video imagery wirelessly to a portable ground control station for "over the hill" and "around the corner" reconnaissance, surveillance and target acquisition in support of tactical units. US armed forces use Raven systems extensively for missions such as base security, route reconnaissance, mission planning and force protection. Each Raven system typically consists of three aircraft, two ground control stations and spares.

The Qube small UAS is tailored to law enforcement, first response and other public safety missions. Small enough to fit easily in the trunk of a car, the Qube system can be unpacked, assembled and ready for flight in less than five minutes, giving the operator a rapidly deployable eye in the sky at a fraction of the cost of manned aircraft and large unmanned aircraft. SP

L-3 Wescam turrets selected for Irish Coast Guard

L-3 Wescam has announced that it has received an order from CHC Ireland to provide MX-15 electro-optical and infrared (EO/IR) imaging systems for installation on the S-92 search and rescue (SAR) aircraft selected for the Irish Coast Guard.

The installation of the turrets will be completed by Sikorsky aircraft ahead of their deployment to Ireland. The newly equipped S-92s will be utilised for SAR missions and operate from bases located near Shannon, Dublin, Waterford and Sligo, Ireland. The first system was delivered in January and remaining systems are scheduled to be delivered during 2013.

The MX-15i will provide the Irish Coast Guard with the most technologically advanced multi-sensor EO/IR imaging capability available. The system has been engineered as a one-line replacement unit solution, which reduces installation weight by 25 per cent and increases much-needed cabin space for transporting rescue victims. The system's digital IR camera is capable of a 20 per cent increase in visual range, allowing missions at night or in inclement weather to result in a higher search success rate.

In addition, the system comes with Wescam's MX-GEO gen. 3 package, which incorporates GEO-scan, automated video/GEO-tracking and adaptive-GEO technologies. Together, this software suite helps deliver maximum geographic location accuracy and significantly reduces operator fatigue that often arises in demanding and stressful SAR operations. SP

Bell Helicopter signs contract with Turkish National Police

Bell Helicopter announced that it has signed a contract with the Turkish National Police for the purchase of 15 Bell 429s with deliveries to begin in May 2013.

The Bell 429 was selected after an extensive evaluation period during which members of the Turkish National Police Undersecretariat for Defence Industries SSM and Turkish Aeronautical Industries (TAI) visited several large helicopter OEM's in North America and Europe. The new Bell 429s will be used as multi-mission airborne platforms flown across the full array of law enforcement missions from surveillance to air support of ground operations.

The contract was signed during a ceremony at the Turkish SSM headquarters in Ankara, Turkey. In attendance were the Undersecretary of Defence Industries for Turkey Murad Bayar, the Canadian Ambassador to Turkey, John Holmes and members of the US Embassy's Commercial Business Support office as well as dignitaries from the Turkish National Police and the TAI.

"It is a measure of great satisfaction to see the right helicopter matched with the requirements of a great customer with the benefits to Turkey and the service that these helicopters will provide the men and women of Turkish law enforcement and the Turkish people," said Larry Roberts, Senior Vice President, Commercial Business for Bell Helicopter.

"We are very pleased to equip our police force with a next generation, high-mission capability helicopter. Bell Helicopter had a strong competitive performance during the tender stage and we believe this will continue during the execution of the contract," said Murad Bayar, the Undersecretary of Defence Industries for Turkey.

"The Turkish National Police represents an anchor programme for us in Europe and will allow Bell Helicopter the opportunity to bring its world class customer support and service to such a critical mission in Turkey," said Roberts.

The Bell 429 is the world's newest and most advanced light twin-engine helicopter. It has conducted extensive flight demonstrations in every continent, except Antarctica, and has been certified in more than 40 countries. With configuration options ranging from VIP to air-medical, law enforcement. SP

PHOTOGRAPHS: Bell Helicopter, L-3 Wescam

Northrop Grumman contract to strengthen Cybersecurity

Northrop Grumman Corporation has been awarded a cybersecurity task order by the Defense Information Systems Agency (DISA) to strengthen cybersecurity protections across the Department of Defense (DoD) and Intelligence Community networks by implementing the host based security system (HBSS) as part of the DoD Information Assurance and Computer Network Defense contract.

The task order was competitively awarded under the Encore 2 contract vehicle and is valued at $189 million over a three-year base period with two one-year options. As prime integrator, Northrop Grumman will provide software licence maintenance support, training, help desk and architectural infrastructure support personnel.

"Cybersecurity is one of Northrop Grumman's four core businesses due to its vital role in our nation's defence," said Karen Williams, Vice President of Northrop Grumman's Defense Technologies Division. "The HBSS award reinforces Northrop Grumman's position as a top provider of defence-in-depth cybersecurity solutions across the DoD and intelligence domains."

HBSS is the DoD's commercial-off-the-shelf suite of automated and standardised software used to provide enhanced host based security – security on desktops and laptops versus at the boundary such as routers and switche s– against both inside and external threats. SP

MIT and Pentagon creating new cyber defence

Researchers at the Massachusetts Institute of Technology (MIT) and the DARPA (Defence Advanced Research Projects Agency) are working together to create a self-healing cloud computing network that can defend against cyberattacks.

InformationWeek reports that existing computer networks shut down when they are attacked, regardless of which portion was hit. Researchers hope to create a new model that is capable of sensing an attack when it occurs and defending against it.

"Much like the human body has a monitoring system that can detect when everything is running normally, our hypothesis is that a successful attack appears as an anomaly in the normal operating activity of the system," explained Professor Martin Rinard, the principal investigator at MIT's Computer Science and Artificial Intelligence Laboratory (CSAIL). "By observing the execution of a 'normal' cloud system we're going to the heart of what we want to preserve about the system, which should hopefully keep the cloud safe from attack." SP

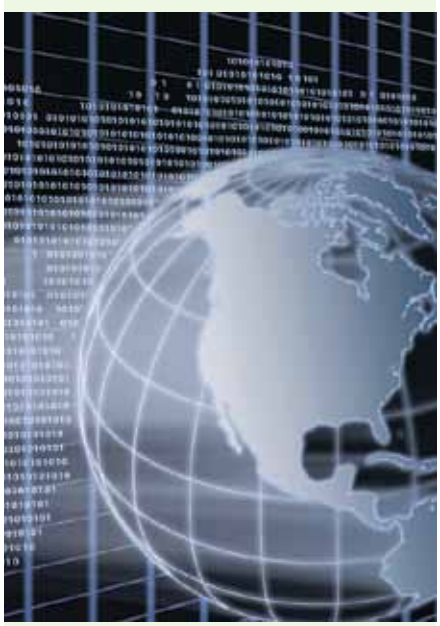
Police officer arrested for cybercrime

According to media reports, a suspended sub-inspector of police has been arrested in connection with the leak of information regarding an alleged attempt to hack the personal e-mails of some muslim leaders in Kerala.

S. Biju Salim, in-charge of the cyber cell of police department, was arrested by the Crime Branch police team investigating the case and was produced before the Chief Judicial Magistrate and remanded to judicial custody for 14 days. According to sources, he was arrested on charges of leaking official documents and for preparing a fake letter in the name of state intelligence. SP

General Dynamics awarded US Air Force cyber intelligence contract

General Dynamics Advanced Information Systems was awarded a contract to continue its cyber network defence, operations and exploitation support of the US Air Force's 35th Intelligence Squadron (35IS) Cyberspace Operations programme Sensor Shadow. The contract has a maximum value of $5 million over three years if all options are exercised. General Dynamics Advanced Informational Systems is a business unit of General Dynamics.



"The Sensor Shadow programme is representative of our cyber security heritage. For two decades General Dynamics has been providing leading-edge cyber intelligence support to the Air Force through Sensor Shadow, dating back to Operation Desert Storm," said John Jolly, Vice President and General Manager of General Dynamics Advanced Information Systems' Cyber Systems division. "Our close partnership with the 35IS allows us to effectively apply our mission understanding and in-depth expertise in the cyber domain to bring more capability to the cyber analyst toolset for more effective and timely analysis." SP

PHOTOGRAPHS: introversed.com, Wikipedia

Rockwell Collins named one of world's most ethical companies for the third consecutive year

For the third year in a row, Rockwell Collins was selected as one of the World's Most Ethical Companies by the Ethisphere Institute, a leading international think-tank dedicated to the creation, advancement and sharing of best practices in business ethics, corporate social responsibility, anti-corruption and sustainability.

The award is presented to organisations that show leadership in promoting ethical business practices. These companies go beyond making statements about doing business "ethically" and translate those words into actions, introducing innovative ideas to benefit the public and compelling their competitors to follow suit.

"Through annual ethics and legal compliance training and regular communications from leadership, every individual at our company knows about the importance of doing the right thing, the right way, for the right reasons, every time," said Gary Chadick, Senior Vice President, General Counsel and Secretary. "Our employees are proud to work at a company that takes ethics and compliance seriously. We are pleased to be recognised as one of the World's Most Ethical Companies for the third consecutive year." SP

Astrium and Air Liquide create EuroCryospace

Astrium and Air Liquide have announced the creation of a European strategic partnership called EuroCryospace. It is an extension of Cryospace, which was set up 25 years ago to develop and manufacture Ariane cryogenic fuel tanks. EuroCryospace will be focused on the development and manufacture of cryogenic fuel tanks, in particular the cryogenic fuel tank for the upper stage of the Ariane 5 ME.

The Ariane 5 midlife evolution (ME) programme, which was approved by the European Space Agency's (ESA) at its 2008 Ministerial Council meeting, sets out to respond to the demands of the market by upgrading the Ariane 5 launcher, taking its capacity beyond that of the current Ariane 5 ECA and Ariane 5 ES. Further development phases should be approved at the next ESA Ministerial Council meeting, scheduled for the end of 2012.

The partnership agreement will lead to a new plant being built in Bremen, Germany, and the creation of around 40 jobs during the production phase. Located close to Bremen Airport, the site of the future factory was purchased last December, and the development and manufacturing plant should be operational by mid-2013, with the first fuel tanks delivered in 2014. SP

Indian Rotorcraft facility In Hyderabad

Indian Rotorcraft had a ground breaking ceremony recently at Hyderabad's Rajiv Gandhi International Airport, marking the start of construction of a new helicopter production facility. The ceremony was conducted in the presence of Ratan Tata, Chairman, Tata Sons; Bruno Spagnolini, CEO, AgustaWestland and other dignitaries.

Indian Rotorcraft is a joint venture company formed by Tata Sons and AgustaWestland, a Finmeccanica company, that will assemble, customise and flight test new helicopters for the worldwide market. The joint venture will initially start to produce the 8-seat AW119Ke light helicopter, with production commencing from mid-2013.

Ratan Tata said at the ceremony "The project is integral to our plans in the aerospace sector and we look forward to an enduring and successful partnership with AgustaWestland for fostering the growth of the Indian aerospace sector."

Bruno Spagnolini added: "We are very pleased through our joint venture with Tata Sons to be playing an important role in the development of the Indian aerospace industry. Not only will this new facility be able to build helicopters for the Indian market but importantly it will supply helicopters to AgustaWestland customers around the world." SP

Thales revenues hold on

Thales has reported a marginal increase in its order intake closing at Euro 13.21 billion (1 per cent organic growth) in 2011. It was driven by the Mirage 2000 upgrade contract in India and the good performance of civil aeronautics, mitigating the impact of reduced space orders.

Group Chairman and CEO Luc Vigneron commented: "Although the economic environment worsened more markedly than expected, particularly in defence, our order intake increased and our revenues held up well. A marked upturn in our results is now underway, driven by better contract execution, the momentum of the Probasis plan and our stronger footprint in growth regions. On the basis of this strong performance, which confirms the relevance of our strategy, we are confident in our ability to continue to improve our results, despite the serious economic uncertainties in Europe." SP

Security events

Soldier Modernisation Asia 2012
12–15 March
Singapore, Singapore
http://www.soldiermodasia.com

International Security National Resilience Exhibition and Conference
19–21 March
Abu Dhabi Exhibition Centre,
Abu Dhabi, UAE
http://www.isnrabudhabi.com/portal/home.aspx

Iraq Defence & Security Summit 2012
24–25 March
Erbil Rotana Hotel,
Erbil, Kurdistan, Iraq
www.iraqstability.org/aboutsummit.aspx

Defexpo India 2012
29 March – 1 April
Pragati Maidan
New Delhi, India
www.defexpoindia.in

DSA 2012
16–19 April
Defence Service Asia
Putra World Trade Centre,
Kuala Lumpur, Malaysia
http://www.dsaexhibition.com/

Info Security Europe 2012
24–26 April
Earls Court
London, UK
http://www.infosec.co.uk/

Counter Terror Expo
25–26 April
Olympia, London
http://www.counterterrorexpo.com/

Miltech 2012
8 May
Avenue Conference Centre,
Airport City,
Israel
http://www.technologies.co.il/beta/en-us/Conference.aspx?Id=46

Black Sea Defence & Aerospace 2012
16–18 May
Romaero, Bucarest
http://www.bsda.ro/

Eurosatory 2012
11–15 June
Paris
http://www.eurosatory.com/#/home

Apache helicopter's 625 round-per-minute M230 30mm chain gun

ATK's integrated weapon systems

ATK will highlight a variety of capabilities in several business areas including integrated weapon systems, precision-guidance for artillery and mortars, advanced programmable artillery fusing, ammunition and accessories for law enforcement and special operations forces, missile warning systems, small-calibre ammunition, and illuminating flares.

In related news, ATK will participate in the US-India Business Council (USIBC) Executive Mission to India March 26 to 31, 2012. As a part of that trade mission, Karen Davies, ATK Senior Vice President and President of the company's Armament Systems group, will participate in a panel discussion on the topic of return on investment in the India defense market on March 28.

ATK's stand will feature information on the company's most powerful and flexible gun system, the Mk44 30mm cannon. This next-generation system is in production now and builds on the Bushmaster tradition of excellence with its design simplicity, external power, positive round control, ease of maintenance, and constant velocity ammunition feed. Visitors will also be able to learn more about the Mk44's airborne cousin, the Apache helicopter's 625 round-per-minute M230 30mm chain gun. SP

BAE Systems at Defexpo

Mobility will be the dominant theme among BAE Systems' displays at the seventh Defexpo India being held in New Delhi from March 29 to April 1 this year. The company will debut its family of CV90 light tanks and BvS10 go-anywhere all-terrain vehicle family in India at the exhibition, along with the ultra-light M777 howitzer. In recognition of the company's commitment to offer the full span of its capabilities across the defence, aerospace and security domains in India; BAE Systems' pavilion at this signature event spans products and solutions in air and defence information, maritime, intelligence and security, and electronics systems.

Initially created for the Swedish Army and sold to six nations, the CV90 light tank provides high tactical and strategic mobility, and survivability in any terrain or tactical environment. Designed to provide maximum availability and cost-efficiency throughout its operational lifespan, the CV90's systems require only straightforward, low-cost maintenance. The platform's future-proof design, the result of continuous improvement from operational feedback, allows for new upgrades and variants. A proven workhorse in battle situations, the BvS10 armoured all-terrain vehicle provides an unbeatable combination of mobility, payload and protection. The world's first 155mm Howitzer weighing under 10,000 lbs (4,218 kg), the highly mobile M777, on display at Defexpo this year is the subject of ongoing discussions between the Indian and US Governments in relation to a possible sale, in support of the Indian Army's modernisation programme. In the Electronic Systems sector, the company will have a variety of future soldier technologies on display, including hand-held thermal monoculars. These technologies will be displayed in conjunction with other components of BAE Systems equipment developed to maximise the capabilities of dismounted personnel in military and security operations. Among the BAE Systems products on display is a lightweight thermal weapon sight featuring a 28-micron focal plane array which requires less power and reduces weight. Two other innovative BAE Systems' products for dismounted personnel on display include the SkeetIR and RED-I.

Dean McCumiskey, Managing Director & CEO India, BAE Systems said, "Defexpo is an extremely important platform for us in the continuing development of our business and the last two years have marked very good progress. Partnering with the industry in achieving self-reliance in the design, development, and production of equipment, systems and platforms, is the cornerstone of our business in India. We take pride in the milestones: our joint ventures with Mahindra & Mahindra and the Hindustan Aeronautics Limited have marked in their journeys since the last Defexpo. As we build our footprint, we are committed to creating key intellectual property indigenously working closely with partners and customers to deliver best of breed solutions." BAE Systems is located in Hall 9 alongside Defence Land Systems India, its joint venture with Mahindra & Mahindra. SP

CV90 light tank

M777howitzer

BEL to focus on C4I systems

Navratna Defence PSU, the Bharat Electronics Limited (BEL) will showcase its R&D might by displaying its latest range of products and systems, developed in-house. The main highlight of BEL's display will be network-centric warfare (NCW) systems developed indigenously for the Indian defence forces.

NCW solutions for the Indian Navy will include combat management system, which automates tactical data from the ship's sensors to provide decision support to the ship's command; coastal surveillance system, an all-weather 24 x 7 surveillance system developed for safeguarding the nation's coastline by networking various sensors such as radars, day and night electro-optical equipment, automatic identification system and meteorological equipment; and advanced composite communication system, an IP-based new-generation voice, data and video integrated system.

BEL's display will also include key elements developed for use in various C4I systems catering to all the three Services — like computing elements in various forms, right from wrist-wearable computers, handheld computers and tablet PC to rugged laptop; communication equipment such as software defined radio with different variants, HF radios and radio Relays, besides encryptors such as terminal end secrecy device (TESD), IP encryptor and bulk encryptor.

BEL will highlight its contributions to the electronic warfare and avionics segment with an impressive display of the missile approach warning systems, convoy jammers, flight control computer and other cockpit modules. Also on display will be the latest range of laser products, night vision products and batteries. SP

PHOTOGRAPH: ATK, BAE Systems

Beckhams' swap planes over security scare

High-profile celebrities David and Victoria Beckham swapped planes at the last minute for "security reasons recently". Some tabloids carried reports stating that they wanted to avoid a run-in with Katie Price, a model.

The former Spice Girl and her soccer star husband were due to fly from London to Los Angeles on a Virgin Atlantic flight, on the same plane as model Katie Price. They refused to board the plane and switched to an Air New Zealand jet, prompting reports they wanted to distance themselves from Price, who Victoria publicly fell out with in 2000.

But the couple's spokesperson has dismissed the reports, claiming the pair swapped jets for "security" purposes rather than for personal issues. SP

The Camp David presidential retreat in Maryland

Camp David tested for security

It was 1969. The US was fighting a war in Vietnam and was involved in a Cold War with the Soviet Union. The military wanted to test Presidential security to see if improvements were needed. The Air Force Chief of Staff gave the order to a team of 40 men from the Office of Special Investigations (OSI) to plot a simulated assassination of the President.

The Air Force hit team chose Camp David as one of their targets. Security was tight whenever President Nixon was at the camp, so they planned their entry when they knew he wasn't going to be there. They created a fake White House ID based on one they saw left hanging on a coat hook by a careless White House staffer at a restaurant in DC.

They called the Camp David security office and told them to expect a White House aide who needed a tour of the retreat. The fake aide arrived in a limo; showed his pass and was let inside the gates. He was given a tour of the Aspen Lodge, the President's cabin at Camp David. When no one was looking, he made his move. He replaced a toilet paper roll in the Aspen bathroom with one that would release faux-poisonous gas when pulled.

In a second attack scenario at Camp David, the Air Force team drove to the public area of Catoctin Mountain Park and hiked through the woods armed with grenade launchers and duct tape. They climbed a 40-foot tree and positioned the grenade launchers toward the Presidential helipad.

The Air Force reviewed the results of this assignment and made the necessary security recommendations. SP

Saadi Gaddafi's flee plans

Muammar Gaddafi's son, Al-Saadi, and his family had to call off their plan to settle in a Mexican paradise after Mexican authorities pulled the plug on a covert operation to smuggle the colonel's family into the country using false names.

Al-Saadi Gaddafi, who is currently under house arrest with his family in Niger, was reportedly plotting an escape to a comfortable asylum in Punta Mita, a city on Mexico's Pacific Coast. But local authorities managed to break up that operation "of international dimensions."

A Canadian company, Can/Aust Security and Investigations International, was involved in the operation to bring Al-Saadi to Mexico. The company's CEO, Gary Peters, reportedly offered private security contractors some $1,000 per day for the extraction mission. SP

PHOTOGRAPHS: blog.leiweb.it, occupiedmedia.us, www.evz.ro

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Photo: United States Air Force/Staff Sgt. Quinton Russ

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