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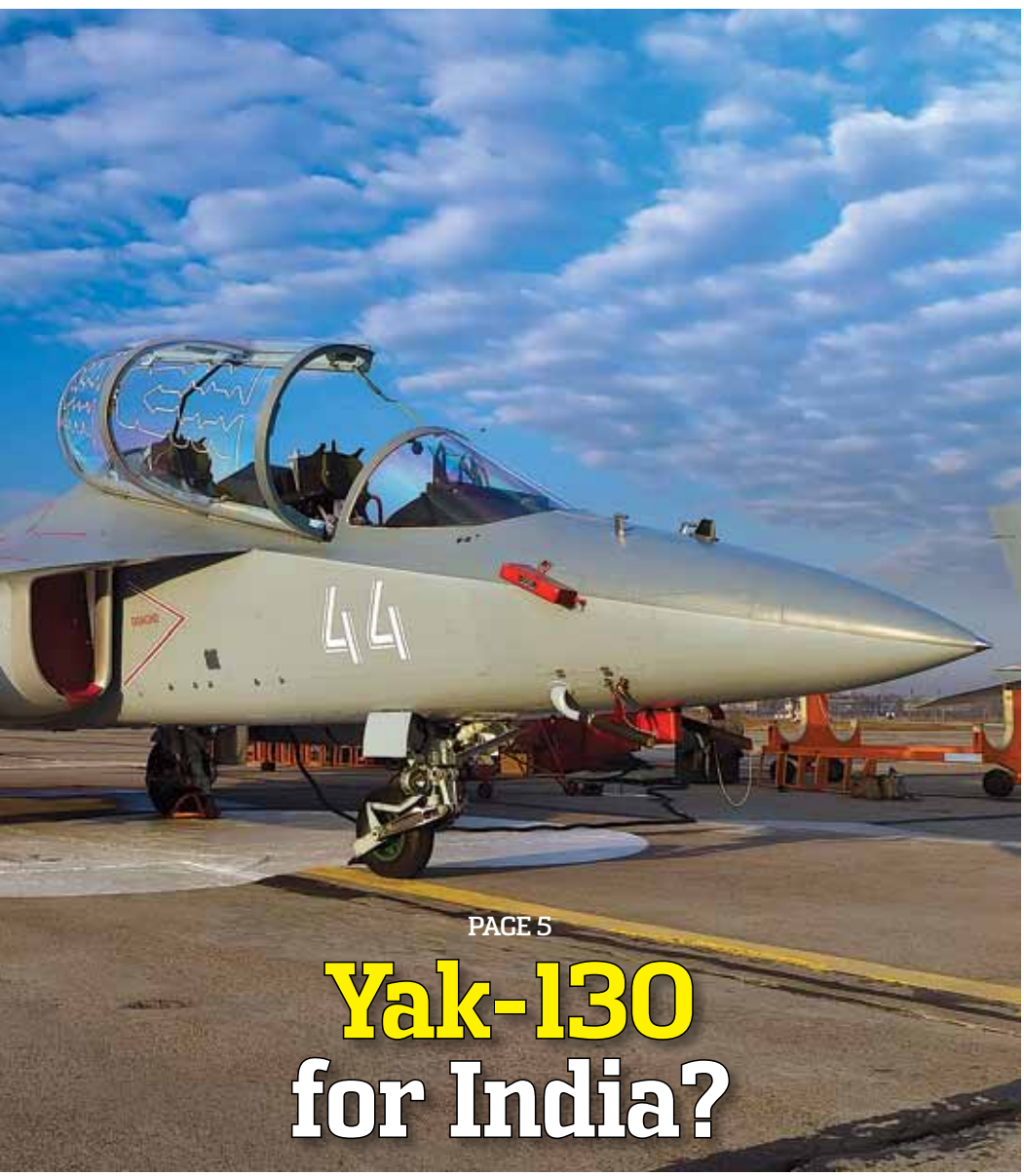

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HAL signs MTA follow-on contract with Russian partners

Hindustan Aeronautics Ltd (HAL), the aerospace major, signed the preliminary design phase (PDP) contract with the United Aircraft Corporation – Transport Aircraft (UAC-TA), the Russian partner and their JV-Multi-role Transport Aircraft Ltd (MTAL) for the multi-role transport aircraft (MTA) project as a follow-on contract of the General Contract signed between the three parties in May 2012.

"With this HAL and UAC-TA will start the preliminary design work immediately at Moscow. HAL design team, consisting of 30 designers, will be positioned at UAC-TA", said R.K. Tyagi, Chairman, HAL. The contract was signed by T. Suvarnaraju, HAL's Director (Design and Development) and S. Velmozhkin, General Director, UAC-TA.

PHOTOGRAPH: HAL

An Inter-Governmental Agreement was signed on November 12, 2007 to design, develop and produce the multi-role transport aircraft in the 15/20-tonne class, jointly by the Indian and Russian agencies (HAL and UAC-TAS) to meet the requirements of 100 aircraft for the Russian Air Force, 45 aircraft for the IAF and 60 for other countries. The total requirement for the present is 205.

On completion of the agreed work share of the PDP Contract in 10 months, Detail Design Phase (DDP) Contract will be signed to complete the design and development of MTA. The aircraft will be designed for cargo/troop transportation, paradrop/air drop of supplies including 'low altitude parachute extraction system.'

HAL will carry out the design and development of its workshare of the MTA at the Aircraft R&D Centre (ARDC) at Bangalore while its Transport Aircraft Division (TAD) at Kanpur will manufacture the prototypes and subsequently the serial production will be undertaken at Kanpur where dedicated facilities are being set up. SP

Cover:
With the JSC IRKUT Corporation recently handing over an initial batch of six Yak-130 combat trainers to the Russian Air Force, the company is weighing interest from India in the trainer that's being moulded into a light-weight fighter.

Cover image: Irkutsk Corp

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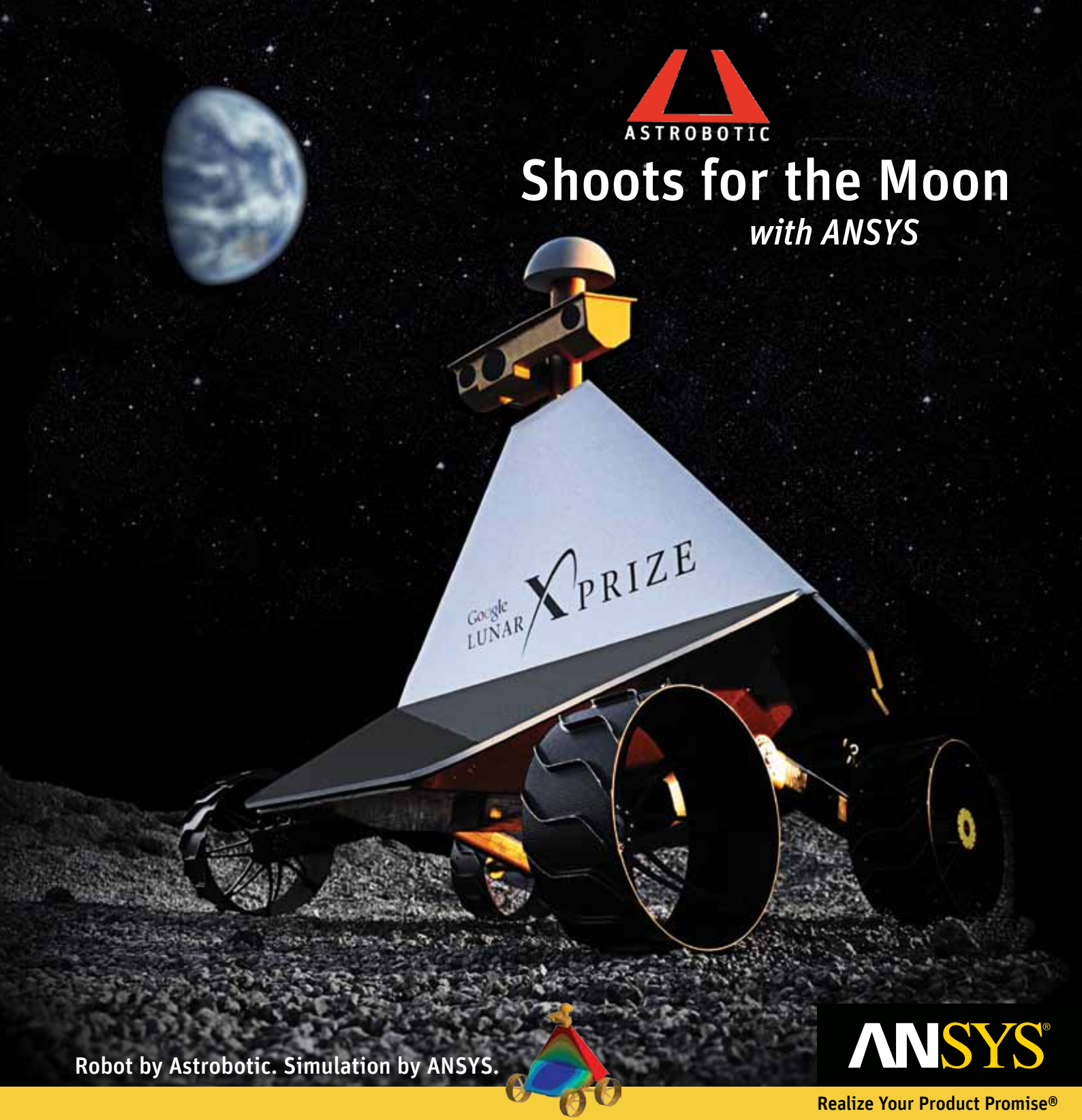

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Need for strategic vision

Siachen is said to be the world's highest battlefield where India and Pakistan have been engaged in a conflict for nearly three decades. The snow-capped mountainous terrain continues to be of strategic importance to India. However, it is somewhat disconcerting that the political leadership is working towards 'demilitarisation' of the Siachen region.

Peace initiatives are welcome, but walking into a trap, egged on by considerations other than national security, is going to be 'suicidal' for India, especially when our neighbourhood cannot be trusted. The higher echelons of the Indian armed forces have expressed in no uncertain terms that 'demilitarisation' of Siachen would not be in the strategic and security interest of the nation. Besides, control over Siachen has been established, as in the words of Winston Churchill, through "blood, toil, tears and sweat of the Indian soldier."

In this issue, Lt General (Retd) P.C. Katoch has taken strong exception to the Indian Government's move to demilitarise the region stating that withdrawal from Siachen would dilute the resolution passed by the Indian Parliament in 1994 that Jammu & Kashmir is an integral part of India. We continue to go wrong, with or without counsel, as he cites how Jawaharlal Nehru trusted the Chinese of his own volition, whereas the current leadership has a coterie of advisers. We just hope that wiser counsel prevails.

Moving from the snowy regions, we come to another turf war, between the Indian Air Force (IAF) and the Indian Army on whether the latter should have its own fleet of attack helicopters. The government has finally settled the matter in favour of the Army. Air Marshal (Retd) B.K. Pandey in his analysis of the imbroglio states that the decision may not end the turf war.

However, for a fighting-fit air force, among other things, a crucial requirement is the availability of trainer aircraft, be it basic, intermediate or combat. As far as the IAF is concerned, it has had to 'manage' with different aircraft for training needs. That the IAF has 'managed' it well so far, despite the limitations, is highly commendable.

Only recently has the government cleared the procurement of 75 Pilatus basic trainer aircraft for the IAF which since 2009 has been without one. As for intermediate jet trainers (IJT), the story is the same. Similarly, the induction of advanced jet trainers (AJTs) has been an arduous process. In 2004, India picked BAE's Hawk. The first 24 Hawk Mk.132 AJTs were delivered by BAE, while deliveries on 42 aircraft which are being licence-built by the Hindustan Aeronautics Limited have got delayed. When India first sought the AJTs, the Yak-130 was on the radar, but it had not completed evaluation. Now the Yak-130 is ready and the Russians are looking at India all over again.

Talking about delays, we hear that the Indo-Russian fifth generation fighter aircraft (FGFA) will be fully certified and ready for induction only by 2020, three years later than that the IAF had planned for. Moving from IAF to Indian Navy, they too are awaiting the induction of Vikramaditya (ex-Gorshkov) aircraft carrier since 2008. It is behind schedule by four years and has had a cost over run of $1.3 billion. Such delays severely impact the modernisation plans of the armed forces.

Jayant Baranwal
Publisher and Editor-in-Chief

Russia interested in Yak-130 for India

PHOTOGRAPH: Irkutsk Corp

With the JSC IRKUT Corporation recently handing over an initial batch of six Yak-130 combat trainers to the Russian Air force, the company is weighing interest from India in the trainer that's being moulded into a light-weight fighter. The Russian contract signed in 2011 involves the delivery of 55 trainers to the Russian Air Force by 2015. On October 5, pilots of Borisoglebsk training centre of the Russian Air Force ferried three Yak-130s from Irkutsk aviation plant to the Borisoglebsk base.

Oleg Demchenko, President of JSC IRKUT Corporation, noted: "Our company will continue increasing the production rate of combat aircraft within the state defence order. Now, together with the Sukhoi Design Bureau we are testing new Su-30SM multi-role fighters with pilot's training functions. In 2012 IRKUT plans to transfer the first batch of aircraft this type to the Russian Ministry of Defence".

Russian Defence Minister Anatoly Serdyukov, who was recently in Delhi, said, "Equipping the Air Force with Yak-130 aircraft allow achieving a desired level of pilot's trainings to handle new generation combat fighters, which are to be mass procured by the Military Department." It is not clear just where interest in the Yak-130 could possibly spring from in the Indian context.

It is well known that the Yak-130 aircraft was offered for an IAF requirement for jet trainers in 2008, but was rendered ineligible as it hadn't completed evaluation trials in Russia (the IAF subsequently decided to order more BAE Hawk Mk.132 advanced jet trainers). The Yak-130 has since completed all trials and is now fully operational with the Russian Air Force.

According to a company spokesperson, "Yak-130 new generation combat trainer provides top-class pilots training to handle Russian and foreign-made combat aircraft of the "4+" and "5" generations. Currently IRKUT Corp. is working on improvements to Yakovlev Yak-130 combat jet trainer that may turn it into a light attack aircraft. The first stage of modernisation includes the installation of an inflight refuelling system and optronic pod. In the next stage, designers plan to equip the aircraft with radar. The radar installation will provide the Yak-130 with target detection for air-to-ground missiles."

He adds, "We hope that the IAF will be interested in the Yak-130 new generation combat trainer as well. The Yak-130 offer for the IAF will include licence production as it was planned in 2008." SP

Flanker turns 10 in Indian service

The venerable Su-30MKI, the definitive variant of the iconic Russian air dominance fighter, has turned ten in the service of the Indian Air Force — one of the largest Flanker operators in the world today. Inducted in September 2002, and with licence production beginning to take-off two years later, the Indian Air Force is now at the cusp of a first cycle of modernisation of what is easily its most advanced jet.

With a fleet of nearly 300 MKIs by the end of this decade, the IAF will have one of the largest air dominance fleets in the world if coupled with the intended purchase of similarly capable Rafale jets as part of the medium multi-role combat aircraft (MMRCA) competition. The Su-30MKI has proven a reliable and supremely nimble platform in Indian service, deployed for exercises abroad, air displays across the country, for island protection, air defence, air cover for VVIP aircraft and other duties through the years. Now deployed with the Central, Eastern and Western Commands, and with detachments operational at bases in the West and South, the Su-30MKI represents a platform of cooperation that the Indian and Russian Governments hope to exponentially leverage and increase in the far more cooperative and ambitious perspective multi-role fighter (PMF/FGFA) project, in which HAL recently unveiled the wind-tunnel model of its intended Indian variant. SP

PHOTOGRAPHS: IAF, Anoop Kamath

Contract for six more C-130Js near

In a delight for the IAF, a contract for six more Lockheed-Martin C-130J Super Hercules transport aircraft is near with the draft follow-on contract approved by both sides. The newly contracted aircraft will also join the 77 'Veiled Vipers' Squadron at Hindon.

IAF Chief Air Chief Marshal N.A.K. Browne, who has in the past extolled the virtues of the Super Herc in Indian service – and also indicated that early deliveries had allowed the IAF to save cost on the follow-on package to the tune of $80-million – said recently that a contract would be concluded shortly with the US Government in a follow-on foreign military sale (FMS) contract. 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.

The aircraft have also been an integral part of exercises through the year, notably the Shoor Veer exercise in May this year. A modified version of the C-130J called the 'Sea Hercules' will participate in the Indian Navy's medium-range maritime reconnaissance aircraft competition. SP

India finalises 42 more Su-30MKIs from Russia

India has finalised a contract for 42 more Su-30MKI fighters to be built under licence from Russia at HAL's Nashik facility—taking the total number of Su-30s in service to 272, and making India the world's largest operator of the Su-30 type.

As recently revealed by IAF Chief Air Chief Marshal N.A.K. Browne, the IAF plans to induct four more squadrons of Su-30MKI. The IAF will soon be adding its latest Su-30 squadron at Halwara, the first under the Western Air Command. "We are raising three-four more squadrons of Sukhoi. Two extra squadrons are being raised in the Eastern Sector. So far we have raised two squadrons there and two more are in process. One more squadron will be based in Punjab and one will be in Southern Command in Thanjavur. Therefore, we will have 13-14 total squadrons of Sukhoi to add to our strength." The Indian and Russian sides have also begun discussing and firming up an upgrade programme for the Su-30 fleet. SP

One year delay in Vikramaditya

In what will be a major setback to the Navy's twin-carrier plans, and to deployments on both seaboards, the Vikramaditya (ex-Gorshkov) aircraft carrier will not be delivered before the end of next year. Confirming the bad news, visiting Russian Defence Minister Anatoly Serdyukov said there were major problems identified in the ship's main power plant and certain boilers and that the ship was back at the Sevmash Shipyard in Severodvinsk in northwest Russia for inspection and necessary repairs. With winter setting in, work will be much slower than usual.

The Russian Minister indicated that the ship was likely to be ready for a second shot at sea trials in April next year following the ice melt. The Vikramaditya refurbishment programme, which began in 2004, has already seen a $1.3-billion cost overrun, and a time overrun of a staggering four years (it was originally to have been delivered in December 2008). The latest delay means the Indian Navy will have to stretch its sole carrier, INS Viraat, for even longer—the ship is already over 50 years old and truly on its last legs. SP

Three-year slip in FGFA

The Indian Air Force officially expects to begin inducting the Indo-Russian fifth generation fighter aircraft (FGFA) by 2017, but there's disappointment there. Russian Defence Minister Anatoly Serdyukov has said in Delhi that the aircraft will be fully certified and ready for induction by 2020—three years later than the IAF has been planning for.

The IAF is looking to acquire 214 aircraft. Work has begun slowly on the Indian variant (which will be significantly different in terms of systems from the Russian base model), with HAL recently unveiling a wind-tunnel model for the modified Indian single-seat version of what the Indian Government has designated the perspective multi-role fighter (PMF) based on the Sukhoi T-50 PAK FA. The Russian test programme is already in full swing with three prototypes in the air, and a fourth to take off soon. A development contract between India and Russia is currently under negotiation and will be signed early next year, sources say. The IAF will test a total of three prototypes in 2015, 2017 and a final production version in 2019—hopefully only a year before full certification and induction. SP

PHOTOGRAPHS: Indian Navy, Boeing, Sukhoi

Boeing's Apache will be IAF's new attack copter

Boeing's AH-64D Apache Block III has officially been declared to be the winner in the Indian Air Force's (IAF) attack helicopter competition. The Ministry of Defence will shortly begin contract negotiations with the Pentagon for a government-to-government contract. The Apache programme is administered by the US Army.

The Apache met performance requirements during field evaluation trials last year, winning out over the Russian Mi-28NE. A final contract, which is likely to be signed by early next year, is expected to be worth about $1.4 billion. The IAF is understood to be deciding on a mix of AH-64D Apaches with and without the Longbow system. One in six Apaches in the US Army service is armed with the Longbow system. The Apaches in IAF service, unlike the Mi-35 fleet, will be under the command and control of the IAF itself and not the Army. The Army, currently embroiled in a turf battle with the IAF over the use of anti-armour helicopters and other tactical battlefield assets, could initiate an effort to procure its own armed helicopters, though a global tender may not be the route. SP

PHOTOGRAPHS: SP Guide Pubns, Dassault Aviation

RFP to Honeywell for Jaguar re-engine this month

The Ministry of Defence (MoD) is expected to send out an RFP to Honeywell this month for the F125 IN turbofan engine for the IAF's Jaguar fleet, IAF Chief Air Chief Marshal N.A.K. Browne has revealed. The F125 IN engine emerged last year as the only suitable powerplant to re-engine the Jaguar and replace its Rolls-Royce Adour Mk811 turbofans.

In February last year, Rolls-Royce pulled out of a two-way competition after the IAF insisted that the competition was to replace the Jaguar's engines and not merely upgrade them. Rolls-Royce had offered (and indeed, continues to offer) a comprehensive 'low-risk optimised' upgrade involving the Adour Mk821 engine. Sources indicate that the Honeywell engine had an edge from the start, considering it was lighter and had proven to require less modifications for integration. Last year, it had been conjectured that the competition would be refloated. However, after a study found that no engines in the global market would suit the Jaguar other than the two that competed, the IAF recommended that it would go with the Honeywell offering, as a direct purchase.

The F125 after-burning version powers the Taiwan Indigenous Defense Fighter and the non-afterburning version, the F124, powers the Czech fighter and the M346. "As an 'off-the-shelf' engine solution, the F125IN is designed to drop-fit into existing Jaguar airframes, resulting in an enhanced aircraft with superior mission capabilities, improved pilot safety, and outstanding reliability, with a projected life-cycle savings of over ₹7,000 crore. F125IN will transform the IAF Jaguar and power India into the future," says Honeywell. SP

MMRCA well on track, says IAF Chief

Discrediting rumours of a competition abort or re-tender—or even that negotiations could be taking place with other companies—IAF Chief Air Chief Marshal N.A.K. Browne has stressed that the medium multi-role combat aircraft (MMRCA) contract negotiations with Dassault Aviation for the Rafale are "well on track" and progressing satisfactorily, with expectations of a contract award this financial year.

The IAF Chief indicated that complex costing was under discussion at this stage, and once the contract negotiation committee (CNC) completed its work, there would be approvals at various levels, ending with the Cabinet Committee on Security (CCS) before a deal, worth potentially over $12 billion, has been signed.

"We have already received the budget for this acquisition. I have not heard any rumours. The negotiations are progressing well and are on track," the IAF Chief said at his annual press conference. Earlier this year, Defence Minister A.K. Antony too dispelled worries about the competition when an inquiry he ordered into a complaint by a fellow Member of Parliament into the efficacy of the selection process, was found to be unfounded. Dassault Aviation hasn't officially commented on the IAF Chief's words, though the company sources confirmed that negotiations were going well, and that they too hoped to draw up a draft contract soon. SP

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LT GENERAL (RETD)
P.C. KATOCH

Strategic suicide

The unthinkable has happened. India has gone ahead and signed on the dotted line to demilitarise Siachen, committing the biggest strategic blunder of the 21st century. The Prime Minister Manmohan Singh has committed the very same mistake in trusting the Pakistanis as Nehru did in trusting the Chinese in 1960s. Nehru did it of his own volition whereas Manmohan Singh has allowed himself to be misled by his coterie and the West.

Strategic suicide through strangulation has been initiated with the India-Pakistan Track II signing the agreement at Lahore last month despite grave reservations by at least three Indian members — a former ambassador, a three star rank officer each from army and navy and even a former R&AW special secretary.

The decision was obviously taken at the political level disregarding strong objections by successive Army Chiefs including the present one. Government briefing of Track II Team prior to departure merely reinforced the Army plea that "any further talks be taken up after ground positions of both sides were authenticated on ground" but the eventual agreement deviously went all the way. Members query why we should demilitarise were not answered. Strategic importance of the Saltoro especially in relation to Gilgit-Baltistan and in particular the Wakhan corridor was obfuscated by an orchestrating media.

Government and gullible TV channels (Nira Radia tapes leverages included) were utilised and selected former officers (shunted out by Army or given the option to resign or face legal action) put up on TV shows to morph perceptions that Siachen has no strategic significance and one even wrote India is 'holding' Karakoram Pass – a blatant lie. National dailies refused to print articles highlighting enormous strategic disadvantage of demilitarisation. The Track II was also told that it is as good as Track I.

The Northern Army Commander, opposed to demilitarisation, was offered Southern Command prior to his superannuation, to get someone more pliable, but he refused. Members of the Track II Team were carefully chosen – not one has served in Siachen, not a single infantry officer and the team never even visited Siachen. At least two are politically connected and will be well rewarded for their blind support.

The aim apparently is to get a Nobel peace prize at 'any' cost. Government officials unofficially say they never thought Pakistanis would agree to authentication of ground positions. Jehangir Karamat, heading the Pakistani team, an ex-DGMO and Army Chief, understands the strategic significance of Saltoro too well. Not only did Pakistan agree to authentication, they extracted the full works: establishing a joint commission to delineate the line beyond NJ 9842; present ground positions to be jointly recorded; determination of places to which redeployment will be affected; disengagement and demilitarisation with mutually acceptable time frame; cooperative monitoring and agreement on demilitarised zone assuring transparency. Atlantic Council of Canada promptly put the agreement on the Net. Shuja Nawaz, heading the Atlantic Council of US and close confidant of General Kayani, Pakistan's Army Chief, was in close touch with the Atlantic Council of Canada and attended most meetings.

India only believes in internalised perception management as in the instant case. Withdrawal from Siachen dilutes the 1994 Parliament resolution that Jammu and Kashmir is an integral part of India. New defence lines and additional troops (up to two Divisions) will require lakhs of crores of rupees that will eat into modernisation funds of the Army. Floodgates of infiltration into Ladakh will open with Pakistan denying culpability on plea of 'non-state-actors'. This will be concurrent to Pakistan orchestrating communal tension in Ladakh using Indian-based terrorists; something we tasted in recent times. Hundreds of additional police and CAPF battalions will be required to fight terror and insurgency. Pakistan has been nurturing Shia terrorist organisations precisely for this purpose. It is not without reason Musharraf warned of "many more Kargils". Prime Minister Manmohan Singh may have his glory moment with the peace prize but posterity will surely curse him. The nation needs to know what exactly has Pakistan done to earn such trust? SP

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

India only believes in internalised perception management as in the instant case. Withdrawal from Siachen dilutes the 1994 Parliament resolution that Jammu and Kashmir is an integral part of India.

PHOTOGRAPH: PIB

AIR MARSHAL (RETD)
B.K. PANDEY

End of a turf war?

On October 13, 2012, after prolonged dithering, the government finally decided to accept the plea from the Indian Army that it should have its own fleet of attack helicopters which so far has been under the control of the Indian Air Force (IAF). While one report says that "the Defence Ministry has decided that all future acquisitions of the attack helicopters would be for the Army", sources in the IAF maintain that the letter from the Ministry of Defence referred to "all the future acquisitions only", not the existing ones thus excluding the 22 AH-64D Apache attack helicopters that are being procured by the IAF. Thus along with the Apache fleet, the IAF will continue to operate the two squadrons of the Russian-origin Mi-25/35 attack helicopters and the medium-lift Mi-17 V5 helicopters. Under the existing arrangement, though maintained and manned by the IAF, the fleet of attack helicopters is under the operational control of the Indian Army. This arrangement does not quite meet the requirements of the Indian Army.

It is expected that this decision by the government would bring to an end at least one of the contentious issues between the Indian Army and the IAF. The timing of the decision however is somewhat unique in some ways as it comes at a time when the IAF was just about recovering from the euphoria of its 80th anniversary celebrations as also soon after a statement to the media by Air Chief Marshal N.A.K. Browne, Chief of the Air Staff, that "it was not possible to have little air forces".

While the decision undoubtedly would raise the spirits in the Indian Army, it would definitely be somewhat disconcerting for the IAF. But what must have been most odd and galling for the leadership in the IAF is the report that "The National Security Advisor had to intervene on behalf of Defence Minister A.K. Antony" to solve what the latter described as a 'family problem.' Involvement of an outside agency to mediate in a dispute between the Indian Army and the IAF, apart from being somewhat incongruous, is likely to set a precedent that may not be a healthy one for the Indian armed forces in the long-term perspective.

Viewed dispassionately, the Indian Army's case for having its own fleet of attack helicopters is not devoid of logic. In a fast moving battle fought in a network-centric environment with large armoured forces deployed, intimate, swift and accurate firepower delivered by airborne platforms would be critical to success. Unfortunately, despite several organisational and doctrinal changes to promote jointmanship as also considerable rhetoric emanating from the highest echelons of the two services, the required degree of integration between the Indian Army and the IAF has not been achieved. Hence the single-minded pursuit by the Indian Army to have its own attack helicopters rather than depend on the IAF. The Indian Army badly needs to cut down the time taken to mobilise their strike corps, an essential pre-requisite for the newly introduced Cold Start Doctrine. The land forces would also need swift response by attack helicopters as also a high degree of flexibility to cope with rapidly changing tactical situations. As per the Indian Army, it would be difficult, if not impossible, to ensure these without fully integrating the attack helicopters with the land forces.

The Army Aviation branch was created in 1986 with the erstwhile Air Observation Post units owned by the IAF, being transferred to the Army. Subsequently, the Indian Army acquired its fleet of light utility helicopters by way of Cheetahs and Chetaks, the latter even converted for limited attack role. The weight limit of five tonnes then defined has now been lifted consequent to the recent decision on attack helicopters. Thus there has been a sustained effort by the Indian Army to ensure a progressive growth of integral air power. It is only a matter of time before there is a renewed effort at acquiring light transport aircraft as well, a move that the IAF is likely to vehemently oppose. The recent decision by the government is, therefore, unlikely to bring an end to the turf war. SP

Unfortunately, despite several organisational and doctrinal changes to promote jointmanship as also considerable rhetoric emanating from the highest echelons of the two services, the required degree of integration between the Indian Army and the IAF has not been achieved

PHOTOGRAPH: af.mil

India and Russia defence cooperation moves forward

The twelfth meeting of the India-Russia Inter-governmental Commission on Military Technical Cooperation was held in New Delhi recently. The Indian delegation was led by the Defence Minister A.K. Antony and the Russian delegation was led by A.E. Serdyukov, Defence Minister of the Russian Federation.

The Commission endorsed the protocols of the meetings of the working group on shipbuilding, aviation and land systems (WG SALS) and the working group on military technical cooperation (WG-MTC) which were held in New Delhi on August 27-28, 2012 and August 30-31, 2012 respectively. The Commission appreciated the work done by the co-Chairmen and members of both the working groups and noted with approval the significant progress made in promoting bilateral military technical cooperation between the two countries.

The Commission noted that during the period under review, the two countries had taken various steps to deepen interaction in the development of defence technologies, modernisation of military equipment and joint manufacture of military-purpose products. The two sides confirmed that such cooperation involves the strengthening of interactions between the armed forces, defence industry enterprises and research agencies of the two countries. SP

New Phoenix networking radios for battlefield needs

BAE Systems has launched the Phoenix family of networking radios to meet the 21st century communications needs of the US military. Filling the gap between higher headquarters and the warfighter, Phoenix radios deliver secure, jam-resistant communications on the battlefield via modern networking waveforms.

BAE Systems has responded to the US Army's request for a non-developmental mid-tier networking vehicular radio (MNVR) solution with its two-channel Phoenix-SC radio, which meets or exceeds all specifications.

"The Phoenix family of radios offers the most complete MNVR solution for battlefield communications," said Joseph Senftle, Vice President and General Manager of Communications and Control Solutions at BAE Systems. "With decades of experience in software-defined radio technology, BAE Systems developed the Phoenix radios with affordability, reduced size, weight and power, as well as robust anti-jam capabilities as top priorities."

The Phoenix family of radios operates the wideband networking waveform (WNW) and the soldier radio waveform (SRW), enabling multiple configurations and providing full anti-jam modes in WNW to protect communications in hostile environments.

BAE Systems has leveraged commercial technology to create a low size, weight,

and power design that can integrate easily into the existing radio space on U.S. Army ground combat vehicles. To simplify end-user training and adoption, Phoenix radios are fully interoperable with other joint tactical radio systems currently in use. SP

BrahMos missile gets new navigation system

India has upgraded its BrahMos supersonic cruise missiles by installing the advanced satellite navigation systems from Russia's Kh-555 and Kh-101 strategic long-range cruise missiles, adding GPS-GLONASS technology to the existing doppler-inertial platform.

The integration of the navigation systems from Kh-555 will turn BrahMos, a supersonic cruise missile, into a "super-rocket" with almost a sub-strategic capability above its normal tactical range, capable of hitting targets over 300-500 km, from sea, land and air launchers, and capable of being armed with a nuclear warhead, according to sources.

The installation of the advanced navigation system is optimised for the new air-launched version of BrahMos, which will be carried by India's Russian-built Sukhoi Su-30MKI strike fighters. India plans to deploy over 200 of the advanced aircraft by 2020.

The Indian Navy carried out a successful test-firing of the sea-launched variant of the weapon on October 7 from the frigate INS Teg off the coast of Goa.

BrahMos can reach a speed of Mach 2.8 at levels as low as 30 feet (10 metres) or fly high-profile diving attacks. The missile was jointly developed by Russia and India, based on the NPO Mashinostroyenie 3M55 Onyx (NATO SS-N-26). SP

ATK wins $8.5 billion ammo contract

Alliant Techsystem Operations l.l.c., Independence, Missouri, was awarded a fixed-price–economic-price-adjustment with a maximum value of $8.4 billion.

The award will provide for the procurement of small calibre rifle ammunition and for the operation, maintenance and modernization of Lake City Army Ammunition Plant. Work location will be determined with each order, with an estimated completion date of September 30, 2022. The bid was solicited through the Internet, with two bids received.

The US Army Contracting Command, Rock Island, Illinois, is the contracting activity. SP

PHOTOGRAPHS: PIB, BAE Systems

Prithvi-II successfully test-fired from Odisha

India recently successfully test-fired its nuclear-capable Prithvi-II ballistic missile with a strike range of 350 km from a test range near here as part of a user trial by the army.

The surface-to-surface missile was flight tested from a mobile launcher from Integrated Test Range's launch complex-3 at Chandipur. ITR Director M.V.K.V. Prasad said, "All the mission objectives were accomplished."

The state-of-the-art Prithvi is the first ballistic missile developed under the country's prestigious Integrated Guided Missile Development Programme (IGMDP) and has the capability to carry 500 kg of both nuclear and conventional warheads with a strike range of 350 km, sources said.

The missile uses advanced inertial guidance system with manoeuvring trajectory. The test-fire of the sophisticated short-range ballistic missile, already inducted into the armed forces, was a user trial by the army and monitored by scientists of the Defence Research and Development Organisation (DRDO).

The sleek missile is handled by the strategic force command (SFC), a defence scientist said, adding the trial was conducted to gauge the effectiveness of the weapon in a real time situation and improve accuracy.

"The whole exercise was aimed at studying the control and guidance system of the missile besides providing training to the Army," said a DRDO official.

The missile is nine-metre-long and one-metre in diameter with liquid propulsion twin engine. A defence scientist associated with the trial said radars and electrooptical systems located along the coast tracked and monitored all the parameters of the missile throughout the flight path. SP

PHOTOGRAPHS: PIB

Antony asks DRDO to keep abreast with changing technologies

Defence Minister A.K. Antony has said that nanotechnology is an emerging field, which can lead to the development of new weapon systems and products that can benefit our nation.

Addressing a workshop on nanotechnology in New Delhi recently, Antony said the world over, the focus is on research & development in nanotechnology. Nanotechnology is likely to find applications in various spheres of our life, including defence, energy, transportation, automobiles, health, infrastructure, food and agriculture.

The Minister said that the Government has declared the decade (2010-20) as the decade of innovation. "We expect our scientists to make concerted efforts at making inventions, discoveries and innovations during this decade."

There is a need to adopt a conglomerate, or a consortium approach that involves academic institutions and industries. All the organisations must act as a cohesive team to explore various aspects of nanotechnology for its application in the development of missiles, aeronautics, armaments, combat vehicles, materials and life support systems, the Minister added.

Antony said that India has proved its strong capabilities and efficiency in the fields of information technology and biotechnology. The Defence Research and Development Organisation (DRDO) must make all-out efforts to bring about a convergence of nanotechnology with information technology and biotechnology, he said.

Antony said the production of DRDO-developed systems already inducted is worth ₹42,000 crore, and cautioned DRDO not to be complacent and set even higher targets. "Today, technology is changing at a rapid pace and DRDO must do its best to keep abreast of the latest technological changes taking place the world over. If DRDO lags behind, the technology being developed by it will become obsolete and it will not be able to provide state-of-the-art equipment to our armed forces. Thus, it must be the endeavour of all scientists to be innovative and creative in thought and action." SP

Iraq signs $4 billion arms deal with Russia

Russia will deliver attack helicopters and mobile air-defense systems to Iraq in arms deals worth $4.2 billion signed earlier this year. This was disclosed during a meeting between Iraqi Prime Minister Nuri al-Maliki and the Russian Premier Dmitry Medvedev in Moscow recently.

Moscow will supply 30 Mil Mi-28NE night/all-weather capable attack helicopters, and 50 Pantsir-S1 gun-missile short-range air defence systems. The contracts, among the biggest ever signed between Iraq and Russia, were signed in April, July and August by Iraq's acting defence minister, according to documents released during al-Maliki's visit.

Arms industry analyst Ruslan Pukhov of the Center for Analysis of Strategy and Technologies, a Moscow-based think tank, said the deal showed Baghdad's desire to break Washington's monopoly of arms supplies to the new government there. "It's clear that America's influence on Iraq has been excessive. The Shiite government of this country is starting to conduct itself more independently of Washington, and more looking towards Iran," he said. SP

Turbomeca (Safran) celebrating 60 years of cooperation with India

Anticipates a demand for 700 new helicopters in the next seven years

HAL's Dhruv helicopter is being powered by Ardiden 1H1/Shakti engine; (right) Turbomeca is preparing for the future with its Arriel 2+ family of engines

[By **Sucheta Das Mohapatra**]

A major producer of turbojet engines for aeroplanes and a leading global helicopter turbine manufacturer, Turbomeca, a Safran group company, envisages that India would be a growing marketplace for helicopters. Presenting the "Indian Market Forecast 2019" at the end of the Turbomeca Operators Symposium held at New Delhi on October 9, Philippe Couteaux, Vice President and General Manager, Airframes, Turbomeca, said that 81 per cent of the global helicopter deliveries between 2012 and 2015 will be in India, China and Russia; and 50 per cent in the 2025-29 period.

Couteaux said that there will be a demand for 700 new helicopters in India in the next seven years, of which 30 per cent will be civil and 70 per cent military. Sixty-six per cent of the military helicopter will be for transport and 34 per cent for specialised attack. Likewise, 25 per cent of civil helicopters will be for para-public police; 44 per cent for utility; 14 per cent for oil and gas; nine per cent for emergency medical services (EMS), charter and tourism purpose; and six per cent for corporate and private use. The company, he said, is preparing for the future with its Arriel 2+ family; the TM800, which is the future solution for four/five-tonne helicopters; and Ardiden, the state-of-the-art solution including for six/eight-tonne helicopters.

Satish Kirtikar, Managing Director, Turbomeca India, gave details of their 50 years of long-lasting cooperation with the Hindustan Aeronautics Limited (HAL), starting from 1962 when Artouste was licensed to HAL to power Chetak and Cheetah helicopters; partnership between HAL and Tubomeca in 2003, Ardiden 1H maiden flight aboard Dhruv in 2007, Ardiden 1H1/Shakti certification in 2009 and finally Shakti's entry into service in 2012. Stating Shakti as an Indian engine, Kirtikar informed that there is a firm order of 159 Dhruv by the Indian Army to HAL, which is likely to enter service this year. "Prototype testing of Shakti has begun," he said. Kirtikar further stated that Turbomeca through its partnership with HAL is supporting national programmes like advanced light helicopter (ALH), light combat helicopter (LCH), Jaguar; and is also preparing for the upcoming light utility helicopter (LUH), Indian multi-role helicopter (IMRH), etc.

The Safran group company, which is celebrating 60 years of its relationship with the Indian armed forces and industry, has over 2,000 employees in India, engaged in production, design and services. It has systems and equipment onboard more than 700 aircraft; as also optronics, navigation and other systems and equipment for the Indian Army and Navy. Besides the military engines, there are 140 civil Turbomeca engines in operations in India. Safran is now identifying and grasping new opportunities in line with its group activities.

Optimistic about the Indian market, the company officials announced that they would continue and develop participation on the development projects in aerospace, defence and security. And in order to build up its footprint in India, the company is looking forward to strategic partnerships with both public and private sector in the country. Without revealing the names of the key private players it is planning to partner within India, the officials stated that discussions are on with key players and Turbomeca will support the growing Indian market for civil and military helicopter. "We are continuing to invest in India for the long-term; fulfilling the offset obligations," said Couteaux. SP

PHOTOGRAPHS: SP Guide Pubns, Safran Group

US Army developing new fixed-wing aircraft

The US Army is refining an initial capabilities document for a new fixed-wing utility aircraft that is designed to replace more than 112 airframes with a common platform. The new platform should be able to perform a range of key mission sets and services, officials said.

"We manage 73 different series of aircraft and more than 40 different designs," said Colonel Brian Tachias, Project Manager, Fixed-Wing, Programme Executive Office Aviation. "A common cockpit and platform will reduce the amount of resources needed to train pilots and sustain the aircraft. Moving to one common fleet will reduce the manpower needed and allow us to gain efficiencies by reducing the number of contracts."

PM Fixed-Wing, established in October of last year, was stood up to create a central hub to manage the Army's fleet of fixed-wing aircraft. As many as 37 different fixed-wing aircraft programmes are now consolidated and centrally managed under the purview of the project office.

"Centrally managing Army fixed-wing aircraft will help to achieve improvements in safety, airworthiness certification, configuration management and aircraft maintenance. We will also gain efficiencies by reducing the number of contracts where it makes sense," Tachias said.

The Army has a current fleet of approximately 377 fixed-wing aircraft spanning a range of functions. Plans to develop a new Fixed-Wing Utility Aircraft emerged out of a fleet-wide Army assessment of fixed-wing aircraft conducted by PM Fixed-Wing and the TRADOC Capability Manager-Lift, Tachias added. SP

Eurofighter Typhoon continues phase 1 enhancements testing

The Eurofighter Typhoon development fleet has begun flight testing the final part of the phase 1 enhancements (P1Eb) programme with completion and delivery to the customers scheduled by the end of 2013. This final step of the first batch of enhancements contract introduces a host of important improvements to the Eurofighter Typhoon capabilities.

These improvements include full air-to-surface integration on Eurofighter Typhoon (including laser designator pod), full smart bomb integration, modern secure identification friend or foe (IFF) known as Mode 5, improved radios and direct voice input, air-to-surface helmet mounted sight system, improved air-to-air capabilities including digital integration of short range air-to-air missiles and updated MIDS datalink functionalities for enhanced interoperability with Coalition Forces.

P1E(b) will also see the introduction of many aspects from the UK Radar and Drop programmes which delivered improvements to the tranche 1 Eurofighter Typhoon — the latest standard of which has recently been delivered and is currently being evaluated by the RAF.

Cassidian flew the first P1E(b) flight in instrumented production aircraft (IPA) 7 in Germany on August 27, 2012. BAE Systems, Cassidian in Spain and Alenia Aermacchi followed with flights in IPA6, IPA2 and IPA4 respectively. After those flights it was confirmed that P1E(b) will deliver a robust simultaneous multirole capability to the nations' air forces which will provide a significant leap in Eurofighter's operational capabilities.

The phase 1 enhancements cover the design, development, qualification and clearance of the first major upgrade after the main development contract (MDC) which will be achieved via two separate software releases (SRP 10 with P1Ea and SRP 12 with P1Eb). The P1E programme is a major milestone in the development of Eurofighter Typhoon giving to the weapon system seamless air-to-ground integration and forming the baseline for future enhancements such as AESA radar and METEOR. SP

Operational firing of an Exocet missile from Rafale M

A French navy Rafale M shipboard fighter launched an AM39 Exocet anti-ship missile AM39 in an operational context recently. The aircraft, Rafale M27, was catapulted from the flight deck of the aircraft carrier Charles de Gaulle to validate the use of the missile. This flight test marks the end of operational testing and qualification of the Rafale/Exocet combination by the French Navy.

This is the first time that a Rafale belonging to the naval aviation launches an Exocet. The missile was qualified on the Rafale in 2007 by the DGA, as part of the development of the aircraft's F3 standard. This test milestone paves the way for the operational implementation of this capability in both Rafale squadrons (11F and 12F) of France's Naval Aviation. SP

PHOTOGRAPHS: US Army, MBDA, Eurofighter

US Coast Guard to acquire three HC-130J surveillance aircraft

Lockheed Martin received a $218 million contract for three additional HC-130Js for the US Coast Guard. This will increase the US Coast Guard fleet of HC-130Js from six to nine. The contract also includes funding for two mission suites, which are critical in supporting US Coast Guard search and rescue operations. The new aircraft are scheduled to be delivered in early 2015.

"The Coast Guard, like many services in the Hercules family, continues to recapitalize with the C130J," said Jack Crisler, Lockheed Martin Vice President for Air Mobility. "The C130J is without equal in terms of its multi-role, multi-mission flexibility and availability. No aircraft in production — or in development — can match the capabilities of the Super Hercules."

The current fleet of HC-130Js, based at Air Station Elizabeth City, meets long-range maritime patrol requirements in areas that cannot be patrolled efficiently by medium-range surveillance aircraft or cutters. The long-range surveillance (LRS) aircraft also provide heavy air transport for maritime safety and security teams, port security units, and National Strike Force personnel and equipment.

The HC-130J's special mission suite is comprised of a two mission system operator station located behind the pilot and co-pilot, a belly-mounted 360-degree long-range search radar, nose-mounted forward looking infrared radar and an advanced mission communications suite. The missionised HC-130J is designed to deliver enhanced search, detection and tracking capabilities. SP

Dassault and Thales deliver combat aircraft with active phased array radar

The DGA (French defence procurement agency) has officially taken delivery of the Rafale C137, the first production Rafale equipped with the Thales RBE2 AESA radar, at Dassault Aviation's Mérignac establishment near Bordeaux.

The Rafale is the first European combat aircraft in operational service equipped with this type of radar. The RBE2 AESA brings the Rafale a number of key operational benefits —extended range capabilities supporting low-observable target detection and full use of new weapon systems such as the Meteor air-to-air missile—higher reliability for reduced maintenance and lower through-life support costs—greater waveform agility for SAR (synthetic aperture radar) imaging and improved resistance to jamming. SP

Russian military to receive first Il-476 in 2014

The Russian armed forces will start receiving Il-476 heavy transport planes in 2014, the Defence Ministry said. The Il-476 is a significantly modernised version of Russia's Il-76 Candid transport plane, featuring a fully-digital flight control system, new avionics and PS-90A-76 engines with improved fuel-efficiency systems.

The ministry recently signed a contract worth about 140 billion rubles ($4 billion) with Russia's United Aircraft Corporation (UAC) for the delivery of 39 Il-476 planes by 2020.

The Il-476 will be built at the Urals-based Aviastar-SP aircraft-manufacturing plant. A prototype of the plane carried out a maiden flight in September and will undergo a comprehensive testing program for another year. The Russian military has not received new transport planes for the past 20 years. SP

Boeing receives $2 billion C-17 aircraft sustainment contract

Boeing will continue assuring the worldwide availability of C-17 aircraft, which provide vital military and humanitarian airlift capability, through a $2 billion follow-on contract it recently received from the US Department of Defense.

The C-17 Globemaster III integrated sustainment programme (GISP) provides support services such as forecasting, purchasing and material management for the C-17 and all C-17 unique support. This performance-based logistics (PBL) programme, which started in 1998 with 42 aircraft, now covers 246 worldwide. It provides lower costs through economies of scale from supporting the entire global fleet. The latest contract covers fiscal years 2013 through 2017.

Under a PBL arrangement, a customer receives an agreed-to level of system readiness, as opposed to a traditional contract for specific spare parts and support services. This integrated logistics approach — in which Boeing manages US assets as a designated inventory control point — has allowed Boeing to apply innovative spares forecasting and modeling tools to maximise aircraft availability while lowering costs. In many cases, Boeing has provided readiness levels beyond those spelled out in the agreements.

The Department of Defense recently recognised the US Air Force-Boeing GISP team with the 2012 Secretary of Defense "system-level" PBL Award.

"This contract award and the recognition from the Secretary of Defense are testaments to the long-standing partnership between the US Air Force and Boeing," said Gus Urzua, Boeing Vice President and GISP Program Manager. SP

PHOTOGRAPHS: US Navy, USAF

Iraq buys Czech L-159 trainer jets

Czech Defence Minister Alexandr Vondra recently announced at a press conference that the Czech Government has agreed to deliver 28 L-159 aircraft to Iraqi Air Force.

Both Minister of Defence of the Republic of Iraq Sadoon Al-Dulaimi and Minister of Defence of the Czech Republic Alexandr Vondra informed the media immediately after their return from the Aero Vodochody Company, the manufacturer of L-159 ALCA (attack light combat aircraft). Also Prime Minister of the Republic of Iraq Nouri Al-Maliki visited the Aero company and participated in static and flight demonstrations. Iraqi Prime Minister Nouri Al-Maliki with his delegation met first with the Czech Prime Minister Petr Necas at the beginning of their visit on October 11, 2012, and confirmed ongoing interest in defence cooperation with the Czech Republic.

Negotiations on the delivery of L-159, which lasted two years, will significantly contribute both to defence capabilities of Iraq and will help introduce this type of aircraft to other markets, added Vondra. SP

Lockheed Martin awarded upgrade contract for 145 F-16s to Republic of China

Lockheed Martin was awarded a contract valued up to $1.85 billion by the US Government to initiate the upgrade of 145 Block 20 F-16A/B aircraft for the Republic of China (RoC). This retrofit programme will include the addition of an Active Electronically Scanned Array (AESA) radar, embedded global positioning, as well as upgrades to the electronic warfare and other avionics systems of Taiwan's F-16s.

Lockheed Martin has a proven track record of upgrading more than 1,000 existing F-16s for a combination of the US Air Force and international customers. Most recently, Lockheed Martin was named the prime integrator to upgrade the USAF F-16 fleet. Both new upgrade programmes will be based on the F-16V configuration announced by Lockheed Martin earlier this year.

"Lockheed Martin looks forward to a continued partnership with the Republic of China in upgrading their F-16s," said Jeff Babione, Vice President and General Manager of the F-16/F-22 Integrated Fighter Group. "Based on elements of the F-16V configuration, Taiwan's air force will receive the most advanced F-16 upgrades. This programme reinforces the strong value proposition associated with commonality between the USAF F-16 programme and the worldwide F-16 user community." SP

Poland to open $3 billion helicopter tender

Poland plans to spend $3 billion on multirole military helicopters for its armed forces in the near future, local paper Rzeczpospolita reported recently, with a new competition replacing an earlier tender.

The main candidates for the deal are America's Sikorsky offering its S-70 Blackhawk, Franco-German Eurocopter, and AgustaWestland with its AW149.

"The armed forces want to buy 70 helicopters, and not 26 as planned previously. A tender wil be completed by the end of the year and a deal should be signed by May 2013," Deputy Defense Minister Valdemar Skrzypczak said.

An earlier tender announced on March 29, set out a requirement for 16 tactical transports for the land forces, four anti-submarine warfare (ASW) and three maritime search and rescue (SAR) helicopters for the navy and three search and rescue examples for the air force, all using one type of helicopter.

The deal could be Poland's largest ever military equipment buy after its 2003 purchase of American Lockheed F-16 fighters for 12 billion zloty ($3.08 billion). SP

Boeing bags $1.9 billion contract for 11 P-8A Poseidon aircraft

The US Navy recently awarded Boeing a $1.9 billion contract for 11 P-8A Poseidon aircraft, which will take the total fleet to 24 and bolster the service's anti-submarine, anti-surface warfare and intelligence, surveillance and reconnaissance capabilities.

This third low-rate initial production award follows two last year that totalled 13 aircraft. Boeing has delivered three of the production P-8As, which are based on the company's next-generation 737-800 commercial airplane, and the navy plans to purchase 117 to replace its P-3 fleet.

"This contract is a stepping stone to full-rate production, and our focus remains on building Poseidon on cost and on schedule," said Chuck Dabundo, Boeing Vice President and P-8 programme manager.

The Poseidon team uses a first-in-industry in-line production process that draws on Boeing's Next-Generation 737 production system. All P-8A-unique modifications are made in sequence during fabrication and assembly.

After assembly, the aircraft enter Boeing's mission system installation and checkout facility for final modifications.

The Boeing-led team also has built and is testing six flight-test and two ground-test aircraft under a Navy System Development and Demonstration contract awarded in 2004. The test aircraft have completed more than 600 sorties and 2,500 flight hours to date.

Boeing's industry team includes CFM International, Northrop Grumman, Raytheon, Spirit AeroSystems, BAE Systems and GE Aviation. SP

PHOTOGRAPHS: Aero Vodochody, Lockheed Martin

IAF to upgrade Israeli-made UAV fleet

The IAF is planning to join hands with an Israeli firm to upgrade the UAVs of the three services under a project worth over ₹5,000 crore to enhance their snooping capabilities. The three services operate a fleet of over 150 unmanned aerial vehicles (UAVs) procured from the Israeli Aircraft Industries (IAI) over the last few decades.

The IAF flies the Israeli-made Searcher II and Heron UAVs for reconnaissance and surveillance purposes and about 100 Searchers are in operation on Indian borders in western, northern and eastern regions. After the upgrades, the IAF would be capable of operating these aircraft from faroff distances and control them through satellite communication system.

The army also operates a sizeable number of UAVs and has deployed them in borders along the western and eastern fronts. The army was the first to induct UAVs in the 1990s starting with Searcher Mark I and Searcher Mark II which could operate at an altitude of 15,000 feet and finally the Heron, which could operate at 30,000 feet.

The navy has also three operational squadrons of the Israeli UAVs deployed along both the eastern and the western sea board. SP

PHOTOGRAPH: Indian Navy

Lockheed Martin-led team to develop new autonomous technology

The Office of Naval Research has awarded a $13.5 million contract to an industry team led by Lockheed Martin to explore highly advanced autonomous technologies aboard an unmanned vertical take-off and landing aircraft. The team of industry, government, and academic partners will develop a technology that will enable aircraft to operate under supervisory control. A human operator will interact with the system at a high level while low level control is left to the automation.

The resulting technology will have the potential to improve the utility and effectiveness of current unmanned vertical take-off and landing aircraft, as well as offer pilots supplemental decision aids on legacy manned platforms.

"This contract provides our team the opportunity to demonstrate how far we can expand the technology envelope," said Roger Il Grande, director of Airborne Systems for Lockheed Martin's Mission Systems and Sensors business.

During this first, 18-month phase of the five-year effort, the team will demonstrate the capabilities of its Open-Architecture Planning and Trajectory Intelligence for Managing Unmanned Systems (OPTIMUS) architecture.

OPTIMUS is designed to be platform-agnostic, drawing from Lockheed Martin's experience with the unmanned K-MAX cargo resupply programme and the combined teams' expertise in the fields of sensing, autonomy and human-machine interaction. SP

Indonesia develops UAV for border surveillance

Indonesia has developed an unmanned aerial vehicle (UAV). The drone was developed jointly by the Agency for the Assessment and Application of Technology (BPPT) and the research and development division at the Defense Ministry.

"The plane is designed to carry out surveillance. Given its noise levels, however, its targets would easily become aware of its position," Research and Technology Minister Gusti M. Hatta said during the drone's flight demonstration, which was also attended by Defense Minister Purnomo Yusgiantoro. Purnomo said that a squadron of drones would join the Indonesian Air Force (TNI-AU), making Indonesia one of a few countries that develop UAVs. The aircraft, according to the minister, would be placed in the country's border regions.

Indonesia shares land borders with Papua New Guinea to the east, Malaysia and Brunei Darussalam on Borneo, and Timor Leste on Timor Island. Most illegal migrants enter the country along these borders.

"These UAVs can be upgraded to fire missiles and to carry bombs," Purnomo said. Currently, the BPPT and the Defense Ministry's research and development division have created around 12 UAV prototypes, which bear names including Sriti, Alap-Alap, Gagak, Pelatuk and Wulung. SP

Israel develops drone which can fly over 1,000 km

Israel Aerospace Industries (IAI) demonstrated a drone recently which can fly 1,000 kilometres and stay in the air for 20 hours without refuelling, hover at 9,144 metres (30,000 feet) and provide high-definition radar and visual images of targets spanning hundreds of kilometres.

IAI demonstrated near Hadera, some of the drone technologies that are employed to safeguard Israel. The Heron 1 which can also be fitted with missile payloads, plays an important role in Israel's naval surface warfare strategy and would be sent to identify any suspicious maritime traffic.

Weighing 1,200 kilos, the Heron is the "younger brother" of the Heron Eitan, a 5,000-kilogram, Boeing 737-sized drone, which can fly all the way to Iran and back, and is not on sale to foreign militaries. Heron 1 carries a wide scope of high-tech payloads, including a radar that displayed dozens of naval and aerial vessels between the Turkish and Egyptian coastlines during the demonstration. The Heron can also eavesdrop on enemy radio traffic and comb its surroundings for suspicious communications, which can then be decrypted. SP

PHOTOGRAPH: Wikipedia

CBRN preparedness in Parliament zone

Keeping in view, chemical, biological, radiological, nuclear (CBRN) safety and security of Parliament House Complex (PHC), the National Disaster Management Authority (NDMA) under the leadership of M. Shashidhar Reddy, Vice Chairman, NDMA has started CBRN training programmes of Parliament security personnel. Eight training courses have been conducted so far.

In his opening remarks during the 8th training programme, Major General (Dr) J.K. Bansal, VSM, Chikitsa Ratan (Retd), Member, NDMA emphasised on constant monitoring for CBRN hazardous agents inside as well as outside the PHC. Due to strict security measures it may be difficult to take any CBRN agents inside the complex, however release of CBRN agents outside in the vicinity of PHC may be attempted, which may enter PHC as a plume. Possibility of water contamination by hazardous material is also there. Biological agents like Anthrax can be disseminated by fire extinguisher or through air handling unit of high vacuum, air-conditioning system.

Major General Bansal informed that CBRN scenario may arise due to unsafe disposal of nuclear material as it happened in 2010 in Mayapuri where eight persons were hospitalised due to radiation injuries caused by cobalt 60. Recently there was a nuclear accident in Fukushima, Japan, which caused widespread radiation contamination in the surrounding area and needed specialised equipment and trained personnel to handle nuclear emergencies.

NDMA also sent CBRN trained National Disaster Response Force (NDRF) team to Japan. NDRF work was appreciated by the Prime Minister of Japan. In 2009, Swine Flu (H1N1) pandemic, India was also affected. Chlorine gas was leaked at Mumbai port in 2010.

Major General Bansal also highlighted the importance of use of protective clothings face mask, gloves and boots while handling a CBRN eventuality. Any extra second contact of hazardous material with body is detrimental and must be removed from body as early as possible by decontamination, he emphasised.

He also stressed about prompt treatment of CBRN injuries including specialised investigations like radio biodosimetry, use of decorporation drugs for radiation and antidotes for hazardous chemicals.

About 60 Parliament security personnel attended the training programme. A mock drill was conducted by NDRF battalion where a scenario of chemical terrorism was simulated and response of different stakeholders was demonstrated. Along with initial training, refresher courses will also be conducted so that all security personnel remain ready to respond promptly in case of CBRN eventuality. SP

National Security Advisor says urgent need to address risks from cyberspace

India's National Security Advisor Shivshankar Menon released a report on the "Recommendations of Joint Working Group on Engagement with Private Sector on Cyber Security", in New Delhi on October 15, 2012.

Making public the report, Menon said facing the challenges from cyberspace requires both the government and industry to work together; the government cannot do this alone nor can the private sector do it on its own. He said it is a delicate act, how to balance social media responsibility with democratic freedom.

The Joint Working Group (JWG) was set up under the chairpersonship of Latha Reddy, Deputy National Security Advisor to work out the roadmap for engaging the private sector in a public-private partnership (PPP) for strengthening the cyber security architecture in the country. It included representatives of both government and private sector. Reddy said, the recommendations are the outcome of extensive and in-depth discussions with the industry. She hoped that India could emerge as a global hub for developing cyber security products.

India's current economic, social and infrastructure development process is making greater use of ICT for bringing transformation. However, this dependence on ICT makes the country vulnerable to cyber attacks that can have serious implications for both, the nation and economy. Given that the private sector leads the development and adoption of ICT, a need was felt that the government and private sector collaborate and work together to overcome the challenges of cyber security.

The JWG has identified the principles and objectives that would underpin the overall framework and roadmap for PPP on cyber security. It has recommended a "roadmap" for PPP on cyber security which includes setting up of an institutional framework, capacity-building in the area of cyber security, development of cyber security standards and assurance mechanisms, augmentation of testing and certification facilities for IT products.

Institutional framework would include setting of a permanent JWG, with representatives of government and private sector, to coordinate and oversee the implementation of PPP on cyber security. A Joint Committee on International Cooperation and Advocacy (JCICA) will advise JWG in promoting India's national interests at various international fora on cyber security issues.

To take the collaboration efforts ahead, the report identifies four pilot projects—setting up of a pilot testing lab, conducting a test audit, study of a sample critical information infrastructure and establishment of a multi-disciplinary Centre of Excellence (COE). The newly constituted JWG would work out the action-plan for implementation of the recommendations.

Some of the other key recommendations of the JWG include:

- Creation of Information Sharing & Analysis Centres (ISACs) in various industry verticals by the private sector which should coordinate with sectoral CERTs and CERT-In.
- Provide training to law enforcement agencies (LEAs) in cyber crime investigation and cyber forensics by establishing training facilities and developing training materials & investigation manuals.
- Promotion and dissemination of cyber security awareness among general public through mutual collaboration.
- Establishment of an 'Institute of Cyber Security Professionals of India' for capacity building in security testing and auditing. SP

PHOTOGRAPH: PIB

India among countries that are at the centre of cyber attacks

India is among the countries that are at the centre of cyber attacks, according to a recent statement issued by Symantec. It said that the number of unique malware variants have increased to 403 million, while the number of web attacks thwarted per day have increased by 36 per cent.

Such trends have led to a growing need for digital warriors and security engineers in the country, the statement said.

Further, the playfield for attackers has expanded to emerging cities in India, with 25 per cent of bot-infections found in these locations. The presence of industrial clusters and the prevalence of small and medium businesses, which may not be aware of the need for security, are key targets.

The growth in the volume and sophistication of attacks has lead to an increasing demand for security engineers. Shantanu Ghosh, Managing Director, India product operations, Symantec, said, "With examples like 'Stuxnet', a computer worm that was designed to sabotage real-world systems, and the more recent 'Shamoon' targeting the energy sector, the security engineer's job is no less than that of a warrior; defending organisations, nation-states and individuals from digital attacks." SP

Consumer cybercrime costs $8 billion in India

More than 42 million people in India fell victim to cybercrime in the past 12 months, suffering approximately $8 billion (₹40,000 crore) in direct financial losses, according to a new report.

According to the Norton Cybercrime Report 2012, 66 per cent of Indian online adults have been victims of cybercrime in their lifetime. In the past 12 months, 56 per cent of online adults in India have experienced cybercrime–more than 1,15,000 victims of cybercrimes every day, 80 victims per minute and more than one per second–and the average direct financial cost per victim is $192—up 18 per cent over 2011 ($163), according to the 2012 edition of the Norton Cybercrime Report released recently. SP

Termination of talks on possible merger of BAE Systems and EADS

Following the announcements made by BAE Systems Plc and EADS N.V. on September 12, 2012 in relation to a possible combination of their businesses through a dual listed company structure, BAE Systems and EADS announce that they have decided to terminate their discussions.

BAE Systems and EADS believe that the merger was based on a sound industrial logic and represented an opportunity to create a combination from two strong and successful companies greater than the sum of the parts. The merger would have produced a combined business that would have been a greater force for competition and growth across both the commercial aerospace and defence sectors and which would have delivered tangible benefits to all stakeholders.

Discussions with the relevant governments had not reached a point where both companies could fully disclose the benefits and detailed business case for this merger.

BAE Systems and EADS are, however, confident that these would have provided a strong case to take to their shareholders.

From the outset of discussions between the parties, both BAE Systems and EADS were clear that they would proceed with a merger of their businesses only if a transaction structure could be created that aligned the interests of the parties' stakeholders and received their strong support. BAE Systems and EADS worked constructively to deliver such a structure.

Ian King, Chief Executive of BAE Systems, said: "We are obviously disappointed that we were unable to reach an acceptable agreement with our various government stakeholders. We believe the merger presented a unique opportunity for BAE Systems and EADS to combine two world class and complementary businesses to create a world leading aerospace, defence and security group.

"However, our business remains strong and financially robust. We continue to see opportunities across our platforms and services offerings and in the various international markets in which we operate. We remain committed to delivering total shareholder value, including a progressive dividend policy, and look to the future with confidence."

Tom Enders, Chief Executive of EADS, said: "I'd like to thank everybody who supported us, in particular all the colleagues at BAE Systems and EADS for all their hard work and dedication to this project in recent months. A special thank-you goes to Ian King for his trust and partnership. It is, of course, a pity we didn't succeed but I'm glad we tried. I'm sure there will be other challenges we'll tackle together in the future. EADS will continue on its international growth path and our shareholders can continue to expect profitable growth, excellent liquidity and programme execution based on a strong order book." SP

Lockheed Martin to form two new business areas of electronic systems

With a continuing focus on lean and efficient operations, Lockheed Martin Corporation today announced it will reorganise its Electronic Systems business area into two new business areas that position the company for growth by increasing customer alignment and reducing costs.

Effective December 31, the creation of the Missiles and Fire Control (MFC) and Mission Systems and Training (MST) business areas brings the company's total to five including aeronautics, space systems, and information systems & global solutions. As previously announced, Marillyn Hewson, who currently leads the Electronic Systems business area, will assume the role of president and chief operating officer on January 1.

"Our customers are looking for affordable solutions to their toughest challenges whether intercepting enemy missiles, conducting naval operations in littoral waters, or securing information networks from attack," said Chris Kubasik, Lockheed Martin Vice Chairman, President and Chief Operating Officer. "This new structure will allow us to better support our customers around the world and positions our company for sustained long-term growth."

The reorganisation will streamline operations and save approximately $50 million a year by eliminating the executive management teams of the Electronic Systems business area and the Global Training and Logistics (GTL) business unit. The GTL portfolio will be split between the two resulting business areas. Approximately 200 jobs will be affected.

To lead these new business areas, Rick Edwards and Dale Bennett have been elected executive vice presidents, effective December 31, of MFC and MST, respectively. Both executives have been with Lockheed Martin for about three decades and served in roles of increasing responsibility. SP

Carl Zeiss Optronics becomes Cassidian Optronics

Cassidian has acquired a majority shareholding in what was previously Carl Zeiss Optronics GmbH from Carl Zeiss AG. Cassidian now holds a 75.1 per cent stake in the new company, which has its headquarters in Oberkochen, Germany, while Carl Zeiss AG holds 24.9 per cent.

All of the optical and optronic activities previously carried out by Carl Zeiss Optronics GmbH are to be continued under the name of Cassidian Optronics GmbH. This includes also the South African subsidiary Carl Zeiss Optronics (Pty) Ltd. soon trading under Cassidian Optronics (Pty) Ltd. This was announced by Cassidian in Munich.

Bernhard Gerwert, CEO of Cassidian, said: "Carl Zeiss Optronics represents a valuable addition to our existing capabilities in the field of sensors. In coming years, this will enable us to offer complete sensor solutions to customers around the world, supplying everything required ourselves."

For Cassidian, the acquisition of this part of Carl Zeiss AG is a strategic addition to its existing product portfolio. Cassidian Optronics will exploit Cassidian's global sales channels and its know-how to provide its existing business activities with a long-term perspective. Both partners expect that the combination of market access and the integration into Cassidian's systems and platform business will open up new business opportunities. The company will be integrated into Cassidian's Sensors & Electronic Warfare business line.

Cassidian's Sensors & Electronic Warfare business line develops and manufactures products in the fields of radar, electronic warfare, air traffic control and self-protection in Germany, France, Belgium and South Africa.

At its German locations of Oberkochen and Wetzlar, as well as at its South African site in Irene, Cassidian employs about 780

staff in the development and manufacture of optronic, optical and precision-engineered products for military and civil applications. The emphasis here is placed on border surveillance systems, optical and optoelectronic equipment, components for vehicles and submarine periscopes. SP

Northrop Grumman offers free mobile app for defence logisticians

A mobile app developed by Northrop Grumman Corporation that quickly calculates transportation requirements for large quantities of operational rations is available for free through the Apple App Store.

The container calculator, or CCALC-I, helps defence logisticians, supply chain planners and others determine the number of pallets, containers and transports needed to move a user-defined amount of provisions.

The mobile app employs a small database that quickly calculates the total weight and determines the number of pallets, air pallets, and 20-and 40-foot containers, called transportation equivalent units (TEUs), needed to move the user-defined requirement. The app's home screen allows the user to select from 19 different ration types – including meals, ready to eat (MREs), humanitarian daily rations (HDRs) or bottled water – and enter the quantity of cases required. The app then calculates the weight and TEUs, and provides the different options in quantities of pallets, containers, airframes, helicopters and ground vehicles needed to move the required rations. The output can be e-mailed in a text file.

Hammond said the app's mobility frees users from ties to a desktop or laptop computer and any need for Department of Defense (DOD) network connectivity. The task it addresses enables logisticians and planners to be more efficient, which benefits the DOD supply chain. SP

Acquisition to expand Austal's defence support capability in Asia-Pacific

Recognising the growing significance of Asia-Pacific to United States and Australian defence forces, Austal has entered into agreements to substantially expand its capability in Darwin, Australia, through the acquisition of Hydraulink NT and its associated business KM Engineering (HKME).

HKME is a leading engineering service provider in northern Australia with well-established operations supporting the Royal Australian Navy (RAN) and Australian Custom,s and Border Protection Service. HKME also has strong relationships with oil and gas sector participants.

As part of the transaction, Austal's existing operations in Darwin will merge with HKME. Austal will acquire an 80 per cent stake in the resulting business for A$8 million split between cash and restricted equity, with further deferred entitlements of up to A$2 million available to the vendors subject to satisfaction of agreed performance-based conditions. SP

Intergraph Government Solutions partners with Carahsoft for geospatial solutions reseller channel

Intergraph Government Solutions (IGS) has partnered with Carahsoft Technology Corporation as a value-added reseller of Intergraph products to provide geospatial software to the US Federal Government expanding product options for government agencies and programme leadership.

Over 900 individual Intergraph geospatial components, platforms, applications, and solutions are now available to all US Government agencies via Carahsoft, including all federal agencies, the military services, and authorised government contractors.

"We are pleased to expand our geospatial solutions portfolio with the addition of Intergraph's full range of software," said Craig P. Abod, Carahsoft President. "With scalable, interoperable, standards-based solutions, Intergraph dramatically expands our existing GIS portfolio, and offers our government customers and reseller partners proven, cost-effective technology to gather, analyse, manage and share geospatial data."

Along with these existing products, new products can be added to the channel based on user requirements creating a dynamic geospatial catalogue where product availability is based on requests as opposed to the past model of requests limited by availability. This new approach aligns well with both organisations' focus on meeting customer needs.

"This strategic partnership is a natural fit for both of our organisations," said David Beddoe, IGS Channels/Partners Business Director. "With this value-added channel for reselling and Carahsoft's proven track record in our industry, we have significant opportunities to expand within the US Government sector."

The IGS software suite including ERDAS Imagine and ERDAS Appollo is an important addition to Carahsoft's portfolio for desktop products and cloud services. Together, the extended geospatial offerings provide full solution sets for mission-critical workflows. SP

Rheinmetall sets up Australian unit

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

South Korean minister apologises for security lapse

South Korea's Defence Minister Kim Kwan-jin has apologised over the security lapse at the heavily fortified border following revelations that a North Korean defector crossed over undetected.

A 22-year-old North Korean soldier, who said he killed his superior before crossing the Military Demarcation Line on Oct 2, was not spotted until he knocked on the door of a barrack and surrendered.

"I sincerely apologise for causing public concern," Defence Minister Kim Kwan-jin said at a press conference in Seoul, acknowledging a "surveillance failure".

A total of 14 high-ranking military officials, including five generals, will face disciplinary measures, the minister said, pledging to beef up security along the border and reinforce border fences "as soon as possible". SP

Sven Jaschan, young master hacker

According to technology experts, Sven Jaschan will be associated with some of the biggest viruses in the history of the Internet. The viruses: the Sasser and NetSky worms that Infected millions of computers and have caused millions of dollars of damage since their release in 2004.

The man behind the viruses proved to be not even a man at all, legally. Seventeen-year-old hacker Sven Jaschan, a student at a computer science school in Germany, claimed to have created the viruses to become a hero by developing a programme that would eradicate the rampaging Mydoom and Bagle bugs. Instead he found himself the subject of a $2,50,000 bounty courtesy of Microsoft for which some of his classmates turned him in. SP

J&K Assembly security breach: Five policemen suspended

Five policemen have been suspended for the security breach at the Jammu and Kashmir Assembly recently. Three unauthorised youngsters had jumped into the well of the House shouting slogans against the Omar Abdullah government's employment policies.

The police said that the three were identified as Manish Khajuria, Sunny Malhotra and Ambedkar Gupta. Sources say the youth had been issued passes on the recommendation of MLA Jagdish Sapolia.

Speaker Mohammad Akbar Lone termed the incident as contempt of the august House and directed the Secretary of the Legislative Assembly to initiate proceedings against the offenders including the abettor (MLA). Lone said action will be taken against the youths as well as the MLA who had facilitated their entry into the House. SP

Ghana President sneaks into Bawku without security

Ghana President John Dramani Mahama recently stormed into the troubled town of Bawku in the Upper East Region without his convoy and his assigned security and medical cover in what many security experts are now describing as a major security breach.

He was chauffeured around Bawku by a Deputy Minister of Education, who has no training in security matters and driving in highly sensitive areas.

The daily *Searchlight* said the President exposed himself without his trained security staff and even medical personnel being close by in case of any emergency. Many security experts have described the President's conduct as amounting to recklessness. SP

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