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India gifts Dornier 228 aircraft to Seychelles

Days ahead of Aero India 2013, in a sign of increasing regional cooperation and power projection, the Indian Government today handed over a HAL-built Dornier Do-228 maritime reconnaissance aircraft to Seychelles on January 31 in Delhi.

According to HAL, licensed builder of the aircraft, "The maritime surveillance aircraft will be used to guard the extensive coastline of the island nation." Defence Minister A.K. Antony said, "It is yet another milestone of our close friendship between our two countries." The Seychelles Foreign Minister Jean-Paul Adam said the aircraft would help his country's war on piracy and strengthen overall security in the Indian Ocean region.

Defence Minister A.K. Antony handed over a Dornier 228 surveillance aircraft to the Foreign Minister of Seychelles Jean Paul Adam in New Delhi on January 31, 2013. The Chief of Naval Staff, Admiral D.K. Joshi and other dignitaries are also present.

HAL Chairman Dr R.K. Tyagi said, "The aircraft to be provided to Seychelles will be supported by HAL team for maintenance on site to enable the new user get the requisite expertise." The aircraft is equipped with state-of-the-art facilities and is excellent platform of maritime applications. HAL manufactures this aircraft under licence agreement with the erstwhile Dornier GmbH of Germany at its Transport Aircraft Division, Kanpur, and has worldwide unfettered sales and marketing rights. SP

PHOTOGRAPH: PIB

Cover:
Rafale twin-jet combat aircraft is capable of carrying out a wide range of short- and long-range missions, including ground and sea attacks, reconnaissance, high-accuracy strikes and nuclear strike deterrence. Dassault will supply 126 Rafale fighters to India under the MMRCA programme.

Cover image: Dassault Aviation

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Developing indigenous aerospace and defence industry crucial

The air is abuzz with activity. New aircraft, new weapons, new technologies, new solutions and new ideas are streaming past the Indian horizon as India emerges as the most definitive aerospace and defence market. Reflecting the country's quest for modernisation and its growing technology prowess is Aero India international air show which is into its ninth edition at the Air Force Station Yelahanka, Bengaluru, from February 6 to 9.

The need to develop a self-sustaining national arms industry is understandable. That India's efforts to modernise, upgrade and maintain the equipment of its armed forces and to expand its military capabilities have made it the largest importer of major arms. In the past couple of years, India has made record deals, including picking Dassault's Rafale for its requirement of 126 medium multi-role combat aircraft (MMRCA). The French fighter aircraft Rafale and US F-16 will be displaying their lethal capabilities at the show. In SP's Exclusive, we have a report wherein the French President Francois Hollande and the French Foreign Minister Laurent Fabius told the visiting Indian External Affairs Minister Salman Khurshid that India needed to exercise Rafale options immediately.

There was talk that with Rafale making it, interest in Aero India 2013 would lessen, which certainly is not the case, considering India's quest to be a technologically-advanced nation in all sectors, particularly aerospace and defence. Testimony to the growing interest is the fact that 78 foreign delegations have confirmed their participation in Aero India 2013, up from 47 in 2011. The largest overseas participation is from the United States, followed by Israel and Russia. The Russian President Vladimir Putin who visited India recently, was witness to the signing ceremony of deals worth $2.9 billion. Under the deals, India will buy 42 Sukhoi Su-30 fighter jets and 71 Mil Mi-17 helicopters.

In SP's Exclusives, we have indicated the many debuts that Aero India will see including the Indian fifth-gen fighter model – Russian PAK-FA.

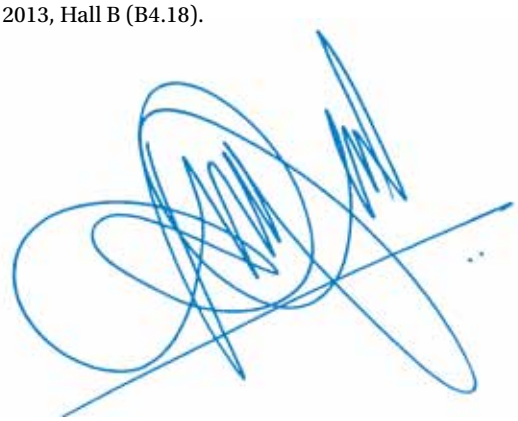
Leading aerospace and defence manufacturers from across the globe are here to woo the Asian Tiger which is the seventh largest country in terms of military expenditure—$48.9 billion in 2011—as per the Stockholm International Peace Research Institute. India's neighbour China had a defence spend of a whopping $143 billion. Besides, Chinese military expansion, we have a belligerent neighbour on the western front.

The belligerence took an ugly turn recently when a trans-border Pakistani raid saw not just the killing of two Indian soldiers, but mutilation of their bodies, going totally against established conventions. In his frank and forthright column, Lt General (Retd) P.C. Katoch has said it was time for India to understand that the Pakistani state is controlled by the military-ISI and these two entities were out to balkanise India. The General has been very vociferous in demanding that a dirty war requires a similar response.

In another article, the General has criticised the decision of the government to turn down the Army's proposal to raise a Mountain Strike Corps. The government needs to be aware of the growing China-Pakistan collusive threat.

Irrespective of the security threats, India is on the path of modernisation in many sectors, including defence and the Aero India show reflects that.

SP Guide Publications is the key official media partner at the ninth edition of Aero India 2013. If you are in Bengaluru do meet us at Aero India 2013, Hall B (B4.18).



Jayant Baranwal
Publisher and Editor-in-Chief

First Indian C-17 enters flight test on schedule

Less than two weeks before Aero India, when the world's aerospace focus is on India, Boeing Defense delivered on schedule the first of ten C-17 Globemaster III heavy-lift transport aircraft for the Indian Air Force (IAF) to flight test. The aircraft will now enter a US Air Force (USAF) flight test programme at Edwards Air Force Base in California. Another four C-17s will be delivered to the IAF this year and the remaining five next year. "The C-17 met the stipulated airlift requirements of the IAF when it flew field evaluation trials in India during June 2010. It was exciting to see the C-17 fly again, this time with IAF markings, as the airlifter completed its first-flight milestone on January 11. We look forward to the day that the first IAF C-17 flies over India," said Air Commodore Sanjay Nimesh, Air Attaché at the Indian Embassy in Washington, D.C.

"The C-17's ability to operate in extremely hot and cold climates; transport large payloads across vast ranges; and land on short, austere runways makes it ideal for India's airlift needs," said Nan Bouchard, Boeing Vice President and C-17 Program Manager. "We value our continued partnership with India and the US Government and will provide dedicated support as India's first C-17 enters flight testing." The IAF agreed in June 2011 to contract for ten C-17s making India the largest C-17 customer outside the United States. A USAF C-17 Globemaster III is expected to be on flight display at Aero India 2013. SP

PHOTOGRAPHS: Boeing, SPSC

India's long-range missile showcased at Republic Day parade

While the Indian media usually dissects the weapons platforms that China puts on display during its ceremonial days, the tables turned this Republic Day—the Chinese watched closely as the Indian Government showcased the Agni-V, the country's long-range nuclear ballistic missile, capable of hitting pretty much any target in China. With a range of nearly 6,000-km and the capacity to deliver a 1.5-tonne nuclear warhead, the Agni-V was a head-turner at this year's Republic Day parade on Rajpath. Footage of the missile trundling down the VVIP avenue were flashed on Chinese state television stations, sparking almost as much interest as the missile did during its debut—and so far only—test-firing in April 2012. While the precise range of the missile remains classified, there has been speculation—including by Chinese think-tanks, that the Agni-V's range could be in excess of 8,000 km.

The Agni-V is likely to be tested once again this year before being officially handed over to the country's Strategic Forces Command, currently headed by Vice Admiral S.P.S. Cheema. The road-mobile missile will be a stepping stone to an intercontinental weapon, should the government ever require DRDO to quickly develop one. As far as the Agni-V itself is concerned, future technologies will include multiple independent re-entry vehicles (MIRVs) and an improved navigation system. SP

Lockheed Martin to focus on C-130J at Aero India

With a deal for six additional C-130J Super Hercules nearly concluded, Lockheed Martin is keeping its focus almost solely on the platform at Aero India 2013. An IAF C-130J will be on display at the show this year. Lockheed's Jack Crisler, Vice President, Air Mobility, Special Operations & Maritime Programs will be at the show for briefings. It may be rememebered that a modified version of the C-130J called the 'Sea Hercules' will participate in the Indian Navy's medium-range maritime reconnaissance (MRMR) aircraft competition. "This air-

lift platform is as versatile as it is proven. Lockheed Martin is exploring opportunities across various Indian services to offer this platform as a solution," the company said in a statement.

The C-130s began operational use with the Sikkim earthquake in September last year, and their legs have been stretched by pilots with visits to Car Nicobar and other remote parts of the country. Lockheed Martin F-16 Block 50 Fighting Falcons are also expected to be at the air show, but will be fielded as part of a demonstration team by the US Air Force. SP

Airbus Military A330 MRTT selected by Indian Government

As reported earlier by *SP's M.A.I.*, Airbus Military has emerged victorious in the Indian Air Force's (IAF) mid-air refuelling tanker bid. The new generation Airbus A330 MRTT has turned out lowest bidder in a face-off against the Russian Il-78M, already in operation with the IAF at Agra. A contract will be negotiated between the Ministry of Defence (MoD) and Airbus now and is expected to cost the Indian Government just over $1 billion.

In a statement, Airbus Military said, "The decision follows a lengthy and thorough selection process including the completion of extensive flight demonstrations in India by the A330 MRTT during which the aircraft refuelled multiple types of IAF fighters and operated from the high-altitude IAF base at Leh. Detailed negotiations will now begin which it is expected will lead to the award of a final production contract for an envisaged six aircraft in 2013."

Airbus Military CEO Domingo Ureña Raso said, "We are grateful for the confidence shown in our company by the Government of India and the Indian Air Force, and we appreciate the detailed and fair appraisal of the competing products which they have conducted. This has been a long and tough competition and we are honoured to have been selected. We are fully committed to the next stage of the negotiations, and ultimately to providing the IAF with what is unquestionably the most advanced tanker/transport aircraft flying and certified today." India will be the fifth nation to order the A330 MRTT after Australia, Saudi Arabia, the United Arab Emirates and the United Kingdom. SP

France wants India to exercise Rafale options immediately

During a two-day official visit to Paris earlier this month, External Affairs Minister Salman Khurshid was apprised of the French Government's keenness that India exercise options for 63 additional Dassault Aviation Rafale fighters alongside the primary under-negotiation contract for 126 jets under the medium multi-role combat aircraft (MMRCA) competition.

The 63 additional jets are mandatorily available to the MoD as part of a 50 per cent options clause attached to the main agreement under negotiation. If the MoD decides to exercise options, the additional jets will be contracted under a separate contract agreement, and not clubbed with the main agreement for 126 jets. It is understood that the issue came up in discussions with French Foreign Minister Laurent Fabius as well as with French President François Hollande. After his meeting with the French Foreign Minister, Khurshid is quoted to have said, "We know good French wine takes time to mature and so do good contracts", when asked about when a deal was expected to be signed. Contract negotiations are currently ongoing. Recently, following queries raised by Dassault Aviation, it was clarified in no uncertain terms by the MoD that the Hindustan Aeronautics Ltd would be the lead integrator of 108 Rafales in Bengaluru. SP

PHOTOGRAPHS: Anoop Kamath, Airbus Military, Govt of France

PHOTOGRAPH: Textron

Post-deliveries Textron looks forward to Aero India

As reported by *SP's M.A.I.* earlier, the Indian Air Force recently began taking delivery of Textron Defense CBU-105 sensor fuzed munitions for its Jaguar jets. The company has announced its participation in Aero India 2013, taking place from February 6-10 at Air Force Station at Yelahanka, Bengaluru.

To mark Textron's first big military sale to India with customers and partners, Textron Systems' new President and Chief Executive Officer, Ellen Lord, will be present at the show. Lord, who was named CEO in October 2012, previously served as Senior Vice President and General Manager of Textron Defense Systems. "Aero India 2013 is a wonderful opportunity to discuss emerging requirements, and engage with potential customers on how Textron Systems' products and solutions can best meet them," she said. "Textron Systems has established strong relationships with the Indian Government, armed forces and security agencies, as well as industry partners, and we are vested in growing that presence even more. Key industry meetings like Aero India 2013 and our ongoing activities as part of the larger Textron enterprise, including Textron India Private Limited, are critical to achieving that goal." SP

Boeing displays ScanEagle UAV in Bengaluru

While Boeing will have the largest aircraft once again at Aero India 2013, with a USAF C-17 Globemaster III—the first C-17 for the IAF entered flight test earlier in January—it will be debuting a smaller aircraft that it has been showcasing as a potential platform for the Indian military: the ScanEagle. The low-cost, long-endurance autonomous unmanned vehicle is a small part of a big unmanned systems push by foreign vendors in India.

According to the company, Boeing foresees customers using ScanEagle vehicles individually or in groups to loiter over trouble spots and provide intelligence, surveillance and reconnaissance (ISR) data or communications relay. It adds that as standard payload ScanEagle carries either an inertially stabilised electro-optical or an infrared camera. The gimbaled camera allows the operator to easily track both stationary and moving targets, providing real-time intelligence. Capable of flying above 16,000 feet, the UAV has also demonstrated the ability to provide persistent low-altitude reconnaissance. SP

PHOTOGRAPHS: US Navy, Honeywell

Combat-proven Iron Dome to debut at Aero India 2013

Israel's participation at Aero India 2013 will be underscored by an outside display for the first time by missile house Rafael Advances Defense Systems Ltd. The heart of the display will be the Iron Dome system that gained much attention during the flare up between Israel and Palestine last year where the weapon system was used with great publicity. Needless to say, Israel considers India a potential customer of the now combat proven active defence system against short-range artillery rockets. It is described by Rafael as "the only dual mission counter rocket, artillery and mortar (C-RAM) and very short-range air defence (VSHORAD) system.

Iron Dome is an affordable, effective and innovative defence solution (CR&AM class) to the asymmetric threats of short range rockets, (up to and over 70 km), and mortars as well as VSHORAD missiles system (up to 10 km) against traditional air defence targets." Rafael's outdoor display will also include the David's Sling (Stunner), a multi-mission multi-platform interceptor developed in partnership with US firm Raytheon. The SpyDer short-range and medium-range air defence systems (which the IAF has ordered, though yet to be delivered) will also be showcased for the first time.

The Python-5 IR-guided short-range air-to-air missile and Derby BVRAAM (already on the LUSH upgraded Sea Harriers of the Indian Navy and chosen as the primary BVR weapon on the LCA Tejas) will be on display once again this year. Rafael will also field the MIC4AD advanced unified integrated C4I system that commands and controls operations of both air and missile defence missions. The company will also field electro-optical and communication systems including the litening, reccelite, toplite, imilite and global link. Also at the outdoor display will be the entire family of Spike tactical guided missile systems. SP

Iron Dome

Python-5

Honeywell focuses on military platforms

Honeywell, which was issued an RFP in October last year for the much-anticipated Jaguar re-engining contract, will be at Aero India in a big way this year as well. While focusing on concluding a deal for the F-125 IN engine for the Indian Air Force's Jaguar fleet, the US firm will also be showcasing support packages for indigenous military platforms including the ALH Dhruv, light combat helicopter and HJT-36 Sitara intermediate jet trainer. The company is also a participant in other programmes, providing safety and mechanical systems in the P-8I programme for the Indian Navy, the C-130J fleet and the yet to be concluded medium multi-role combat aircraft bid.

The company will also be showcasing soldier protection systems, including the Spectra Shield series of protective plates. The company lists its key technology pursuits as the F-125 IN engine for the IAF Jaguar, T-Hawk micro-air vehicle, advanced medium combat aircraft, multi-role transport aircraft and light combat helicopter. SP

Russian Helicopters banks on 197 copter deal

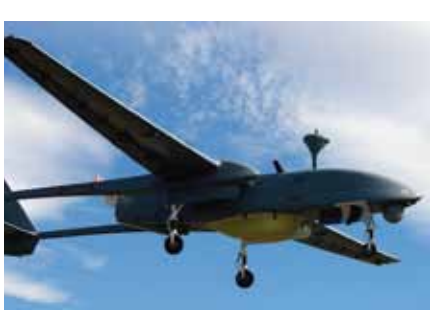
On the back of two significant losses in the Indian defence space—the IAF's heavy-lift and attack helicopter competitions—Russian Helicopters Co. will be focusing all its energies at Aero India 2013 on the Kamov Ka-226T Sergei helicopter, a finalist in the Indian Army/IAF reconnaissance and surveillance (RSH) bid, already delayed indefinitely with commercial bids still to be opened by the MoD.

Pitted against the Eurocopter AS550 C3 Fennec (which was displayed at Aero India 2011), the Ka-226T has exuded confidence ahead of a final decision that can be expected shortly after bids are opened any time now. The deal has also weathered some measure of controversy too but appears now to be on track for the next stage—bid opening. The two vendors will have hoped that the bids would be opened ahead of Aero India, but that does not appear to be in the pipeline for now. During Aero India 2013 Russian Helicopters jointly with Rosoboronexport will showcase Mi-28NE attack helicopter, even though the platform lost out to the AH-64D Apache Block III Longbow chopper in the IAF's attack copter competition. SP

Indian Army for UAV missile simulator

The Indian Army is in the market for a mission simulator to train UAV crews in operating IAI Heron and Searcher Mk.2 surveillance UAVs. The Army has stipulated that the UAV mission simulator should be capable of conducting initial and refresher training of external pilot, internal pilot, mission commander and observer with a separate console available to the instructor.

The Army proposes to use the simulator for simulation of single, air data relay (ADR) mission scenario, maritime scenario, with or without satellite communication (SATCOM) for single or multiple payloads, simulation of all phases of UAV mission as well as its payloads and to play pre-recorded missions with annotations for analysis, training of internal pilot, external pilot, mission commander and observer in stand-alone mode and as coordinated crew of a mission, training on all types of UAV emergencies and to carry out student assessments. SP



PHOTOGRAPHS: SPSC, US DoD, Rosoboronexport

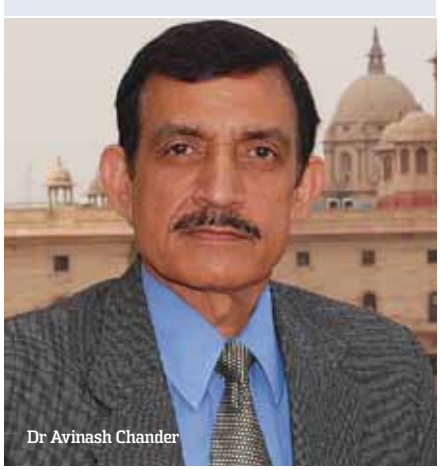
Dr V.K. Saraswat

Missile men honoured by GoI

In an affirmation for the country's missile programme, three top missile scientists were honoured this year by the Government with Padma awards. DRDO Chief Dr Vijay Kumar Saraswat, Scientific Adviser to the Raksha Mantri and a scientist best known for his association with the successful Akash SAM programme, has been honoured with a Padma Bhushan. "It is DRDO that has got the award and it is a recognition of DRDO's contribution towards nation building," said Dr Saraswat.

Dr Sivathanu Pillai, DS & CCR&D and CEO BrahMos, and Avinash Chander, Chief Control Research & Development (Missiles & Strategic Systems), are the other two eminent scientists of DRDO who have been honoured with Padma Bhushan and Padma Shri respectively.

The country's missile programme has enjoyed an upswing since 2008, with several programmes coming to fruition and new technologies proving themselves. SP



Dr Avinash Chander

Indian fifth-gen fighter model to debut at Aero India

The aerospace community will get its first ever glimpse of what the modified Indian version of the Russian PAK FA looks like at Aero India, with HAL planning to unveil a model of the Prospective Multirole Fighter (the official name of the Indian version of the Sukhoi T-50 fifth-generation fighter aircraft prototype). HAL has already built a wind-tunnel model of the aircraft—a single-seat variant with minor modifications. "For the first time, we will present to the world glimpses of prospective multi-role fighter (PMF) also known as fifth-generation fighter aircraft (FGFA). This is under co-development with the Russians", says HAL Chairman Dr R.K. Tyagi. According to HAL, the other major attractions of the HAL's pavilion include the light combat helicopter (LCH), the weaponised advance light helicopter (ALH) Rudra—the first of which will be handed over to the Indian Army during the show—and the intermediate jet trainer (IJT), a platform that is causing a lot of concern to the IAF.

The Dhruv, Rudra and LCH will be on flying display. Scale Models of the in-development light utility helicopter, BAE Systems Hawk, light combat aircraft (LCA) Tejas and Su-30MKI will also be on display. In addition, pilotless target aircraft (Lakshya), Shakti engine, state-of-the-art accessories and avionics from various divisions of HAL are also being showcased. According to a statement, the other highlights of the HAL pavilion include 3D video mapping of HTT-40, Dornier Glass cockpit, scale models of aerospace structures of GSLV MkII, GSLV Mk III and PSLV. The Rotary Wing Corner will provide the visitors through simulation and visual display, a helicopter view of the technologies, the capabilities and competencies built in the company. There will also be a holographic projection depicting capabilities of LCA, Hawk, LCH and LUH. SP

PHOTOGRAPHS: Sukhoi, MBDA, SPSC

MBDA back with a bang

European missile house MBDA has always had a solid presence at Aero India, and this year it's back with full force once again. The company says, "At Aero India 2013, MBDA will again demonstrate its unique status as the only company with a product catalogue capable of meeting the guided weapons requirements of all three armed services: air, land and sea. Prominently displayed will be a model of the SR-SAM missile which sees MBDA supporting the DRDO in advancing a solution for the Maitri short-range air defence programme. Partnership will also be a strong theme as MBDA moves to deepen its long-standing relationship with the Indian defence sector."

The company goes on to add, "With the Indian Air Force looking to enhance the operational capabilities of its fleet of Jaguar and Mirage aircraft, combined with its recent selection of the future MMRCA, Aero India offers MBDA the ideal opportunity to showcase its extensive range of air-to-air and air-to-ground guided weapon systems. Today's combat pilot has a more demanding job than ever now that the typical mission has become multi-role. MBDA can provide the pilot with the necessary equipment to not only ensure air supremacy but also to carry out precision strikes against a wide variety of static and fast moving surface targets." SP

Rolls-Royce pitches engine for HAL's light copter

While Aero India 2011 was tinged with turmoil for Rolls-Royce – it had decided shortly after the show to withdraw from a competition to re-engine the IAF's Jaguar strike aircraft – it is back at Aero India 2013 with a strong focus on the CTS800 turboshaft engine that Rolls-Royce builds in partnership with Honeywell. The CTS800 squares off against the Turbomeca Ardiden 1H1/Shakti engine that currently powers the ALH Dhruv and Light Combat Helicopter prototypes. In a statement, Rolls-Royce said the engine has passed 100,000 in-service flight hours and demonstrated proven technology and reliable performance in a variety of demanding operational environments.

Kishore Jayaraman, President, Rolls-Royce India, said: "Aero India is a significant platform for us in the continuing development of our business. India is an important market for Rolls-Royce with a number of significant local partners. We look forward to accelerating our business development and partnership initiatives as we work to further contribute to India's defence modernisation goals." John Gay, Senior Vice-President – Defence Aerospace, South Asia, Rolls-Royce, said: "It is a pleasure for us to be a part of Aero India, which gives us a platform to showcase our technology and products and has been an enabler for exchange of innovative ideas. Rolls-Royce is proud to have powered the Indian armed forces for 80 years. As our in-service fleets continue to increase we are looking to strengthen our local partnerships to deliver greater levels of support to the benefit of the customers here." The company will also show-case iPad-based services technology and the Adour Mk871 engine that powers the Hawk advanced jet trainer. SP

Certified and ready, Indian Army to receive first weaponised Dhruv

In a significant milestone for the Hindustan Aeronautics Ltd, the first Dhruv (Weapon Systems Integrated)—Dhruv-WSI or Rudra as it has been christened—will be certified and ready for handing over to its primary customer, the Indian Army, during Aero India 2013. The platform is all set to be officially certified by certification agencies this week. While a modified version of the Dhruv airframe—tandem seats—goes into the light combat helicopter that is currently in flight trials, the Army was of the opinion that an armed Dhruv without major modifications to the primary airframe would also be a potent platform, and be available to the customer naturally much sooner. The Rudra is a result of that. According to HAL, a Rudra can carry forty-eight 70mm rockets. "Different warheads such as high explosives, darts, flechettes or cargo warheads provide adequate flexibility to address any type of target. These rockets can be safely delivered at stand-off ranges of more than eight km. The turret mounted 20mm cannons can be cued to the electro-optical pod or the pilot's helmet. This provides Rudra immediate and accurate firepower against ground and aerial targets. Pilot only has to look at the target and fire. With an advanced ballistic computer, the guns are very accurate even at extreme angles. Fire and forget anti-tank guided missiles with seven-km range make Rudra an ideal platform for ground support roles. Rudra can carry four air-to-air missiles. These are infrared guided fire and forget missiles with off axis boresight capability. Pilot can engage the target using the helmet-mounted sight or with the electro-optical pod, while manoeuvring." The HAL brochure on the Rudra also adds, "State-of-the-art sensors complement this tremendous firepower. Gyrostabilised electro-optical sensors work on both visual and IR spectrum. Any type of target will be picked up and tracked at large distances, whether by day or by night. These targets can be handed over to the guided missiles or attacked with rockets and gun. The laser designator can designate the target for any compatible weapon. A comprehensive self-protection suite would empower the pilot with essential situational awareness of the elctromagnetic and laser environment. Any missile launched on the helicopter would be picked up by the self-protection suite and effective countermeasures dispensed automatically. This makes Rudra practically unassailable." The delivery comes at a time when there remain unresolved issues between the IAF and the Indian Army in the use of armed helicopters. SP

Indian Navy for new anti-ship missile

The Indian Navy is on the lookout for a new medium-range anti-ship missile for its surface platforms and has floated a global request for information (RFI). The medium-range anti-ship missile for surface platform is intended for fitment onboard the Indian Naval ships and would be utilised for engaging identified surface targets by the Indian Navy, says the RFI.

The Navy is looking for a weapon system with a minimum range of 120 km and a minimum altitude of 5-20 metres above sea level. The weight of the missile, launched from vertical or inclined launchers, needs to be a maximum of 1,000 kg with a warhead of at least 100 kg. The missile needs to have a velocity of at least 0.9 Mach while flying at 20 metres altitude or less, with a low radar cross section of 0.5-1 sq m or less.

The Navy has stipulated that it is interested in a new-generation missile with active seeker or better technology. It has also laid down that the missile should be able to target surface platforms with RCS of approx 250 sq m (at approximate ranges of 10-20 km), and capable of targeting surface platforms having an across vector of 40 knots. As is standard, the weapon needs to be all-weather capable and deployable in up to sea state 6. SP

PHOTOGRAPHS: SPSC, GSL

INS Saryu enters service

The first of four naval offshore patrol vessels (NOPV) built by the Goa Shipyard Ltd (GSL), INS Saryu (P54), enters service with the Indian Navy recently at Goa. INS Saryu will be the largest and first stealth OPV operated by the Indian Navy so far, and comes fitted with the latest sensors and systems.

According to GSL, "This state-of-the-art vessel will help meet the increasing requirement of the Indian Navy to undertake ocean surveillance and surface warfare operations in order to prevent infiltration and transgression of maritime sovereignty. This vessel is suitable for monitoring sea lines of communication, defence of offshore oil installations and other critical offshore national assets. Besides, the vessel can be deployed for escorting high value ships and fleet support operations. Designed and built by the Goa Shipyard Limited, the warship is the culmination of many years of in-house design development and ship build techniques. Well armed, the warship has been built to the specifications and standards required by the Indian Navy." Displacing 2,200 tonnes, INS Saryu will have on board eight officers and 105 sailors. It can take on board either a Chetak or an HAL Dhruv helicopter for surveillance and logistical duties. SP

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LT GENERAL (RETD)
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Trans-border Pakistani raid

Pakistan displayed barbarianism again by ambushing an Indian military patrol 600 metres inside Indian territory in Mendhar Sector, killing two soldiers mutilating their bodies and carrying the head of one back to Pakistan. Just a week earlier, an article by General S.K. Sinha was circulating on the Net describing that when a soldier of our Army was beheaded on an earlier occasion and taken to Musharraf, latter had rewarded the butcher with one lakh rupees. India has issued a démarche to Salman Bashir who looks most amused – this foxy diplomat was Pakistan's Foreign Secretary when 26/11 Mumbai terrorist attack occurred.

Why did we have to get Pakistanis onto TV channel debates and see their gloating smiles denying culpability? One joker even had the gumption to say that a third party witness is essential before you make accusations. What did you expect in any case? If Pakistan refuses to even acknowledge the 26/11 perpetrators, how do you expect them to take responsibility for such heinous acts. The familiar noises were heard – "Pakistan's act unacceptable", "don't let the peace dialogue derail" and the like including The External Affairs Minister Salman Khurshid saying we have achieved so much already. Hope he does not count Rehman Malik insulting us in our own home as achievement.

Media says the US wants both sides to show restraint. Look who is preaching after faking nukes in Iraq post-9/11 and morphing perceptions now that Bashar Assad is on the verge of unleashing chemical weapons. The million-dollar question, however, is when will the Indian State wake up to ground realities of Pakistan and acquire some spunk of its own?

The killing and mutilation of Captain Saurabh Kalia and his patrol and the unarmed Squadron Leader Ajay Ahuja used for target shooting practice during 1999 also had the same Indian response – warning to Pakistan.

North and South Blocks might as well acquire mascot pigs and be satisfied by issuing any amount of démarches. What happened in 1999 was gross violation of Geneva Conventions but we neither raised the issue with the UN nor went to the International Court of Justice – we still haven't despite some media murmurs after Captain Kalia's father knocked the doors of the Supreme Court.

Why can't we understand that the Pakistani State is controlled by the Military-ISI and these two entities out to Balkanise India are doing everything possible to achieve this end in cahoots with a host of terrorist organisations? We still call a charlie-like Musharraf for leadership summits who has the gumption to talk of demilitarisation.

Lt General (Retd) Shahid Aziz, former Corps Commander of Lahore, recently wrote about Kargil, "The whole truth about Kargil is yet to be known…..It was a total disaster…..We didn't pre-empt anything; nothing was on the cards. I was then heading the Analysis Wing of Inter-Services Intelligence……Our clearly expressed intent was to cut the supply line to Siachen and force the Indians to pull out…There were no mujahideen, only taped wireless messages, which fooled no one. Our soldiers…the boys were comforted by their commander's assessment that no serious response would come….Cut off and forsaken, our posts started collapsing one after the other, though the General (Musharraf) publicly denied it."

The Centre does not even take action against an arrogant scum like Akbaruddin Owaisi who openly threatens the State because of vote-bank politics. So what do we do about this cross border incident? It is quite simple. The porosity of the LoC is not one way. Keep playing cricket but such incidents must be replied 'with interest' in the same coin. Raise interest levels till the message goes home. A dirty war must have a similar response. Respond to deniability with deniability. Keep talking to their puppet government but efforts by the Pakistani State to Balkanise India must be responded to in similar fashion. SP

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

Why can't we understand that the Pakistani State is controlled by the Military-ISI and these two entities out to Balkanise India are doing everything possible to achieve this end in cahoots with a host of terrorist organisations?

ILLUSTRATION: Anoop Kamath

Russian defence deals with India

Russia is to supply India with combat helicopters and warplanes worth $2.9 billion under deals signed during Russian President Vladimir Putin's visit to New Delhi recently. "We have agreed to further strengthen our partnership in the sphere of military cooperation," Putin said after a meeting with the Indian Prime Minister Dr Manmohan Singh.

Under the deals, India will buy 42 Sukhoi Su-30 fighter jets and 71 MiL Mi-17 helicopters. The two countries also signed a number of cooperation agreements in the defence and technology sectors during Putin's one-day visit, his first to South Asia since his return to the Kremlin in May.

India is now the world's largest arms importer and Russia-made military equipment make up some 70 per cent of India's arms purchases. But Moscow has lost out on a number of deals to Western countries in recent years. Boeing was chosen last month by India over Russia's MiL plant for a major helicopter contract.

New Delhi has expressed dissatisfaction with a deal in the delivery of the aircraft carrier Admiral Gorshkov, which is being refurbished by Russia for the Indian Navy. Russia was due to deliver the vessel in 2008, but work has dragged on and the price has doubled to $2.3 billion.

Putin said he wanted to see annual trade turnover between Russia and India double from the current $10 billion in the coming years. "Our trade turnover has overcome the consequences of global crisis, and in 2012 we expect to reach record numbers, over $10 billion. Our next goal is to reach $20 billion by 2015." SP

A new "eye" for the Leopard 2 battle tanks

Cassidian Optronics GmbH, previously known as Carl Zeiss Optronics GmbH, will supply the new "Attica" thermal imaging unit for the commander's periscope in the Bundeswehr's Leopard 2 battle tanks.

After extensive trials, the German procurement authority BAAINBw (Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support) has awarded this Cassidian subsidiary an order to deliver the Attica to a value of almost seven million euros.

The third generation of thermal imaging equipment from Cassidian Optronics thus becomes the standard for the commander's Peri R17 periscope, which is also supplied by Cassidian Optronics.

The use of the Attica thermal imaging device significantly enhances the tank commander's ability to acquire targets, thus improving the safety of the crew. With the Peri R17, the commander is able to supply the gunner with marked targets by day and night, to then be able to acquire other targets without delay. The acquisition of targets can thus be separated from their engagement, which enables quicker reactions.

The Attica system meets the complex requirements presented by today's mission scenarios. This equipment, which has already been selected for the Puma armoured infantry fighting vehicle, is thus developing into a unit which is used across the Bundeswehr, especially in the tank force and mechanised infantry, as well as in the artillery. This results in logistical benefits and a reduction in operating costs when using thermal imaging equipment from the same family of products.

As a consequence of this German decision, other states in the "LEOBEN" association of Leopard user states are also planning procurement of the Peri R17. This will further standardise the level of configuration for the LEOBEN states. SP

PHOTOGRAPHS: PIB, Wikipedia

ITT Exelis bags major order

ITT Exelis (XLS) has received a $25-million order to provide a wide range of communications equipment to an international customer. This foreign military sales (FMS) programme contract was awarded by the US Communications-Electronics Command (CECOM) at Aberdeen Proving Ground, Maryland.

The award includes the delivery of Exelis International single channel ground and airborne radio system (SINCGARS) VHF base stations and vehicular systems in single and dual radio configurations. SINCGARS provides secure VHF voice and data communications capability to tactical units. With more than 6,00,000 radios delivered to date to the United States and more than 30 of its allies, SINCGARS is the most prolific tactical radio system in the world.

It also includes Spearhead VHF Handheld Radios, unit and intermediate level spares, installation services and field service representative support. The portable handheld tactical radio provides dismounted soldiers secure, frequency-hopping voice and packet data with integrated GPS in a small, lightweight package that is fully interoperable with the international SINCGARS. SP

Lockheed Martin's JLTV undergoes design review

Lockheed Martin's family of joint light tactical vehicles (JLTV) successfully completed a top-to-bottom government design review in late December, well ahead of the first engineering and manufacturing development (EMD) JLTVs that will begin rolling off the assembly line this spring.

The design understanding review, which was held December 18 through 20, assessed all elements of Lockheed Martin's JLTV design and confirmed its overall maturity and requirements compliance.

"We are focused on ensuring that our servicemen and women get the very best equipment for the mission," said Scott Greene, Vice President of Ground Vehicles for Lockheed Martin Missiles and Fire Control. "Our JLTV is affordable both to buy and to operate. It provides proven performance with room to upgrade capabilities as required and is ready for production."

The JLTV family of vehicles is designed to replace and supplement the existing fleet of Army and Marine Corps Humvees. Compared to existing vehicles, JLTV will provide greatly improved crew protection, lower logistical support costs, superior fuel efficiency and state-of-the-art connectivity with other platforms and systems. Government tests show the Lockheed Martin design equals the high blast-protection standards of much larger mine-resistant vehicles serving in combat today. SP

PHOTOGRAPHS: Lockheed Martin, www.cjoc-coic.forces.gc.ca

Light armoured vehicle III upgrade project

The recent experiences of the Canadian Armed Forces and other allies in Afghanistan and other operational theatres continue to demonstrate the ongoing requirement for a highly protected, yet highly mobile light-armoured vehicle (LAV). The use of mines, improvised explosive devices (IEDs) and anti-armour weapons have become more prevalent, posing a greater risk to personnel.

The LAV III upgrade project will capitalise on existing and evolving technology to improve the protection, mobility and lethality of the LAV III fleet. The project will modernise a portion of the existing LAV III fleet to ensure it remains a highly protected, operationally mobile and tactically agile combat vehicle that will remain the backbone of domestic and expeditionary task forces, extending the life span of the LAV III to 2035.

The upgrades on the LAV III will include mobility systems such as powertrain, suspension, running gear and brakes; weapon systems; and installation of additional armour, heightening its protection against increased threats.

The LAV III upgrade project will upgrade 550 vehicles with an option for an additional 80. Initial operational capability is scheduled for 2013.

In October 2011, the Government of Canada announced a $1.064-billion contract, awarded to General Dynamics Land Systems – Canada (GDLS–C) of London, Ontario, for the implementation phase of the LAV III UP project. This phase consists of upgrades to the mobility systems, the weapon system, and installing additional armour and improved seating, strengthening its protection against threats.

On November 9, 2012, the Government of Canada announced that the contract is now being amended to exercise the option to upgrade 66 additional LAV III at a value of $151 million to support the Canadian Forces' reconnaissance and surveillance capability. SP

Northrop Grumman's handheld precision targeting devices to US Army

The US Army has awarded a contract to Northrop Grumman to supply handheld precision targeting devices (HHPTDs).

The HHPTD is an advanced targeting system weighing less than 5.5 pounds and providing a greater degree of precision than previous systems. To supply the accurate information needed on the modern battlefield, the device incorporates a celestial navigation module. Devices such as the HHPTD allow forces on the ground to relay accurate targeting data to aircraft and command centres. Under the terms of the $9.2-million contract, Northrop Grumman will supply the systems over a three-year period.

"With the HHPTD, we have used the experience we gained from the production of the lightweight laser designator rangefinder IIH to create a smaller, more lightweight targeting system," said Gordon Stewart, Vice President and General Manager of the laser systems business unit. "The HHPTD puts the targeting accuracy needed for today's precision GPS munitions in the hands of the warfighter."

Northrop Grumman has delivered more than 25,000 electro-optic laser systems. Currently deployed and in-production systems include man-portable products such as the lightweight laser designator rangefinder IIH and the Mark VII and Mark VIIE laser target locators; ground vehicle products such as the M1 Abrams eye-safe laser rangefinder and the sight integrated rangefinder for Stryker vehicles; and airborne products such as the target acquisition designation sight for the AH-64 Apache and lasers for unmanned aerial vehicles and helicopters; and Viper countermeasure lasers for the AN/AAQ-24(V) directional infrared countermeasures system used to protect soldiers from the threat of infrared-guided missiles. SP

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Mountain Strike Corps

The New Year gift to the armed forces by the Finance Minister P. Chidambaram was slashing their modernisation budget by ₹10,000 crore. Barring an odd year, considerable portion of the defence budget gets surrendered through bureaucratic manoeuvrings in any case. The surprise was more this time because Defence Minister A.K. Anthony appeared to have taken note of the increased China-Pakistan nexus and announced in Parliament last year he would bid for additional defence budget allocations. The 2012-13 defence budget allocation was actually ₹45,715 crore less than the Services projections, to which another ₹10,000 crore shortfall is now added.

Last year, media had also reported Finance Ministry turning down Army's proposal to raise a Mountain Strike Corps though the proposal remained alive. No amount of perception management can obfuscate the growing China-Pakistan collusive threat. During an international seminar held in South Korea last December, Chinese participants were vehement that China will go to any length to protect her 'claimed' territories.

Chinese claims to entire Arunachal Pradesh need to be viewed in this context and it would be serious mistake to view this in isolation. Chinese claim to Arunachal Pradesh must be viewed in conjunction with her illegal occupation of Aksai Chin and Shaksgam Valley, domination of Karakoram Pass, Chinese strategic investment of PoK and northern Nepal in guise development projects, Pakistan leasing her Gilgit-Baltistan for 50 years, crafty calls for India to vacate Siachen and Chinese claims to Bhutan's Doklam Plateau. Chinese maps showing Arunachal Pradesh and South China Sea as Chinese territory and whole of Jammu and Kashmir as Pakistani territory are deliberate.

The new 'Princelings' regime of China is already showing signs of increased aggression. Not only are the People's Liberation Army (PLA) Generals part of the all powerful politbureau, more significantly, the PLA Chief does not report to the Chinese Government but to the Chinese Communist Party (CCP). The Catch-22 is akin to Pakistan. You can keep talking at governmental level but PLA and Pakistani military will do what they want. By ignoring Chinese direct meddling in India's internal affairs, the threat will only magnify. Ignoring Chinese preparations for future large-scale conventional wars on multiple fronts including informationised and mechanised for potential Asia-Pacific and Indian war scenarios would only be at our peril. India never allowed any political activity by Tibetans on Indian soil yet China gave sanctuary to the United Liberation Front of Assam (ULFA) cadres after they were routed from Bhutan. Chinese nationals with fake documents on mission to contact Naga insurgents were apprehended last year and now assault rifles are being supplied by China through Kachen rebels in North Myanmar to the PLA in Manipur and Indian Maoists.

Continued emphasis on 'peaceful' rise by China is belied by her actions; provocations both in South China Sea and against India while also hurting India economically through a grossly unbalanced bilateral trade. We should have no illusions that PoK is already a strategic objective of China and can no longer be treated as an Indo-Pak issue. PoK ensures Chinese access to the warm waters of the Indian Ocean, to Afghanistan and CARs.

This in turn restricts any power projection by India to the west. China-Pakistan collusion to create the third front within India (already accounted as half front by Indian Army) will continue, plus border transgressions and doling money to villagers in the border belt to manipulate perceptions. The fact is that we have been weak in Eastern Ladakh for past several years in areas contiguous to Aksai Chin. At the same time, a pusillanimous approach would be foolish. We actually, need two Mountain Strike Corps—one in Ladakh and the other preventing Chinese claims to Arunachal, in addition to levelling asymmetries in space, cyber and electromagnetic domains. If China makes a move into what she claims as "South Tibet", we must go for "North Tibet". SP

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PHOTOGRAPH: PIB

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Apart from many publications written, edited and published by the Founder, Military Yearbook is introduced in 1965...

1974

Military Yearbook continues relentlessly with collective support from dignitaries including the Prime Ministers and Presidents of India...

1984

50

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2014

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SP's Airbuz, SP's M.A.I. follows the intensity of magazines introduction...

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SP's Aviation, SP's Land Forces, SP's Naval Forces are launched starting from '98 and within a span of a few years...

1994

Military Yearbook is rechristened as SP's Military Yearbook conveying gratitude to Founder Publisher...

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Eurocopter España's first assembled NH90 helicopter takes flight

Recently a ceremony was held for the maiden flight of the first NH90 to be assembled by Eurocopter España at its facility in Albacete. The event was attended by María Dolores de Cospedal, President of the Regional Government of Castile-La Mancha, Spanish Defense Minister Pedro Morenés, Eurocopter CEO Lutz Bertling and the CEO of Eurocopter España, Francisco Vergé, among other political and military officials.

Following the two NH90 GSPA prototypes manufactured in Marignane (France), which are currently in Spain for the testing and certification campaign of the Spanish version, the NH90 GSPA03 will be the first helicopter to be delivered to the Spanish Army Airmobile Force (FAMET) in 2013 under the contract signed in 2006.

This represents a major milestone for Spain, which now assumes a role as a helicopter manufacturer together with its partners, France and Germany. Eurocopter will be fully involved in the entire life cycle for these helicopters, from the design stage through to flight testing and certification, component manufacture, the final assembly line and integrated support.

The NH90 programme, promoted by the Spanish Secretariat of Defense through the Directorate-General of Armament and Equipment (DGAM), is the first to supply all three branches of the Spanish armed forces. It will provide Spain's military with an advanced helicopter transport system and associated technology, with Spanish participation not only in the manufacture of the helicopter itself but also in other areas such as installation of the electronic warfare systems, simulation equipment, automated test benches and engine assembly.

Produced in two basic versions—the Tactical Transport Helicopter (TTH) and NATO Frigate Helicopter (NFH)—this 11-tonne class rotary-wing aircraft provides a common platform for army, navy and air force roles, enabling countries to rationalise their helicopter fleets. while also organizing training and support on a larger scale, with flexible management of personnel and equipment. SP

First Airbus Military A400M in FAF colours

The first production A400M 21st century airlifter can be seen for the first time in the colours of an air force in this latest picture of the aircraft in the Airbus Military final assembly line (FAL) at Seville, Spain. The photograph shows MSN7 in the colours of the French Air Force, thus passing another milestone in the A400M programme towards first delivery, scheduled for the second quarter of this year.

The A400M is an all-new military airlifter designed to meet the needs of the world's armed forces in the 21st century. Thanks to its most advanced technologies, it is able to fly higher, faster and further, while retaining high manoeuvrability, low speed, and short, soft and rough airfield capabilities.

It combines both tactical and strategic/logistic missions. With its cargo hold specifically designed to carry the outsize equipment needed today for both military and humanitarian disaster relief missions, it can bring this material quickly and directly to where it is most needed.

Conceived to be highly reliable, dependable, and with a great survivability, the multipurpose A400M can do more with less, implying smaller fleets and less investment from the operator. The A400M is the most cost-efficient and versatile airlifter ever conceived and absolutely unique in its capabilities. SP

PHOTOGRAPHS: Eurocopter, AgustaWestland, Airbus Military

AgustaWestland signs Sea King contract

AgustaWestland recently announced that it has signed a contract with the United Kingdom Ministry of Defence, valued at approximately £260 million, for the provision of Sea King integrated operational support (SKIOS) from April 1, 2013, to the type's out of service date in March 2016. This contract will follow on from Phase-1 and Phase-2 of SKIOS which provide services till March 2013.

The SKIOS contract provides a comprehensive availability based support package for the UK MoD's fleet of Sea King helicopters operated by the Royal Navy and the Royal Air Force. The contract includes payments for achieved flying hours and incentive arrangements associated with delivering agreed levels of aircraft serviceability and operational fleet aircraft numbers.

Ray Edwards, Managing Director, AgustaWestland, said "The Sea King, after more than 40 years in service, continues to play an important role supporting British troops and delivering higher than contracted levels of availability for search and rescue missions." SP

Boeing's design for Wedgetail AEW&C airborne mission segment accepted by Australia

Australia has completed its acquisition of six Boeing 737 airborne early warning and control (AEW&C) aircraft and related mission systems by accepting the final design of the Wedgetail airborne mission segment. The Royal Australian Air Force (RAAF) operates the aircraft, which provide Australia with advanced airborne surveillance, communications and battle management.

"Australia has worked closely with Boeing and its industry partners to deliver a world-class airborne early warning and control capability," said Air Vice Marshal Chris Deeble, Wedgetail Programme Manager, Defence Materiel Organisation. "The performance of the Wedgetail in recent high-end coalition exercises indicates that we are delivering a cutting-edge warfighting capability to the RAAF."

Besides six AEW&C aircraft, the Wedgetail programme also includes ground support segments such as the operational flight trainer, operational mission simulator and mission support system. All are located in the AEW&C Support Centre at RAAF Base Williamtown in Newcastle. SP

MV-22 Ospreys conduct first flights in Japan

Marine Medium Tiltrotor Squadron 265 aircrews conducted MV-22B Osprey functional check flights aboard Marine Corps Air Station Iwakuni, Japan, recently marking the first time the Osprey has flown in Japan.

Once VMM-265, a part of Marine Aircraft Group 36, 1st Marine Aircraft Wing, III Marine Expeditionary Force, completes functional check flights and pilot proficiency flights at MCAS Iwakuni, its Ospreys will be based at and operate out of MCAS Futenma.

Basing the Osprey in Okinawa will significantly strengthen the United States' ability to provide for the defence of Japan, perform humanitarian assistance and disaster relief operations, and fulfill other alliance roles.

The aircraft first arrived in Japan at the end of July to the port facility here via commercial ship from San Diego, California. After arriving, the Ospreys were offloaded, inspected, and prepared for flight operations. In recognition of the Government of Japan's concerns about the aircraft's safety, the US Government refrained from any MV-22B flight operations in Japan until the results of mishap investigations were presented to the Government of Japan and the safety of flight operations was confirmed. SP

Russian Helicopters deliver consignment of Mi-17B-5s to India

Russian Helicopters, part of state defence holding Oboronprom and a leading global designer and manufacturer of helicopters, has delivered another consignment of Mi-17B-5 helicopters to India as part of a contract signed by Rosoboronexport and India's Ministry of Defence in 2008.

The helicopters were built by Kazan Helicopter Plant, a Russian Helicopters company. The final delivery under the contract is scheduled for 2013. The Mi-8/17 series of helicopters is one of the symbols of Russia's aviation industry. The latest models combine advanced technologies with the years of operational experience accumulated by their predecessors. These advanced helicopters, the best in their class, are equipped with the latest navigational and on-board systems, and maintain the high levels of reliability, simplicity and ease of operation that generations of operators have come to expect. They can fly a wide range of missions in conditions ranging from tropical and maritime climates to high altitude and desert environments.

The Mi-17B-5 has been built to the requirements of the Indian Ministry of Defence. It is one of the most advanced helicopters on the global marketplace, as well as in the Indian armed forces.

The helicopters are equipped with new VK-2500 engines that have an electronic control system and deliver enhanced power performance, which is particularly important in hot climates and at high altitudes. Should one engine fail, the reserve power provided by the second engine ensures safe operation through to landing. The on-board systems allow the helicopter to operate day and night in all-weather conditions. A new navigation system has been developed for this version of the Mi-17B-5 that shows all of the piloting and navigation information on four multifunctional display screens, significantly reducing the crew's workload.

The medium multi-role Mi-17 is the export version of the Mi-8. Their versatility and high performance have made these helicopters some of the most popular Russia-built helicopters around the world. More than 12,000 Mi-8/17s are in operation in about 110 countries. Russian Helicopters builds advanced versions of the Mi-8/17 at Kazan Helicopter Plant and Ulan-Ude Aviation Plant. SP

PHOTOGRAPHS: Boeing, US Navy, Russian Helicopters

Telephonics awarded second contract with Kazan Helicopters

Telephonics Corporation has bagged a second contract from the Russian manufacturer of the world-renowned Mi-8/17 family of helicopters, Kazan Helicopters, part of the Russian Helicopters company. Telephonics will supply 85 RDR-1600 weather avoidance search and rescue radars to Kazan for installation on the Mi-17V5 helicopters for delivery to the Indian Air Force.

The RDR-1600, a high-performance airborne, weather avoidance, and surveillance radar has been chosen by many end-users for its long detection range and reliable performance in extreme conditions. The system provides the Indian Air Force with a lightweight solution for their all-weather operations. With the addition of weather alert, beacon detection, and ground mapping operational modes, the RDR-1600 delivers accurate and precise information to the flight crew, enhancing both mission effectiveness and safety.

This is the second time Telephonics RDR-1600 radar has been chosen by Kazan Helicopters after the successful introduction, integration and delivery of 93 systems for the Indian Air Force Mi-17V5 helicopters. "Being chosen by Kazan and the Indian Air Force for the second time demonstrates the effectiveness and reliability of the RDR-1600 in challenging environments," said Kevin McSweeney, Telephonics Chief Operating Officer. "We're pleased to partner with Kazan Helicopters in support of the Indian Air Force."

Deliveries to Kazan will begin in early summer of 2013, with final deliveries to complete in 2014. SP

Enhanced Exoatmospheric Kill Vehicle successful in non-intercept flight test

Raytheon Company's upgraded Exoatmospheric Kill Vehicle (EKV) played a mission-critical role in a non-intercept flight test of Boeing's ground-based midcourse defence programme. The EKV is a vital component of the GMD's ground-based interceptor.

The EKV allows the GBI to lock on and eliminate high-speed ballistic missile warheads in space using nothing more than the force of impact.

"Rigorous non-intercept flight tests are important in proving the effectiveness and operational capability of ballistic missile defence weapons and their various components," said Wes Kremer, Raytheon Missile Systems' Vice President of Air and Missile Defense Systems. "Today's test allowed us to challenge the EKV in a series of realistic outer space environments, which gives us a broad range of data prior to moving towards an intercept scenario."

During the test, the EKV performed as planned, manoeuvring the interceptor to the appropriate altitude and closing velocity required for an intercept.

"The sole purpose of the ground-based mid-course defence programme is to defend the homeland from the threat of ballistic missile attack," said Kremer. "This test moves us one step closer to an intercept flight test in 2013." SP

China's Y-20 large transport aircraft completes first flight

China's first Y-20 large military transport aircraft made its first flight recently powered by Russian engines, it will be retrofitted with more powerful Chinese powerplants. The Y-20 is China's independently-developed large and multi-purpose transport aircraft. It can carry out the task of long-distance air transport of various materials and personnel under complicated weather conditions.

Code-named "Kunpeng" and mainly developed by the Xi'an Aircraft Industry (Group) Company Ltd., the Y-20 transport aircraft has strong take-off and landing capability as evidenced by being able to take-off and land at airstrips, and can carry all types of armored vehicles of the Chinese People's Liberation Army (PLA).

Operated by three aircrew members, the Y-20 has the highest load-carrying capacity of 66 tonnes, a fuselage length of 47 metres, a wingspan of 45 metres and a height of 15 metres, and bears the maximum take-off weight of a little more than 200 tonnes. It has a traditional layout: tricycle landing gear and two 90-degree deflecting wheels on the nose gear. SP

Boeing-led missile defence team completes GMD flight test

Boeing, working with the US Missile Defense Agency and industry teammates, have returned the ground-based mid-course defence (GMD) system to testing with a successful flight. GMD is the United States' only defence against long-range ballistic missile threats.

"Today's test signals the next step in GMD's future capability and is the culmination of successful partnerships among government, military leaders and industry," said Greg Hyslop, Vice President and General Manager for Boeing Strategic Missile and Defense Systems. "Throughout our team effort to solve one of the toughest challenges facing the aerospace industry, GMD remained on alert and continues to defend the United States."

GMD flight testing was halted in early 2011 after a guidance error resulted in a failed intercept in a December 2010 test. SP

PHOTOGRAPHS: Telephonics, 1.bp.blogspot.com, US Army

First sensor test flight of Euro Hawk unmanned aircraft successfully accomplished

Cassidian, the defence and security division of EADS and Northrop Grumman Corporation, together achieved a major milestone with the first full system test flight of the Euro Hawk unmanned aircraft system (UAS) equipped with the signals intelligence (SIGINT) advanced sensors for detection of radar and communication emitters.

The Euro Hawk took off from Manching Air Base and climbed a ceiling of more than 15,000 metres within military controlled airspace, far above and in safe distance from civilian air traffic. After 6 hours aloft, the aircraft landed safely back at the airbase.

"This successful flight demonstrates the Euro Hawk programme's systems integration capabilities and cutting-edge technologies. The Cassidian-developed SIGINT sensor suite, conforming to the German Bundeswehr's requirements, showed excellent performance within the perfect interplay of the overall system," said Bernhard Gerwert, Chief Executive Officer of Cassidian. "We therefore are proud to prove with these test flights the new Euro Hawk's mission capability of strategic SIGINT intelligence for the protection and security of the German armed forces."

The Euro Hawk system previously completed extensive ground testing at Manching Air Base, receiving final approval to flight test the functionalities of the integrated SIGINT payload from the German Airworthiness Authority.

"Today's SIGINT sensor flight marks the start of the critical flight test phase of the Euro Hawk payload for the German Bundeswehr," said Tom Vice, Corporate Vice President and President of Northrop Grumman's Aerospace Systems. "Euro Hawk represents many significant firsts for Northrop Grumman. Not only is it our first trans-Atlantic cooperation with Germany and Cassidian, but it is also the first international version of the RQ-4 Global Hawk produced by the company and the first high-altitude, long-endurance (HALE) SIGINT UAS in Europe."

Based on the RQ-4B Global Hawk HALE UAS, the Euro Hawk system includes a ground station consisting of a mission control and launch and recovery elements provided by Northrop Grumman. It is equipped with a new SIGINT mission system developed by Cassidian, providing standoff capability to detect electronic and communications emitters. The SIGINT ground station, which receives and analyses the data from Euro Hawk as part of an integrated system solution, is also supplied by Cassidian.

"The Euro Hawk success story continues to unfold and will enable Germany to independently conduct round-the-clock surveillance and reconnaissance," said Neset Tükenmez, Chief Executive Officer for the Euro Hawk GmbH. "With this first sensor flight, the Euro Hawk effectively demonstrated its system capability for safe operation within German air space."

With a wingspan larger than most commercial airliners, endurance of more than 30 hours and a maximum altitude of approximately 60,000 feet, Euro Hawk is an interoperable, modular and cost-effective replacement to the fleet of manned Breguet Atlantic aircraft which was in service since 1972 and retired in 2010. SP

BAE's Taranis UCA to fly in spring

Taranis, an unmanned combat aircraft, has been built for the British military is to undergo its first ever test flight later this year.

It can fly faster than the speed of sound, cannot be detected by radar and has no pilot. This is the new robotic plane that will become the next-generation of front line bombers for the British military.

The drone, which is named after the Celtic god of thunder, has been designed to fly intercontinental missions to attack targets and can automatically dodge incoming missiles.

The aircraft, which has cost £125 million to build, is intended to be the first of a new generation of aeroplanes that will reduce the need to risk human lives on long, dangerous missions. It is to be flown for the first time in a series of tests over the Australian outback in the spring in an attempt to demonstrate the technology to military chiefs.

Currently the Royal Air Force uses Tornado GR4 bombers as its front line strike aircraft, although the Typhoon Eurofighter is expected to replace it in the coming years. Remote controlled drones such as Reaper are also used by the Ministry of Defence and US military to attack targets.

But the Taranis is expected to provide a prototype of a new kind of bomber that will replace piloted planes and the current drones. With a shape more similar to the US B-2 Stealth bomber, it intended to fly automatically using an on-board computer system to perform manoeuvres, avoid threats and identify targets. Only when it needs to attack a target will it seek authorisation from a human controller.

Nigel Whitehead, Group Managing Director of programmes at BAE Systems which has been developing Taranis, said the new drone could change the way aircraft are used by the MoD in the future, which currently uses manned planes for combat missions.

He said: "I think that the Taranis programme will be used to inform the UK MoD thinking, regarding the make up for the future force mix. I anticipate that the UK will chose to have a mix of manned and unmanned frontline aircraft. This decision will have a major impact on the future of the UK military." SP

PHOTOGRAPHS: Northrop Grumman, BAE Systems

Japan to snoop on North Korea with RQ-4 Global Hawk

Japan has embarked on a plan to acquire the Global Hawk—a high-altitude, long-distance unmanned surveillance and reconnaissance aircraft—from the United States to enhance the Japanese Self-Defense Forces' (JSDF) ability to collect information.

The RQ-4 Global Hawk is an unmanned aerial vehicle (UAV) used by the United States Air Force and Navy and the German Air Force as a surveillance aircraft.

The planned introduction of the cutting-edge drone would bolster Japan's intelligence capabilities, enabling it to more effectively cope with the increased pressure by China over the Senkaku Islands in Okinawa Prefecture, according to government and Liberal Democratic Party sources.

The Global Hawk would also enhance the JSDF's ability to gather information on North Korea, which has pushed ahead with programmes to develop ballistic missiles and nuclear weapons, the sources said. SP

US Army awards contracts for small UAVs

AeroVironment, Inc. announced that the United States Army has selected it and four other companies to compete for future small UAS requirements under a new firm fixed-price indefinite delivery indefinite quantity (IDIQ) contract with a $248 million maximum value.

The contract will enable the continued procurement of AeroVironment's RQ-11B Raven and RQ-20A Puma AE systems as well as competing medium- and long-range small unmanned aircraft systems.

"We have successfully competed for every major United States Department of Defense programme of record involving small UAS and have delivered highly reliable systems with increasing capability to support our warfighters," said Roy Minson, AeroVironment Senior Vice President and General Manager of its Unmanned Aircraft Systems business segment. "This new IDIQ contract provides for continued procurement of small UAS, reflecting the high value of this capability. We look forward to supporting the US Army and other customers with market leading small UAS solutions that anticipate the ever-evolving needs of warfighters and address the budgetary constraints of governments."

RQ-11B Raven, Wasp AE, RQ-20A Puma and Shrike VTOL comprise AeroVironment's family of small unmanned aircraft systems. Operating with a common ground control system (GCS), this family of systems provides increased capability to the warfighter that can give ground commanders the option of selecting the appropriate aircraft based on the type of mission to be performed.

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

Telephonics to provide radar for Fire Scout UAV

Northrop Grumman Corporation under contract to the US Navy, has selected Telephonics Corporation, a wholly owned subsidiary of Griffon Corporation (GFF), to provide a multimode maritime radar system for the Navy's MQ-8B Fire Scout vertical take-off and landing tactical unmanned aerial vehicle.

A $33-million contract was awarded to provide the development, production, integration and testing of nine radar systems. The new Telephonics RDR-1700B+ radar will give the MQ-8B Fire Scout critical wide-area search and long-range imaging capability to complement the focused capabilities of its current electro-optical infrared payload.

"We are pleased to be partnered with Northrop Grumman in adding this essential operational capability to Fire Scout," said Joseph Battaglia, Telephonics' Chief Executive Officer. "We're looking forward to working with both Northrop Grumman and the Navy to integrate this new advanced radar system on the MQ-8B as soon as possible." SP

Predator in the air for 24 hours

The Italian Air Force's remotely-piloted vehicle - Predator stayed in the air for 24 consecutive hours in December, to carry out four distinct operational missions in the Afghan theater.

For the first time during an operational mission in Afghanistan, Predator flew for 24 consecutive hours and carried out four separate missions without landing.

Predator aircraft flew mostly over the Bakwa district, supporting a patrol of Task Force 'Victor' whose mission was to monitor the itinerary to be followed by an Italian vehicle convoy. SP

PHOTOGRAPHS: Northrop Grumman, Italian Defence

US Navy complete at-sea deck handling trials of X-47B unmanned demonstrator

Northrop Grumman Corporation and the US Navy have successfully completed a series of deck handling trials of the X-47B unmanned combat air system (UCAS) demonstrator aircraft aboard the aircraft carrier USS Harry S. Truman.

The exercises, conducted recently demonstrated the ability to manoeuvre the tailless, strike-fighter-sized aircraft quickly and precisely on the flight deck using a wireless handheld controller. They are the latest in a series of test activities leading up to the first carrier landings of the X-47B planned for 2013.

"The X-47B deck trials proved convincingly that the design and operation of the aircraft are fully compatible with the rhythm and operational requirements of the carrier flight deck," said Mike Mackey, UCAS-D Programme Director for Northrop Grumman Aerospace Systems. "They provided a major boost to the team's confidence as we move steadily towards our first carrier landings next year."

Northrop Grumman is the Navy's prime contractor for the UCAS-carrier demonstration (UCAS-D) programme. The company designed and produced two X-47B aircraft for the programme. One aircraft was on the ship; the other remains at Naval Air Station Patuxent River where it is undergoing additional shore-based carrier suitability testing.

The deck trials were conducted both while the USS Harry S. Truman was in port at Naval Station Norfolk, and while the ship was under way off the coast of Virginia.

In 2013, the UCAS-D programme plans to begin conducting shore-based arrested landings of the X-47B at Patuxent River. Carrier trials, which will include both landings and catapult launches, are planned for later in the spring. SP

Korea to buy Global Hawk

The Defense Security Cooperation Agency notified Congress of a possible foreign military sale (FMS) to the Republic of Korea (RoK) for four RQ-4 Block 30 (I) Global Hawk remotely piloted aircraft and associated equipment, parts, training and logistical support for an estimated cost of $1.2 billion.

Korea has requested a possible sale of four RQ-4 Block 30(I) Global Hawk remotely piloted aircraft with the enhanced integrated sensor suite (EISS). The EISS includes infrared/electro-optical, synthetic aperture radar imagery and ground moving target indicator, mission control element, launch and recovery element, signals intelligence package, an imagery intelligence exploitation system, test equipment, ground support, operational flight test support, communications equipment, spare and repair parts, personnel training and training equipment, publications and technical data, US Government and contractor technical and logistics support services, and other related elements of logistics support.

The estimated cost is $1.2 billion. Korea needs this intelligence and surveillance capability to assume primary responsi-bility for intelligence gathering from the US-led Combined Forces Command in 2015. The proposed sale will maintain adequate intelligence, surveillance, and reconnaissance capabilities and will ensure the alliance is able to monitor and deter regional threats in 2015 and beyond. Korea will have no difficulty absorbing these systems into its armed forces.

The principal contractor will be Northrop Grumman Corporation. There are no known offset agreements proposed in connection with this potential sale. SP

Presentation in flight of nEUROn

Recently a presentation in the nEUROn flight was organised by Dassault Aviation at Istres for French and foreign authorities involved in the programme. The Director General for Armaments, Laurent Collet-was present at the programme.

It is the first UCAV built in cooperation; it is the first stealth fighter aircraft; and is the first aircraft in combat completely designed and developed on a collaborative virtual plateau.

Collet-Billon said: "Their technical skills and their proven know-how, they listed this face to the challenge posed by the calendar's design for a demonstrator of such complexity. Dassault Aviation, Saab and Alenia, EADS Casa, HAI RUAG have managed with great professionalism this technological challenge". SP

Northrop wins Fire Scout support deal

Northrop Grumman Aerospace Systems, San Diego, California, is being awarded a $33.27 million cost-plus-incentive-fee contract for the development, production, integration, and testing of nine radar systems on the MQ-8B Fire Scout vertical take-off and landing tactical unmanned air vehicle.

Contract funds in the amount of $15,844,756 are being obligated at time of award, $11,344,756 of which will expire at the end of the current fiscal year. Work will be performed in San Diego (70 per cent) and Patuxent River, Marylan (30 per cent), and is expected to be completed in June 2014. The Naval Air Systems Command, Patuxent River, is the contracting activity. SP

PHOTOGRAPHS: Northrop Grumman, US Navy

Coast Guard station Mayabunder commissioned

Indian Coast Guard station Mayabunder, the first coast guard station in the North Andaman Islands, was commissioned by the Defence Secretary Shashi Kant Sharma in the presence of Air Marshal P.K. Roy, Commander-in-Chief, Andaman & Nicobar Command, Inspector General V.S.R. Murthy, Commander Coast Guard Region (A&N), and senior officials from the A&N administration.

The station is a part of ongoing efforts by the Coast Guard to strengthen maritime and coastal security and the assets based at Mayabunder will help augment patrolling along the Northern Group of Islands for safeguarding Indian maritime interests.

Shashi Kant Sharma lauded the efforts of the Indian Coast Guard in maintaining a high state of vigil in the Andaman and Nicobar Islands resulting in apprehension of a large number of poachers and saving of precious human lives during search and rescue operations. He further said that the implementation of the coastal surveillance network project would be a major milestone in ensuring near gap-free radar surveillance of these Islands.

Air Marshal Roy stressed the need for maintaining continuous vigil of this strategically important archipelago. He further stated that the Coast Guard had initiated several far-reaching measures to augment force levels and manpower to meet existing and future

maritime challenges.

Coast Guard station Mayabunder will function under the administrative and operational control of the Commander Coast Guard Region (A&N) through the Commander Coast Guard District Headquarter-9 located at Diglipur. Commandant (JG) Umed Singh has been appointed as the Commanding Officer of the station. SP

Intelligence Bureau completes 125 years

The Union Minister for New and Renewable Energy, Dr Farooq Abdullah releasing the Indian Police Journal, *The Intelligence Bureau the First 125 Years*, at the 25th I.B. Centenary Endowment Lecture, in New Delhi on December 22, 2012. The Minister of State for Personnel, Public Grievances & Pensions and Prime Minister's Office, V. Narayanasamy, the Minister of State for Parliamentary Affairs & Planning, Rajiv Shukla, the Minister of State for Human Resource Development, Dr Shashi Tharoor, the Director, Intelligence Bureau, Nehchal Sandhu and Kiran Mazumdar Shaw are also seen.

The Intelligence Bureau completed 100 years of its existence in 1987 and celebrated 1988 as its Centenary Year. The Centenary Year culminated with Dr Shankar Dyal Sharma, then Vice President of India, delivering the first IB Centenary Endowment Lecture on "The Dynamics of Security Environment".

Since then, a Centenary Endowment Lecture is organised in December every year. Twenty-four such lectures have been delivered by eminent speakers including luminaries like Dr A.P.J. Abdul Kalam, Prof J.V. Narlikar, N.A. Palkhivala, Abid Hussain and Prof Jagdish N. Bhagwati on a wide range of issues related to India's security, development of the Indian polity and on the state of the nation.

This year, the endowment lecture was delivered by Kiran Mazumdar Shaw, Chairperson and Managing Director, Biocon Ltd. on "Role of Biotechnology in Inclusive Economic Development". SP

PHOTOGRAPHS: Indian Coast Guard, PIB

After US school shooting, teachers keen on receiving firearms training

In the wake of the mass shooting in Sandy Hook Elementary School, US which had over a score killed, including children, about 200 teachers in Utah will receive special firearms training — with a plastic gun — in order to carry concealed weapons in their classrooms in the future.

Aposhian, the chairman of the Utah Shooting Sports Council, said they will waive the $50 fee for the training. The instruction will feature plastic gun.

According to the National Conference of State Legislatures, Utah allows citizens to carry concealed weapons into public schools without exception. By law, Utah gun permit records are close to the public, so parents will not know which teachers in their children's schools will be carrying weapons. SP

DHS determines 13 states meet REAL ID standards

On December 20, 2012, the Department of Homeland Security (DHS) determined that 13 US states have met the standards of the REAL ID Act of 2005 for driver's licences and identification cards and has granted a temporary deferment for all other states and territories.

Currently, DHS has determined that Colorado, Connecticut, Delaware, Georgia, Iowa, Indiana, Maryland, Ohio, South Dakota, Tennessee, West Virginia, Wisconsin, and Wyoming have met the Act's requirements. The department commends these states on

the substantial progress in working towards these goals and the improvements in security for state-issued driver's licences and identification cards since 9/11 terrorist attacks.

Other states have not provided sufficient information, at this time, for DHS to determine if they meet the Act's requirements. These states will have an opportunity to respond with additional information before DHS makes a final determination. DHS will continue to receive and review state submissions on a rolling basis.

Beginning January 15, 2013, those states not found to meet the standards will receive a temporary deferment that will allow federal agencies to continue to accept their licences and identification cards for boarding commercial aircraft and other official purposes.

DHS's goal is to implement the REAL ID Act, as required by law, in a measured, fair and responsible way. In the coming weeks and months, DHS will, in consultation with states and stakeholders, develop a schedule for the phased enforcement of the Act's statutory prohibitions to ensure that residents of all states are treated in a fair manner. DHS expects to publish a schedule by early fall 2013 and begin implementation at a suitable date thereafter. Until the schedule is implemented, federal agencies may continue to accept for official purposes driver's licences and identity cards issued by all states.

Secure driver's licences and identification documents are a vital component of a holistic national security strategy. Law enforcement must be able to rely on government-issued identification documents and know that the bearer of such a document is who he or she claims to be.

The REAL ID Act, passed by Congress in 2005 enacts the 9/11 Commission's recommendation that the Federal Government "set standards for the issuance of sources of identification, such as driver's licences." The Act establishes minimum security standards for licence issuance and production and prohibits federal agencies from accepting for official purposes those documents issued by a state unless DHS determines that the state meets the minimum standards.

Official purposes, as defined in statute and regulation, are accessing a federal facility, boarding federally-regulated commercial aircraft, and entering nuclear power plants. DHS has twice modified the statutory deadline in order to allow states more time to meet the statutory requirements of the Act in a period of declining state revenues. SP

Internal Security appointments

Ajay Chadha, Special Secretary (Internal Security), Ministry of Home Affairs, has been appointed as Director General, Indo-Tibetan Border Police (ITBP).

Subhash Joshi, Director General, National Security Guard, has been appointed as Director General, Border Security Force (BSF).

Arvind Ranjan, Special Director General, Border Security Force, has been appointed as Director General, National Security Guard (NSG).

The appointments will be effective from the dates these officers assume charge.

Rajiv, presently Director General (DG), Central Industrial Security Force (CISF), will hold the additional charge of the post of DG, BPR&D with effect from December 31, 2012 till an incumbent is appointed on regular basis or till further orders.

Milind Kanaskar, Joint Director, National Police Academy (NPA), will look after the duties of Director, NPA, with effect from December 31, 2012 till an incumbent to the post of Director NPA appointed on regular basis or till further orders. SP

President Obama nominates Chuck Hagel as Defense Secretary

President Barack Obama announced two key nominations for his national security team. He tapped John Brennan to serve as the Director of the Central Intelligence Agency (CIA), and has asked Senator Chuck Hagel to serve as Secretary of Defence.

"Chuck Hagel's leadership of our military would be historic," he said. "He'd be the first person of enlisted rank to serve as Secretary of Defense, one of the few secretaries who have been wounded in war, and the first Vietnam veteran to lead the department. As I saw during our visits together to Afghanistan and Iraq, in Chuck Hagel our troops see a decorated combat veteran of character and strength. They see one of their own.

"Chuck knows that war is not an abstraction," President Obama said. "He understands that sending young Americans to fight and bleed in the dirt and mud, that's something we only do when it's absolutely necessary."

Senator Hagel thanked the President for the opportunity to again serve the United States and its men and women in uniform.

"These are people who give so much to this nation every day with such dignity and selflessness," he said. "This is particularly important at a time as we complete our mission in Afghanistan and support the troops and military families who have sacrificed so much over more than a decade of war."

President Obama has nominated John Brennan as the next Director of the Central Intelligence Agency.

Brennan, a 25-year veteran of the CIA, has served as President Obama's Advisor for Counterterrorism and Homeland Security since 2009. "For the last four years," President Obama said, "John developed and has overseen our comprehensive counterterrorism strategy – a collaborative effort across the government, including intelligence and defence and homeland security, and law enforcement agencies."

President Obama called Brennan "one of the hardest working civil servants I've ever known" and said that he valued Brennan's integrity and commitment "to the values that define us as Americans." SP

John Brennan

John Kerry next US Secretary of State

President Obama has nominated Senator John Kerry to serve as Secretary of State. "Over these many years, John has earned the respect and confidence of leaders around the world," the President said. "He is not going to need a lot of on-the-job training. He has earned the respect and trust of his Senate colleagues, Democrats and Republicans. I think it's fair to say that few individuals know as many presidents and prime ministers, or grasp our foreign policies as firmly as John Kerry. And this makes him a perfect choice to guide American diplomacy in the years ahead."

John Kerry is to replace Senator Hillary Clinton. SP

PHOTOGRAPH: White House

ReconRobotics announces strong international sales

ReconRobotics has announced that its international headquarters in Lugano, Switzerland, has closed the year (2012) with strong sales of micro-robot systems to military and police users in Norway, the Netherlands, Switzerland, Austria, Germany, Hungary and France, in addition to an unspecified country in the Middle East.

"Our robot sales were up more than 50 per cent in 2012, and it is our international team that has led the way in the last quarter," said Alan Bignall, President and CEO of ReconRobotics. "Military and counter-terror teams around the world are recognising that the unique reconnaissance capabilities of our Throwbot XT give them a big tactical advantage during high-risk operations, and this is driving sales at a fast clip. We expect this trend to continue in 2013."

About 4,000 of the company's Recon Scout and Throwbot systems have been deployed by the US military and international friendly forces, and by hundreds of law enforcement agencies worldwide. Operators use these throwable micro-robot systems to determine the layout of enclosed spaces, identify potential IEDs and fix the location of civilians or enemy personnel. The Throwbot XT weighs 1.2 lbs (544 g) and can be deployed in five seconds and thrown up to 120 feet (36 m). SP

PHOTOGRAPH: ReconRobotics

Thales opens Center of Excellence for radar and integrated sensors in Singapore

The official opening of Thales' Center of Excellence (CoE) for Radar and Integrated Sensors in Singapore was held recently and was inaugurated by Her Excellency Mrs Lilianne Ploumen, Minister for Foreign Trade and Development Cooperation, the Netherlands.

The CoE is the result of a close cooperation between Thales operations in the Netherlands and Singapore. The mission is to increase the amount and speed of innovation in naval radar and integrated sensors. This is achieved by performing research and technology activities in close coordination with three key assets of the Singapore environment: top-level research institutes, dynamic industry and an innovative and technology focused defence organisation.

"This Center of Excellence paves the way to promising collaborative innovations in the field of radars and integrated sensors," said Jean-Noel Stock, Chief Executive Officer of Thales Solutions Asia, Singapore.

This new centre will complement and leverage the Singapore R&T environment in the field of radar and integrated Sensors. SP

Russian Helicopters to open helicopter assembly plant in India

During the visit of Russian President Vladimir Putin to India, Russian Helicopters, a subsidiary of Oboronprom, part of Russian Technologies State Corporation, and Elcom Systems Private Limited, part of the Indian investment conglomerate Sun Group, signed in New Delhi an agreement to set up in India a modern industrial facility for manufacturing of Russian helicopter models, namely helicopters of the Ka- and Mi- brands.

The joint venture will have the capacity to produce key helicopter units and carry out final assembly of the machines as well as engage in ground and flight testing. It is expected that the enterprise will start with production of components for the multi-role Ka-226T helicopter. The enterprise will serve as an industrial base for high-tech Russian rotorcraft products in India.

"India is a traditional partner of Russian Helicopters in terms of helicopter deliveries. The creation of a joint Russian-Indian enterprise marks a new stage and also a logical continuation of our joint efforts in light of the growing demand for Russian helicopter models," said Dmitry Petrov, CEO of Russian Helicopters.

According to Petrov, the joint venture will help drive the development of India's aerospace industry and provide for effective application of advanced Russian technologies. It will also make it possible to organise the training of Indian engineers and promote the development of highly qualified personnel across the entire production chain.

Moreover, the enterprise will be eligible to implement offset projects under various procurement tenders in India where Russian rotorcraft are involved. The holding company and Elcom Systems also reached an agreement on plans to create a joint Helicopter Academy in India for the training of flight and technical personnel.

Vladimir Putin's visit to India resulted in the signing of a set of documents aimed at strengthening military-technical cooperation between Russia and India, including in helicopter manufacturing. India is a traditional buyer of Russian aircraft and currently has a fleet of 280 Russian-made helicopters. SP

Lockheed Martin acquires CDL Systems

Lockheed Martin has acquired the assets of CDL Systems Ltd., a software engineering firm that specialises in the development and licensing of vehicle control station software for unmanned systems.

CDL Systems has developed an open, standards-based, and commercial off-the-shelf software product that has been integrated into numerous unmanned vehicle platforms. The company's products are designed on low-cost, interoperable, and open architecture systems to support government and civil applications around the world, with more than one million hours of operational use. CDL

Systems was founded in 1992 in Calgary, Alberta, Canada, with offices in Calgary and Huntsville, Alabama.

"CDL Systems is an industry leader in the development and systems integration of interoperable vehicle control software," said CDL Systems CEO Albert Sulmistras. "Our success is a direct result of our talented and dedicated employees and we're excited that this combination will enable us to continue to expand our reach and grow our business." SP

Embraer, AgustaWestland join forces in Latin America

Embraer S.A. and AgustaWestland recently announced that they have signed a memorandum of understanding aiming at establishing a joint-venture which could lead to the production of AgustaWestland helicopters in Brazil to be marketed for both commercial and military use in Brazil and Latin America.

"This is an important step for Embraer as we continue expanding our business", said Frederico Fleury Curado, Embraer President and CEO. "We are certain that the combined skills and competences of Embraer and AgustaWestland will create great value for customers in the region."

Bruno Spagnolini, CEO, AgustaWestland said, "We are pleased to have signed this MoU with Embraer and look forward to working with them to establish a joint-venture company in Brazil to manufacture and market helicopters. Brazil is an important market for AgustaWestland and we believe having an industrial presence in this country will help us to further grow our business in one of the world's fastest growing markets."

Preliminary studies by Embraer and AgustaWestland show strong market potential for twin-engine, medium-lift helicopters, especially to meet the requirements of the offshore oil and gas market. Other key market sectors, such as executive transport and military, show promising potential as well. The partners aim at establishing the joint-venture within a few months once a final agreement has been reached and the relevant approvals have been obtained. SP

Cassidian appoints Peter Gutsmiedl as first Head of Asia-Pacific

Cassidian has appointed Peter Gutsmiedl as the company's head of operations in Asia-Pacific. Gutsmiedl takes up this newly created role in addition to his position as India CEO.

Gutsmiedl's additional responsibility for the region reflects a realignment of Cassidian's business structure. To better tap growth opportunities worldwide, Cassidian has reorganised its newly integrated Sales and International Operations Division along the lines of three major regions: Asia-Pacific, Americas and Europe, Middle East & Africa (EMEA). As the in-charge of Asia Pacific, Gutsmiedl supports the recently appointed Cassidian Chief Sales Officer Christian Scherer.

"India plays a strategic role for us and continues to be the main focus in Asia", explains Cassidian CEO Bernhard Gerwert. "In addition to further increasing our industrial footprint in India, we also plan to tap considerable growth potential in the wider region."

Welcoming his new responsibility, Gutsmiedl said: "I am looking forward to expanding Cassidian's Indian operations into a springboard for strong and sustained growth in Asia-Pacific. The capabilities at our Engineering Center in Bengaluru allow Cassidian to customize products from our global portfolio according to local requirements. This gives Cassidian a competitive advantage in India which we can also leverage to target other Asian markets with similar requirements."

Besides combat aircraft opportunities, Cassidian sees potential especially in the areas of professional mobile radio, avionics for fighter aircraft and helicopters, radar/EW systems and border control systems and infrastructure in the region. SP

Jean-Bernard Lévy appointed Chairman and CEO of Thales

The Board of Directors of Thales have elected Jean-Bernard Lévy as the Chairman and Chief Executive Officer of Thales. Thales's two main shareholders, the French State and the Dassault Aviation have welcomed the appointment and will work in agreement with senior management to pursue the continued recovery of the Group and its future development.

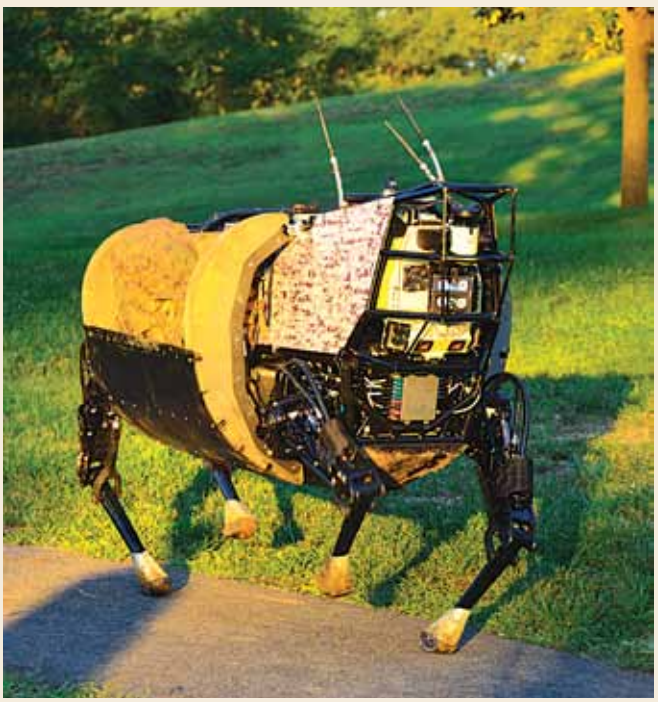
Jean-Bernard Lévy has said that he is very proud to be appointed to lead Thales. "I have been aware for many years of the passion and the high-level expertise of the men and women who contribute to the Group's numerous successes in many countries around the world. In the global marketplace, Thales has all the strengths needed to play a leading role. I know I can count on the energy and commitment of all to meet the challenges ahead and work together to develop our Group."

Jean-Bernard Lévy is a graduate of the École Polytechnique (1973) and Télécom ParisTech. He began his career in 1979 with France Telecom as an engineer in Angers. In 1982, he became responsible for the management of senior staff and budgets, and was later promoted to deputy head of personnel. In 1986, he acts as advisor to Gérard Longuet, the French Minister for Postal and Telecommunications services.

Jean-Bernard Lévy was General Manager, Communications satellites of Matra Espace and then Matra Marconi Space from 1988 until 1993, when he became Chief of Staff to Gérard Longuet, the Minister for Industry, Postal Services & Telecommunications and Foreign Trade. In 1995, he was appointed Chairman and Chief Executive Officer of Matra Communication, and in 1998, he joined Oddo et Cie as Chief Executive Officer, then managing partner.

During summer 2002, Jean-Bernard Lévy was appointed CEO of Vivendi before serving as Chairman of its Management Board from 2005 until June 2012. Jean-Bernard Lévy is a chevalier of the Légion d'Honneur and an officer of the Ordre National du Mérite. SP

PHOTOGRAPHS: Cassidian, Thales



PHOTOGRAPH: Darpa

Robot to serve as future military's "pack mule"

The warfighter who carries up to 100 pounds of equipment on his back is expected to get relief from the cumbersome weight, officials at the Defense Advanced Research Projects Agency (DARPA) say.

It's not just any robot. DARPA's semi-autonomous Legged Squad Support System – also known as the LS3 – will carry 400 pounds of warfighter equipment, walk 32 kms at a time, and act as an auxiliary power source for troops to recharge batteries for radios and handheld devices while on patrol.

Now in trials, the "pack mule" robot might have numerous functions, but its primary responsibility is to support the warfighter, said Army Lt Colonel Joseph K. Hitt, Programme Manager in DARPA's tactical technology office.

"It's about solving a real military problem: the incredible load of equipment our soldiers and Marines carry in Afghanistan today," Hitt said. The consequences of that kind of load can be soft-tissue injuries and other complications, he added.

And as the weight of their equipment has increased, so have instances of fatigue, physical strain and degraded performance, officials have noted. Reducing the load warfighters carry has become a major point for research and development, DARPA officials say, because the increasing weight of equipment has a negative effect on warfighter readiness.

DARPA's five-year, $54 million LS3 project began in September 2009, and now is undergoing trials in the field. The LS3 must become familiar with different types of terrain, from wooded areas to deserts, and with varying weather conditions such as rain and snow, Hitt explained.

The LS3 prototype completed its first outdoor assessment this January, demonstrating its mobility by climbing and descending a hill and exercising its perception capabilities.

Following a "highly successful" trial at Fort Pickett near Blackstone, Virginia, earlier this month, Hitt said, the robot worked with the Marine Corps Warfighting Laboratory there and developed additional behaviours.

The robot's sensors allow it to navigate around obstacles at night, manoeuvre in urban settings, respond to voice commands, and gauge distances and directions. The LS3 also can distinguish different forms of vegetation, Hitt said, when walking through fields and around bushes. With the ability to avoid logs and rocks, the LS3's intelligent foot placement on rough terrain is a key element, he said.

The next trial will challenge the robot with the desert terrain at Twentynine Palms Marine Corps Base in California, and subsequent trials will follow every three months, Hitt said.

"The vision is a trained animal and its handler," he said, adding that a squad leader would learn 10 basic commands to tell the robot to do such things as stop, sit, follow him tightly, follow him on the corridor, and go to specific coordinates. The technology of the robot focuses on mobility, perception and human-robot interaction," Hitt said.

With the expectation of delivering the first LS3 to a Marine Corps squad in two years, the programme culminates a decade of research and development. Yet it still needs some tweaks, Hitt acknowledged.

"We have to make sure the robot is smart like a trained animal," he said. "We need to make sure it can follow a leader in his path, or follow in its own chosen path that's best for itself. The interaction between the leader and the robot [must be] intuitive and natural." SP

Rockwell Collins bags contract for completion of the TTNT waveform development

The Air Force Research Laboratory (AFRL) has awarded Rockwell Collins an $18-million contract to complete the development and qualification of the tactical targeting network technology (TTNT) waveform, paving the way for the high-speed, networking waveform to be implemented across a broad range of aircraft.

"TTNT will provide warfighters with a higher throughput, low latency networking capability to meet the demands of new and evolving mission requirements." said Bob Haag, vice president and general manager of Communication and Navigation Products for Rockwell Collins. "TTNT will provide the Department of Defense with a unique networking capability that the warfighter does not have today."

The contract modification extends the current contract value and scope for the completion of the TTNT waveform development effort. The TTNT waveform will be made available for the Joint Tactical Networking Center's Information Repository.

TTNT provides high data rate, long-range communication links for airborne platforms. As a complement to existing tactical data link networks, TTNT adds significant airborne network capacity while providing rapid, low latency message delivery. The minimal network planning requirements of TTNT will enable participants to enter and exit the network without extensive preplanning. SP

Aegis Technologies launches combat vehicle detection and identification

Huntsville, Alabama-based Aegis Technologies company has launched a games-based combat identification and recognition trainer known as combat vehicle detection & identification (C-ID). The product has been selected as a finalist in this year's IITSEC Serious Games Showcase & Challenge.

The company is now using its visualisation technologies to address a new area of training, vehicle recognition skills for UAV operators. A move that is likely to be the first of a series of projects where the company leverages proven technologies into new areas of training.

During the product development phase, research was undertaken by consulting with the US Department of Defense and industry subject matter experts as well as analysing military trend reports that show fratricide and combat vehicle recognition are still issues in current operations. Development of C-ID began by determining what vehicles are most commonly used in combat, both friendly and enemy, providing a training environment to educate the user on those vehicles (from the so-called 'C-ID training garage' database) and then placing them in a realistic environment that will allow them to test their proficiency in positively identifying the vehicle and engaging the threat if appropriate.

The new training system challenges players to embark on a series of missions in a variety of battlefield environments; correctly identifying combat vehicles and then determining if they are friend or foe. After familiarising themselves with the features of 30 potential vehicle targets in the C-ID training garage, the trainee enters the battlefield environment and must locate and select vehicle targets, evaluate and identify with the option to zoom and then select the vehicle ID from an on-screen set of options. An on-screen after action review provides the player instant feedback on their performance and gives them a proficiency ranking. SP

PHOTOGRAPH: Aegis Technologies

Argon's remotely managed CBRN simulation exercise

Argon Electronics has cut itself a niche in the development and manufacture of hazardous material detection simulators, most notably in the fields of military chemical, biological, radiological and nuclear (CBRN) defence. The company's simulators also have applications in civil defence market.

At this year's IITSEC event, the company is set to launch a system for remotely managing CBRN and HazMat simulation exercises. Called PlumeSIM, the new system has been developed for use by military and first responder training organisations as well as industrial concerns such as those responsible for nuclear power generation. It enables a single instructor to configure simulated chemical and radiological releases across a wide area, and then to monitor and manage multiple trainees in real time from a central location.

The system allows virtual dispersal plumes and hot spots to be set up quickly and simply. There are multiple scenario options including the type of threat, the point of release or delivery mechanism from single or multiple sources, and a full range of constant or changing environmental conditions such as wind strength and direction and precipitation. Persistency, deposition, time of release or detonation can also be controlled by the instructor.

Able to operate as part of a desk-top training exercise or in the field, it is thought that PlumeSIM will attract interest from the integrators of live training systems that want to add realism to their training exercises.

The exercise area can also be configured, using standard maps or hand-drawn sketches of the training area. Once configured, all exercises can be saved for future use and revision. These can be run in either a classroom environment for table top exercises, with trainees using standard gamepad controllers to manipulate their positions on-screen with actual simulators responding according to the simulated threat, or as a field based training system.

The company says that PlumeSIM is a modular system, so can be upgraded as required, and is designed for use with all simulation instruments from Argon. SP

Rheinmetall Simulation Australia to strengthen commitment "Down Under"

Rheinmetall Defence is expanding its presence in Australia with the newly founded subsidiary Rheinmetall Simulation Australia Pty Ltd. The new company underscores its commitment to providing customers with comprehensive advice and support in all aspects of simulation and training technology. Adrian Smith has been appointed Managing Director of Rheinmetall Simulation Australia, which will be headquartered in Adelaide.

The move represents another step in Rheinmetall Defence's progressive internationalisation and systematic expansion into key markets. The Düsseldorf-based German Group has production and sales units in numerous European countries, the United States and Canada, the United Arab Emirates, South Africa and Asia.

Rheinmetall Simulation Australia is a wholly owned subsidiary of German defence and automotive company Rheinmetall AG, which has an annual turnover of approximately €4 billion (A$ 5 billion). Rheinmetall Defence's business unit Simulation and Training is Europe's second largest simulation and training company and the largest supplier of defence simulation equipment for land warfare operations.

Rheinmetall Simulation Australia will provide advanced simulation-based training products and services to the Australian armed forces in the maritime, air and land environment and plans to aggressively grow the company to be the major supplier of these products in the region and to become the preferred partner of the military. SP

Gayle's room 'guests' arrested for security breach

In 2012, Chris Gayle made news, but not for his big hits or quirky celebrations. Security officials at the Cinnamon Grand hotel in Sri Lanka arrested three British women in the wee hours for socialising with Gayle in his room along with teammates Andre Russell, Dwayne Smith and Fidel Edwards, raising concerns from police authorities and ICC's Anti-Corruption and Security Unit. The women were later released from custody.

Police treated it as a breach of security, because the players have been accorded the security levels reserved for heads of the state, making hotel floors out of bounds for outsiders. Though players are allowed to bring guests into their rooms, they are supposed to register the names with the hotel security. The trouble began when the women's names were not in the list, and the players refused to recognise them as their guests.

"Ministerial Security Division (MSD) guards, assigned to protect the players, carried out the arrest and the three women were handed over to the Kollupitiya police station for further investigations," the police said in a statement. SP

To meet girlfriend, techie poses as army captain

Umesh Kumar, a computer engineer from Rajasthan, was arrested recently for impersonating as army captain to meet his girlfriend in Jammu. He is said to have repeatedly breached high security military installations in his love pursuit.

Umesh was picked up by the police in a routine raid from a hotel in Jammu. He later turned out to be a major catch for the police as they recovered forged documents of sensitive nature including army identity cards, smart canteen cards, medical records and other papers from his possession.

During questioning, he reportedly told the police that he had forged the documents to gain access to his girlfriend who is working in one of the army hospitals in Jammu.

"He has been going around calling himself an army officer. In the process he cheated a woman whom he promised to marry. We have registered a case of cheating against him," said J.P. Singh, Deputy Inspector General of Police, Jammu-Kathua range. What has, however, baffled the police is that he has been visiting number of army installations including Yol cantonment in Himachal Pradesh and Nagrota garrison of 16 Crops army headquarters. SP

Security breach at Mumbai airport

A cargo jet belonging to logistics firm UPS was forced to return 45 minutes after take-off from the airport recently for lack of mandatory custom clearances of a consignment. "One of the consignments on board did not have the mandatory Custom papers and upon inspection from the Customs, we ordered the plane to come back," an ATC official said.

The ATC official, however, did not divulge details about the destination of the aircraft. In an earlier incident, two gates of the Mumbai International Airport were left unattended for over three hours following a tussle between CISF and Customs authorities. The tussle broke out over alleged delay in frisking of a Customs official by CISF and checking of entry and exit passes of CISF officials by Customs officials. SP

Darwin naval base goes into lockdown

A Darwin naval base went into lockdown recently after an armed intruder stole military-issue weapons and tied up a sailor during a raid on a navy patrol boat. Police have called the incident a breach of national security.

The break-in at the HMAS Coonawarra base, was by a single intruder armed with a gun and wearing a balaclava boarded the Armidale class patrol boat Bathurst, which was moored at the base.

A Northern Territory Police spokesman said a crewman on board was assaulted and tied up before the intruder broke into the boat's armoury. He said two pump-action shotguns and a dozen 9mm pistols were taken.

An Armidale class patrol boat would carry a stock of machine guns, assault rifles, shotguns, 9mm pistols and ammunition in its armoury. A "cache" of weapons appeared to be missing. The Royal Australian Navy bases 10 of its 14 patrol boats in Darwin. SP

PHOTOGRAPHS: wallpaperpassion.com, www.abc.net.au, Wikipedia

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