SWALLOWING NATIONAL PRIDE : A VIEWPOINT PAGE 6

ISSN 2230-9489

SP's mAi

AN SP GUIDE PUBLICATION

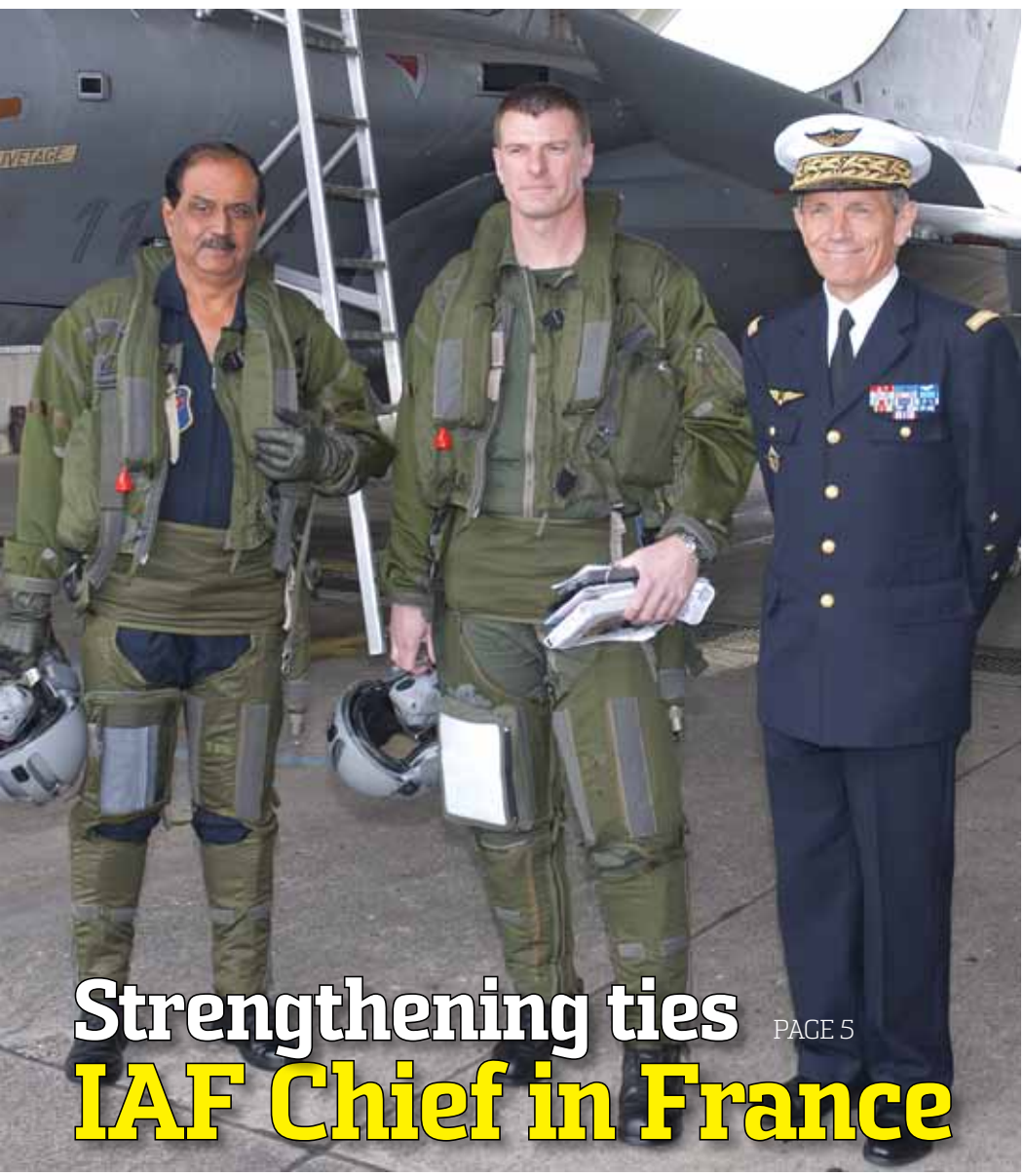
₹55.00 (INDIA-BASED BUYER ONLY)

www.spsmai.com

Vol: 2 Issue 11 ▮ June 1-15 • 2012

ONLY FORTNIGHTLY ON

MILITARY
AEROSPACE
INTERNAL SECURITY



Strengthening ties IAF Chief in France

PAGE 5

HAL signs agreement with Russia for MTA

PAGE 2

Gp Capt Tejbir Singh, Commanding Officer, Hercules Squadron and crew being received by Air Force officials at Car Nicobar airbase on May 28, 2012

IAF's Super Hercules lands in Car Nicobar

PAGE 11

DELENG/2010/34651

HAL signs agreement with Russia for MTA

Following criticism of delays, the Hindustan Aeronautics Ltd has signed a tripartite General Contract with United Aircraft Corporation Transport Aircraft (UAC-TA), their Russian partner and their JV, Multirole Transport Aircraft Ltd (MTAL) for the Multirole Transport Aircraft (MTA) project. HAL will carry out the design and development of its workshare of MTA at Aircraft R&D (ARDC) Centre at Bangalore while its Transport Aircraft Division (TAD) at Kanpur will manufacture the prototypes. Serial production will take place at Kanpur where dedicated facilities are being set up. HAL's other R&D Centres and manufacturing divisions will share development of systems & LRUs and manufacture of components, sub-assemblies and composite structure. HAL will showcase its expertise in design of aircraft as well as systems, manufacturing and flight testing while jointly

working with the Russian team in Moscow as well as in India. The Indian and Russian Governments had earlier signed an Inter Governmental Agreement for joint design, development and production of MTA on 50:50 sharing basis and had decided to form a JV between HAL, UAC-TA & Rosoboronexport to execute the project. The primary objective is to achieve self-reliance in design and development and production of aircraft of this size and also to manage the programme with international collaboration and a large number of global suppliers. The aircraft will be designed for the roles of cargo/troop transportation; para-drop/air drop of supplies including Low Altitude Parachute Extraction System (LAPES). The joint effort seeks to meet a requirement of 100 aircraft for the Russian Air Force, 45 aircraft to the IAF and 60 for export. Total requirement for the present is 205. The MTA project preliminary design will start immediately after signing the follow-up contract on preliminary design on which tripartite discussions have been concluded. SP

PHOTOGRAPH: HAL

Cover:
Air Chief Marshal N.A.K. Browne, Chief of the Air Staff, after a sortie in the Rafale Aircraft at St. Dizier Airbase. Also seen in the picture are commandant (Squadron Leader) Kubiak Thierry, Commander of the Rafale Squadron and General Jean-Paul Paloméros, Chief of Staff of the French Air Force.

Cover image: IAF

PUBLISHER AND EDITOR-IN-CHIEF
Jayant Baranwal

ASSISTANT GROUP EDITOR
R. Chandrakanth

SR TECHNICAL GROUP EDITORS
Air Marshal (Retd) B.K. Pandey
Air Marshal (Retd) V.K. Bhatia
Lt General (Retd) Naresh Chand
Lt General (Retd) V.K. Kapoor
R. Adm (Retd) S.K. Ramsay

SPECIAL CONTRIBUTOR
Lt General (Retd) P.C. Katoch

SR COPY EDITOR & CORRESPONDENT
Sucheta Das Mohapatra

CHAIRMAN & MANAGING DIRECTOR
Jayant Baranwal

PLANNING & BUSINESS DEVELOPMENT
Executive Vice President: Rohit Goel

ADMIN & COORDINATION
Bharti Sharma

DESIGN & LAYOUT
Senior Art Director: Anoop Kamath
Designers: Vimlesh Kumar Yadav, Sonu Bisht
Research Assistant - Graphics: Survi Massey

SALES & MARKETING
Director: Neetu Dhulia
General Manager Sales: Rajeev Chugh

SP'S WEBSITES
Sr Web Developer: Shailendra P. Ashish
Web Developer: Ugrashen Vishwakarma

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

E-mail: subscribe@spsmai.com

LETTERS TO THE EDITOR
editor@spsmai.com

FOR ADVERTISING DETAILS, CONTACT:
advertise@spsmai.com
guidepub@vsnl.com
neetu@spguidepublications.com
rajeev.chugh@spguidepublications.com

SP GUIDE PUBLICATIONS PVT LTD
A-133 Arjun Nagar,
(Opposite Defence Colony)
New Delhi 110 003, India.

Tel: +91 (11) 24644693,
24644763, 24620130
Fax: +91 (11) 24647093
E-mail: guidepub@vsnl.com

REPRESENTATIVE OFFICE
534, Jal Vayu Vihar
Kammanhalli Main Road
Bengaluru 560043, India.
Tel: +91 (80) 23682534

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

Indo-French ties surging ahead

India and France have had close and friendly relations for decades. It is only in recent years it has got accentuated to a higher level, beginning with establishment of the strategic partnership in 1998. The French were the first ones to enter into an agreement with India on nuclear energy following the waiver given by the International Atomic Energy Agency.

In the realm of defence cooperation, we now see heightened activity between the two countries, in the background of the 'mother of all deals'—the medium multi-role combat aircraft (MMRCA)—going to Dassault's Rafale. The deal is touted to be the largest ever military pact between the two countries, but also the largest defence deal in the world in the open tender category.

Ahead of inking the mega billion dollar deal to buy 126 combat jets, the Indian Air Force (IAF) Chief, Air Chief Marshal N.A.K. Browne, was in France recently, checking out the Rafale manufacturing line and also holding discussions with the officials involved in the Mirage 2000 upgrade project. Indeed, the Air Chief's visit has come at a time when the Indo-French military ties have been surging ahead. India had recently awarded France the project to construct six Scorpene submarines at the Mazagaon Docks Limited at a cost of $5.25 billion.

These deals are happening, I believe, not just because of technology and other allied factors, but also because of the steadfastness of France in standing by India following the nuclear tests in 1998 and the Kargil war.

For the Indian Air Force, there is a comfort level working with France and the Air Chief's visit has endorsed this. The IAF is well on track in its modernisation plans and here fits in another deal—but with Switzerland.

In the last issue of *SP's M.A.I.*, we had reported about the Cabinet Committee on Security's (CCS) go ahead for the $523 million PC-7 trainer aircraft deal. Soon after, on May 24, the government signed on the dotted lines for the 75 PC-7 Mk.II turboprops from Pilatus, signifying that the government is on the move and long-pending deals will be cleared before long. The deal also includes an integrated ground-based training system and logistics support. Deliveries should begin at the end of 2012 and the contract provides for a possible additional 30 PC-7s. The Pilatus deal is expected to fill a massive capability gap in the training programme of the IAF, the fourth largest in the world with 1,70,000 personnel and 1,500 aircraft operating from over 60 bases. It purportedly requires some 200 trainer planes.

In his fortnightly column, Lt General (Retd) P.C. Katoch has once again raised the issue of US duplicity when it comes to Pakistan. The news that supplies to NATO troops in Afghanistan via Pakistan is going to happen, smacks of this duplicity. For Pakistan—it is raining moolah both ways and also it gets the opportunity to resume the game of 'running with the hare and hunting with the hounds'. Though details of the accord are under wraps, reportedly Pakistan will be paid $1,500 to $1,800 for each truck carrying supplies that may total up to something like $1 million per day. That is 'aid' to Pakistan under a different name.

Jayant Baranwal
Publisher and Editor-in-Chief

Pilatus deal inked

The monumental fourth-generation medium multi-role combat aircraft (MMRCA) fighter deal may still be a while away, but its a season of cheer for the Indian Air Force (IAF). On May 24, after more than one scare of an abort, the government signed on the dotted line for 75 PC-7 Mk.II turboprop trainer aircraft from Swiss firm Pilatus – the company's single largest contract ever. In a deal worth $523 million, the 75 aircraft will all be manufactured in Switzerland, with a 30 per cent offset commitment to Indian industry. While the IAF expects initial deliveries to begin no later than August 2013, Pilatus has announced that it will begin deliveries well ahead of schedule, by early next calendar year. The contract also includes an integrated ground based training system and a comprehensive logistics support package. India has worked in an options clause allowing it purchase 30 more PC-7 Mk.II aircraft within three years under identical techno-commercial terms. The Swiss firm says it is confident that options will be exercised by the IAF. This contract extends the fleet of Pilatus turboprop trainers to more than 900 aircraft operating worldwide, according to the firm.

The IAF's fleet of HAL-built HPT-32 Deepak trainers have been grounded since July 2009 following a fatal crash – the grounding was forced by frequent engine cuts and dangerous recovery qualities during ab initio training. A separate effort is on to certify the HPT-32 with an American ballistic recovery system. Since the grounding, the IAF has been forced to put trainee pilots directly onto intermediate or Stage-2 training on ageing HJT-16 Kiran Mk.1 and Mk.2 jets. The signing of the basic trainer deal, an overwhelming priority for IAF chief Air Chief Marshal N.A.K. Browne, is therefore a cause for celebration. The fact that India, which boasts of a maturing aerospace industry, is still compelled to import simple platforms like basic trainers, is of course a separate issue altogether. HAL is currently developing the HTT-40, a follow-on to the HPT-32, and is in the process of creating a mock-up. The IAF hopes to begin training pilots on the new Pilatus aircraft by the end of 2013.

"The Indian Air Force joins more than 30 other countries to modernise its training pipeline with the most modern, capable and cost effective system for Basic Flying Training on the market today. The decision to select the PC-7 Mk.II training system was made after a thorough evaluation by the Indian Air Force, which looked at all available options. Pilatus Aircraft Ltd views this contract for the Indian Air Force as a major success and believes it will encourage other forces to take a close look at our pilot training solution," says Oscar J. Schwenk, CEO of Pilatus Aircraft.

The IAF has sought to ensure that maintenance is not a problem. Pilatus has revealed that coupled to this award will be the establishment of in-country depot level maintenance capabilities, which includes the required transfer of technology to HAL, enabling in-country maintenance of the platform throughout its service life of over 30 years.

The Pilatus CEO adds, "Pilatus has also entered into a separate offset contract with the Government of India for 30 per cent of the value of this contract and we view this as a major opportunity. Pilatus has significant confidence in the Indian defence market with its highly skilled workforce and it is our intention to leverage the offset opportunity to establish manufacturing capability for the region in support of our business plans for India. Pilatus Aircraft Ltd is committed to serving the Indian Air Force with its world renowned dedication to Swiss precision and quality, through delivering and supporting the most advanced Basic Flight Training turboprop trainer aircraft in the world – the Pilatus PC-7 Mk.II."

The PC-7 beat out stiff competition from the American Hawker Beechcraft T-7C Texan-II and Korea Aerospace KT-1. The latter has in fact protested the emergence of Pilatus as lowest bidder, submitting that the Swiss firm had not supplied full facts in its commercial package. However, the government announced that it found KAI's protest "devoid of merit" before progressing the deal with Pilatus. SP

PHOTOGRAPH: Pilatus

Air Chief Marshal N.A.K. Browne, Chief of the Air Staff, presenting the IAF souvenir to General Jean-Paul Paloméros, Chief of Staff of the French Air Force

IAF Chief visits Rafale facilities

Indian Air Force Chief Air Chief Marshal N.A.K. Browne left for France on a four-day official visit on May 21, where the highlight of his stay was the time spent with the Rafale squadron at St Dizier. This, according to an IAF statement, was "to get a first-hand impression of the MMRCA selected by the IAF, as also to see Rafale's production facilities at Mérignac". The Chief also had a one-hour sortie in the aircraft.

Negotiations are currently on for a final contract in the MMRCA, in which Rafale was declared lowest bidder earlier this year, defeating the Eurofighter Typhoon. While certain concerns are still under investigation, sources say that the procurement procedure is well on its way. The IAF Chief met senior officials in France, including a team from Dassault, which impressed upon him the company's commitment to timely delivery and efficient technology sharing.

The visit came at a time when a question came up in the Parliament asking if the MoD was aware of Dassault Aviation's financial condition (the Defence Minister said he was not privy to such information, but that all procedures were taking place as per the Defence Procurement Procedure). The first high level visit from India after a new government came to power in France, Air Chief Marshal Browne met France's new Defence Minister Jean-Yves Le Drian, Chief of Defence Staff Admiral Édouard Guillaud, Director-General of the French Defence Technology and Procurement Agency (DGA) Laurent Collet-Billon and Chief of Staff of the French Air Force General Jean-Paul Paloméros. He also visited the airbases at Istres and Cognac and met members of the Mirage 2000 upgrade project management team as well. SP

India to order Honeywell engines for Jaguar?

Last month, India's Parliamentary Consultative Committee on Defence visited HAL's Engine Division facilities in Bangalore to review the company's facilities, current work and future plans. On display for the visiting group, which includes Members of Parliament, was a slide on Honeywell F125 IN turbofan, under the section "Future Engine Programmes".

The F125 IN is on offer as a replacement engine for the IAF's Jaguar deep penetration strike aircraft fleet. Last year, the Indian Government scrapped the Jaguar re-engine effort after Rolls-Royce pulled out, leaving a single-vendor situation—an unviable position in competitive contracting. While HAL has been known to jump the gun before, it is possible that the government is negotiating a foreign military sales (FMS) contract for the new Honeywell engines, and sidestepping a competition repeat. Last year, the IAF had ruled out the proposition of an engine upgrade (which is what Rolls-Royce's offer effectively was), leaving only Honeywell in the reckoning. SP

PHOTOGRAPHS: IAF, ADA, SP's Special Correspondent

Six LCA squadrons by 2022

Has the MoD put a cap on the induction of LCA Tejas? In a surprise assertion, it has been revealed that the Indian forces will induct six squadrons of the indigenous LCA Tejas by 2022 – or the end of the 13th Five Year Plan period. Revealing this in Parliament, Defence Minister A.K. Antony said, "There has been delay in the manufacturing of indigenous Light Combat Aircraft (LCA) Tejas. This is a design and development project and the Aeronautical Development Agency (ADA) is the nodal organisation for the development of Light Combat Aircraft, Tejas. The Initial Operational Clearance-1 (IOC-1) for the Tejas has been achieved on January 10, 2011. Presently, LCA development activities leading to final operational clearance are in progress. The deliveries of aircraft are scheduled in the 12th Five Year Plan period. It is planned to induct six LCA squadrons by the end of 13th Plan." Six squadrons is a much lower figure

than the programme originally envisaged, since it was intended as a MiG-21 replacement. While official estimates do not exist, HAL sources say the IAF and Navy were expected to order a total of at least 400 aircraft for the project to be anywhere close to viable. The Air Force currently has 48 LCAs on order – eight limited series production (LSP) aircraft and 40 LCA Mk.1. In January last year, the IAF asserted that had projected a need for 83 LCA Mk.2 aircraft, powered by the more powerful GE F414 turbofan engine. This adds up to a total of 131 aircraft for the IAF. The Navy recently received clearance for the induction of nine LCA Navy Mk.1 aircraft, but is expected to order at least 30 of the Mk.2 variant. This still adds up to only 171 aircraft from the indigenous programme. SP

FOR MORE, LOG ON TO:
www.spsmai.com

LT GENERAL (RETD)
P.C. KATOCH

Swallowing national pride

Resumption of supplies to NATO forces in Afghanistan through Pakistan reminds one of the Shamsi airbase incident of 2011. There was much hype in Pakistani last May with Pakistan's Defence Minister, Firdous Ashiq Awan, announcing that the US had been asked to vacate Shamsi airbase albeit US had already halted drone strikes from Shamsi three months earlier post the Raymond Davis affair and all Predator drone attacks inside Pakistan since then were being launched from bases in Afghanistan.

There were calls of national pride getting hurt in letting a foreign power (US) operate from Pakistani soil. Then cropped the question as to who owned Shamsi? Brig (Retd) Farooq Hameed Khan, amongst others, asked, "Who is deceiving whom?" It emerged that Shamsi was built by Arab sheikhs for falcon hunting trips in the early 1990s but had been occupied by the CIA since at least 2004, when Google Earth images showed Predator drones parked on the runway. The base infrastructure had been expanded with new constructions including aircraft hangars coming up over the years. Confirmation came during the May 13, 2011, joint session of Pakistani Parliament (held in-camera) that the Shamsi airbase was under UAE Government's authority and not under Pakistani Air Force control. So, where is the national pride – one hand you object to a foreign power 'operating' from your soil while another foreign power has actually 'built' an airbase on your soil?

There were feeble calls of the nation's right to know the truth about the terms and conditions which Article of Pakistan's Constitution or law had allowed such an agreement, which Pakistani Government or Parliament approved the deal, how could this happen in a 'sovereign' state, was the land leased or permanently transferred including aspects duration of lease, security responsibility, degree of Pakistani control and whether UAE could sublet this base to a foreign power. However, media was forced to shut down the issue altogether.

Now is the recent US-Pakistan agreement to revive the supply of NATO troops through land routes via Pakistan including the use of Pakistani ports? Remember the fracas and hullabaloo last November when a NATO strike killed 24 Pakistani soldiers. Pakistan cried blue murder suspending NATO supply routes via Pakistan, labelling it a deliberate act impinging on their sovereignty and demanding apology from US and complete suspension of US drone strikes inside Pakistan, failing which the NATO supply routes via Pakistan would remain blocked. Pakistan Chief of Army Staff General Ashfaq Kayani even announced that Predators undertaking strikes inside Pakistan would be shot down. The Pakistani Parliament went in a frenzy hollering loss of national pride. The US responded by saying strike was conducted after receiving confirmation from Pakistani Army that the area was clear of their troops. Hillary Clinton categorically said there was no question of the US offering an apology. US never suspended drone strikes inside Pakistan and continues to do so. So, how has the agreement to resume supplies to NATO troops in Afghanistan via Pakistan come about?

Pretty simple – it is raining moolah both ways plus Pakistan gets the opportunity to resume the game of 'running with the hare and hunting with the hounds' – national pride be damned! Though details of the accord are under wraps, reportedly Pakistan will be paid $1,500 to $1,800 for each truck carrying supplies that may total up to something like $1 million per day. Surely, there would be large fees at the ports as well and of course, as earlier, scores or rather hundreds of containers will go 'missing' with their wares landing up in local markets. Then is the trump card of targeting supply columns periodically through 'out of control' Taliban – notwithstanding they strike from terrorist training camps established by Pakistan along the international highway on pretext of housing Afghan refugees. SP

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

Where is the national pride – one hand you object to a foreign power 'operating' from your soil while another foreign power has actually 'built' an airbase on your soil?

PHOTOGRAPH: US Navy

Defence Minister triples service chiefs' financial power to ₹150 crore

Defence Minister A.K. Antony on May 28 approved the proposal to hike financial powers of service chiefs by three times from ₹50 crore to ₹150 crore in a move that could speed up urgent purchases for the armed forces.

The enhanced amount will enable services to carry out low valued essential purchases without waiting to get clearance from the Defence Ministry. It had been a long pending demand of the services as one of the measures to speed up acquisitions.

Antony met the three service chiefs to review security. After discussions, he held a separate one-on-one with Army Chief General V.K. Singh whose outburst in recent days has embarrassed the government.

General Singh, who retires on May 31, has gone public on the recent controversies surrounding him leading to the impression that he did not have the best of relations with the Defence Ministry.

The General had accused the ministry of leaking documents pertaining to dispute over his date of birth as well as a letter from him to Prime Minister Manmohan Singh highlighting the army's lack of battle preparedness.

The letter led to an uproar and galvanised Antony to take some urgent measures to put the army's modernisation programme on fast track. The decision to increase the purchasing power was an outcome of that effort.

The service chiefs were entitled to clear purchases up to ₹50 crore only till now while the Defence Secretary had financial powers to sanction acquisition of ₹75 crore. For amounts beyond ₹500 crore, sanction from the Defence Minister was required. For contracts of ₹1,000 crore and above, approval of the Cabinet Committee on Security was mandatory. SP

Lockheed Martin's Aegis computer programme development approved by US Navy for Australian Warfare Destroyer

Lockheed Martin has completed computer programme development and testing for the HOBART class Air Warfare Destroyer (AWD), the Royal Australian Navy's Aegis-equipped ships. The computer programmes have been approved by the US Navy.

Tests were conducted over a two-week period at the Navy's land-based test facility, the Vice Admiral James H. Doyle Combat Systems Engineering Development Site in New Jersey confirmed.

"The Aegis Weapon System enables navies around the world to protect their citizens and their nations from continuously evolving threats," said Doug Wilhelm, Director of International Aegis Programmes for Lockheed Martin's Mission Systems & Sensors business. "We look forward to working with the US and allied navies to continue to provide proven anti-air warfare capability on a global scale."

The HOBART class will be capable of simultaneous operations in a multi-warfare environment, including anti-air, anti-surface, anti-submarine and naval gunfire support roles. SP

Ingalls Shipbuilding's seventh LPD completes builder's sea trials

Huntington Ingalls Industries announced that the company's seventh amphibious transport dock, Anchorage (LPD 23), returned from successful builder's sea trials in the Gulf of Mexico. The ship is currently under construction at Ingalls' Avondale facility.

"The LPD 23 team just finished one of the most successful builder's trials of any LPD so far," said Doug Lounsberry, Ingalls' Vice President and Programme Manager, LPD 17 Programme. "The ship demonstrated its quality through operational testing over the past four days, including propulsion, steering, navigation, communications and weapons. "

The ship will now prepare for acceptance sea trials to demonstrate the same tests and seaworthiness to the US Navy's Board of Inspection and Survey (INSURV). The ship is scheduled to be delivered to the Navy this year. SP

Elbit to supply advanced dismounted soldier systems to the Finnish Army

Elbit Systems Ltd. announced today that it was awarded a contract by the Finnish Army, to supply advanced dismounted soldier systems, in the first phase of a comprehensive ISTAR (Intelligence, Surveillance, Target Acquisition and Reconnaissance) program. The initial award is not in an amount that is material to Elbit Systems.

The solution offered by Elbit Systems includes enhanced observation soldier equipment (MARS), comprehensive situation awareness software, cutting edge combat soldier wearable radio (PNR1000) and computer systems intended to enhance the operational capabilities of the Finnish Army in the areas of reconnaissance, terrain dominance and dismounted soldiers. It will also support the Finnish Army in developing new combat doctrines, and as a basis for developing its future forward observation program. SP

PHOTOGRAPHS: PIB, Ingalls Shipbuilding

New DCNS carrier deck coating process validated

Recent tests have demonstrated the effectiveness of new coatings applied to the flight deck of CVN Charles de Gaulle using a process tailored by DCNS. Phase I of the programme involved the application of new coatings to the landing zone, the portion of the flight deck subject to highest stresses.

The tests, involving landings by Rafale Marine combat aircraft, demonstrated the new coating's qualities. The advanced materials and application process help reduce nose gear loads suffered by incoming aircraft while ensuring

excellent grip between tyre and deck.

DCNS and joint clients DGA and SFF developed a multi-year programme to update a range of non-skid coating products and processes used on the French Navy's flagship. Defence procurement agency DGA funded the development phase while SFF, the Navy's fleet support service, funded the testing and qualification phases.

DCNS contributed to the success of phase I and to meeting all milestones. The DCNS teams assigned to the programme are now preparing for phase II which will involve the application of new coatings to CVN Charles de Gaulle's tow-ways and parking areas when the ship is laid up for its next scheduled refit in 2013. SP

PHOTOGRAPHS: Navistar, DCNS

Navistar Defense, Indigen Armor, SAIC unveil special operations tactical vehicle

Navistar Defense, LLC, Indigen Armor and SAIC have unveiled the team's Special Operations Tactical Vehicle for the US Special Operations Command (SOCOM) ground mobility vehicle (GMV) 1.1 programme.

The team's Special Operations Tactical Vehicle is transportable in an armoured and mission-ready state on a M/CH-47 helicopter. The vehicle is designed for maximum off-road speed and mobility for a variety of terrain found in desert, jungle, mountain and arctic environments and incorporates a full government furnished command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) suite.

"Our GMV offering incorporates the expertise of three very strong companies," said Archie Massicotte, President, Navistar Defense. "Together we have a sophisticated design ready now that meets transportability and mature platform requirements while providing unprecedented mobility."

The Special Operations Tactical Vehicle chassis, suspension, power train and armoured occupant safety cell were engineered specifically to carry large payloads across rough landscapes in 3-man, 5-man and 7-man variants. The scalable armour packages meet multiple threat levels and accommodate a variety of low-profile and overt tactical body styles which allow the vehicle's profile to be changed at the crew level. SP

BAE Systems bags contract for next generation submarines

BAE Systems has been awarded a £328 million contract for the design of the Royal Navy's next generation of submarines. The UK Ministry of Defence announced it had placed the first design contracts for the Vanguard replacement programme with the three main industrial partners, BAE Systems Maritime – Submarines, Rolls-Royce and Babcock. The first of the new class is due to be delivered in 2028 and will provide the nation's nuclear deterrent into the 2060s.

Managing Director John Hudson said: "The signing of this contract is a key step forward in our business strategy to deliver a seven-boat Astute programme followed by the replacement class for the Vanguard submarines. Not only does it help sustain the jobs of over 1,000 skilled employees currently working on the programme, it also provides the opportunity to grow our workforce by a further 280 in 2012."

The remainder of the contract, which is worth around £350 million in total, is split between the other industrial partners, Babcock and Rolls-Royce, to cover design aspects of in-service support and the submarine's reactor design respectively.

The Vanguard Class comprises four submarines – HMS Vanguard, HMS Victorious, HMS Vigilant and HMS Vengeance – all of which were built at Barrow-in-Furness from 1985 to 1999. The new class of submarines has yet to be given an official name, though the programme is referred to as 'Successor' by those involved in it. SP

HII achieves construction milestone on Virginia-class submarine Minnesota

Huntington Ingalls Industries announced that the Virginia-class submarine Minnesota (SSN 783) is "pressure hull complete," signifying that all of the submarine's hull sections have been joined to form a single, watertight unit. Minnesota will be the 10th Virginia class submarine and the fifth delivered by HII's Newport News Shipbuilding (NNS) division.

"This is a key milestone in the construction of the submarine," said Jim Hughes, NNS' Vice President of submarines and fleet support. "Our shipbuilders and our partners at Electric Boat have put a lot of hard work into this boat, and it shows. Construction progress on Minnesota is two months ahead of where USS California, the last Virginia class submarine delivered by NNS, was at pressure hull complete. The accelerated progress is due to an increase in work prior to hull completion in a more cost-efficient environment, resulting in a reduction in both the time and cost to complete the work."

Pressure hull complete is the last major milestone before the submarine's christening this fall and delivery in 2013. The contract to build Minnesota was awarded in 2003, and construction began in February 2008 under a teaming arrangement between NNS and General Dynamics Electric Boat. Minnesota is 81 per cent complete. SP

Korean Navy orders Thales minesweeping equipment

Thales has been awarded a contract to supply minesweeping equipment for the Republic of Korea Navy's (ROKN) new Mine Sweeper Hunters. The contract signed with ITT Corporation (now ITT Exelis) is for the supply of three ship sets of advanced acoustic generators (AAGs) from Thales in Australia. These will be provided by ITT Exelis to GMB USA, which is the prime contractor for the ROKN's mine sweeper hunter (MSH) combined influence sweep (CIS) project.

Jean Pellegrin, Thales Country Director of South Korea, said: "The ROKN has committed to having the most advanced minesweeping technology, which is also in service with the Royal Australian Navy, the United States Navy, and two other navies.

"As new mine-related threats emerge, it is vitally important to deploy cutting-edge systems that deliver innovative and flexible capabilities to friendly naval forces on operations. We are extremely proud to be a part of the ROKN's capability in this area."

Chris Jenkins, Thales Australia's CEO, said: "This technology is the result of close cooperation with Australia's Defence Science and Technology Organisation (DSTO), as well as a long-term investment to develop innovative, specialised solutions at our facility in Sydney, Australia. We believe the AAG is well suited to the export market, and this contract reflects growing international interest in our minesweeping systems." SP

PHOTOGRAPHS: Huntington Ingalls Industries, army.mil

US Army evaluates net-centric interoperability for Coalition Ground Forces

The US Army hosted a coalition interoperability experiment to identify performance shortfalls and to evaluate future network architectures that will better enable interoperability for coalition ground forces brigade and below, prevent fratricide and extend continuity of operations, recently.

The US Army Research, Development and Engineering Command's communications-electronics RD&E Center, or CERDEC, provided experimentation and interoperability support to Project Manager Mission Command to validate the interoperability of the National Command & Control Information System and to produce a roadmap with capacities, performance assessments and recommendations for future systems.

The experiment was conducted under the 5-Powers Net-Centric Agreement among England, France, Germany, Italy and the United States, which concludes this year.

"Soldiers need to accurately pass friendly force information to coalition partners for mission execution, but there are challenges to receiving the same pieces of data through different methodologies in a net-centric environment," said Kenneth Grippo, Cognition Branch chief for CERDEC's Command, Power & Integration directorate.

The experiment will aid in identifying interoperability gaps and whether those gaps are due to specifications, national implementation or the technology itself. The results will be used to maximise situational awareness, to understand and utilise coalition resources, to avoid duplication of coalition efforts and to increase flexibility of functionality, Grippo noted. SP

Borey submarine contract signed

Russia's Defense Ministry and United Shipbuilding Corporation (USC) have signed a contract for the delivery of five new Borey class (Project 955) strategic nuclear submarines, according to a USC spokesman.

"I have information that the contract for five subs has been signed," Kravchenko told RIA Novosti. He did not specify when the contract was signed but said that the signing was confirmed on May 28.

On May 25, it was reported that the ministry and the USC failed again to agree final contract terms for Borey delivery, despite the intervention of President Vladimir Putin.

Defense Minister Anatoly Serdyukov told journalists on May 25 after a meeting with Putin that his ministry and the submarine manufacturer would return to talks in the future to agree a final price for the Borey boats in 2015.

At the end of Friday's meeting, Serdyukov and Trade and Industry Minister Denis Manturov left to sign the deal with no journalists present, and it was unclear how the final agreement looked and whether it would be signed.

Manturov told journalists earlier on Friday after the meeting with Putin that the contract would be signed on May 25. He also said then that the Borey contract would be implemented in full.

"There will be five submarines and a design contract," he said. "The president made a considered decision that makes it possible to sign a contract with the Defense Ministry until 2020."

The Russian Navy is to receive at least 10 new Borey class strategic nuclear submarines by 2020. The submarines, to be armed with Bulava ballistic missiles, are expected to constitute the core of Russia's strategic ballistic missile submarine force after 2018.

Then Prime Minister Putin said last year that the procurement of new warships and submarines for the Navy would be a priority over the next decade. The Russian Government has allocated five trillion rubles ($156 billion) or a quarter of the entire armament procurement budget until 2020 for this purpose.

The signing of a contract for delivery of the Borey submarines has been repeatedly postponed due to the pricing dispute between the Defense Ministry and defense industry enterprises. SP

PHOTOGRAPH: Lockheed Martin

Lockheed Martin JLTV

US Army refining long-term MRAP plan

The US Army is in the process of refining a long-term plan for its fleet of 20,000 blast-deflecting, mine-resistant, ambush-protected vehicles, known as MRAPs, service officials explained.

Some of the MRAPS will be placed in brigade combat team configurations for as needed troop transport and route clearance missions; some will be put in storage facilities and others will be kept for training purposes, according to the Department of the Army G-8 officials.

"The MRAPs were a very successful programme," said Colonel Mark Barbosa, Chief, Focused Logistics Division, Director of Material, G-8. "The $45-billion investment had Office of the Secretary of Defense (OSD), oversight, with very strong support in Congress. The platform was rushed to theatre to protect our soldiers and it did very well. In order to meet the timelines we needed to meet, we had to go to multiple vendors and we had to go to very large quantities."

Now that the war in Iraq is over and plans for an Afghan drawdown are underway, the Army is outlining a long-term plan for the vehicles to place roughly 60 per cent of them in storage or prepositioned stocks, 30 per cent of them with units and about 10 per cent of the fleet for home-based troop training. In addition, a small number will be divested, Barbosa said.

At the same time, the MRAP plans are a key part of the calculus of the Army's overall fleet strategy which, among the flagship programme, plans to incrementally field the new, next-generation joint light tactical vehicle, or JLTV. The now-in-development JLTV, a new, high-tech light tactical vehicle to begin fielding by 2016, is being engineered with MRAP-like protection at a much lighter weight.

"The JLTV will bring the MRAP-level protection that we need, and the on-board power we will need for current and future networks. Also, the JLTV will have an off-road mobility and system reliability that will exceed what we have in MRAPs," said Tim Goddette, director of sustainment systems for the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology.

Overall, MRAPs only represent about seven per cent of the army's wheeled vehicle inventory; by contrast, the army plans to have JLTVs make up roughly one-quarter of its total tactical wheeled vehicle fleet, officials said. In essence, the army plans to acquire as many as 50,000 JLTVs by 2035, they said. SP

Naval missile defence system project a success

Australia's ANZAC Frigates will be further protected from supersonic cruise missile attacks thanks to new radar technology acquired and fitted onto the ships by the Defence Materiel Organisation (DMO).

The CEAFAR Radar and CEAMOUNT Missile Control Illuminator are part of a multi-phased array radar system used to identify, track and guide missiles onto multiple targets simultaneously.

The technology upgrade also gives the ships the means to detect and destroy incoming supersonic cruise missiles. The fitting was part of the Anti-Ship Missile Defence Upgrade programme, the multi-phase radar system was developed by the US and Australian military in a joint venture.

HMAS Perth was recently upgraded and its new capability was successfully shown off to the Royal Canadian Navy (RCN) at the annual Esquimalt Victoria Day Parade.

The total project cost is in excess of $650 million, including the funds already spent upgrading HMAS Perth. The Royal Australian Navy's (RAN) remaining seven frigates will be upgraded by 2017.

RAN and RCN have a long history of serving and training together. RAN and RCN ships served during the Korean War, in support to East Timor, and have been longstanding participants in the Rim of the Pacific (RIMPAC) Exercise series, the largest maritime exercise in the world.

While on deployment to the US West Coast and Canada, HMAS Perth will conduct international engagement visits to several other ports and will participate in RIMPAC 2012. SP

C-130J Super Hercules lands at Air Force Station, Car Nicobar

In yet another accomplishment, the C-130J Super Hercules aircraft touched down at Air Force Station, Car Nicobar on May 28, 2012, on its maiden flight to the island airbase.

After almost six hours flight from Air Force Station Hindan, Group Captain Tejbir Singh, Commanding Officer of the Hercules Squadron accomplished the task of landing at Car Nicobar Airbase. The crew was received by the Chief Operations Officer Wing Commander Sanjay M. Nijai. The Chief Staff Officer CSO (Ops) HQ Andaman & Nicobar Command, Air Commodore T.K. Sinha was also present on the occasion. For some, it was just yet another landing, in fact it marked a big leap for the Indian Air Force in projecting its strategic reach even at this remote and far-flung island base of the Indian Air Force.

C-130J is one of the latest warbird with state-of-the-art avionics and defensive suites. This aircraft has the ability to execute special operations which shall involve not only the Air Force elements but also Army and Naval forces to achieve the assigned task by displaying a great synergy between them. This also showcases our ability and operational infrastructure to induct variety of forces and technology. This endorses the vision of our planners to induct this magnificent machine into tech-savvy Indian Air Force. It is indeed a proud and historic moment which will go down the annals of Indian Air Force's only island base rightfully known as 'Commendable Carnic'. SP

Eurofighters replace F-16 jets in Italy

Eurofighter Typhoons of the Italian Air Force (ItAF) have replaced the last of the air forces' F-16 jets to leave the Typhoon solely responsible for the defence of Italian airspace. Entering into service in 2004 and now operational with four Typhoon Squadrons (Gruppi) across both northern and southern Italy – two at Grosseto airbase and two at GioiadelColle – Eurofighter is now the only air defence asset in the Italian Air Force.

Replacing the F-16 as a more modern weapon system, the Typhoon aircraft will bring to the air force operational benefits thanks to better effectiveness and capabilities of the new fighter as well as offering logistics benefits due to the standardisation of having only one operational line for air defence duties.

The ItAF leased 34 F-16s from the USAF for a period of five years, followed by an additional five years under the programme "Peace Caesar". The aircraft has been effectively used to fill a gap during the transition from the F-104 and the Eurofighter.

Till date, 62 Typhoon aircraft have been delivered to the Italian Air Force and during operations in Libya in 2011, the Italian Air Force fleet completed over 200 missions and flew 1,294 flying hours from their forward operating base in Trapani, Sicily. SP

Yak-130 attracts over 10 potential buyers

Irkut expects to receive new orders this year for the Yakovlev Yak-130 advanced jet trainer and light-attack aircraft, said company President Alexey Fedorov. Russia's Defence Ministry late last year signed a production order for 55 of the twin-engined aircraft to equip the nation's air force. These will be delivered as a mix of training aircraft and armed combat trainers.

In 2011, Irkut also delivered its first export examples of the type to Algeria, under a 16-unit order. "At the moment we are conducting pretty intensive talks and negotiations with more than 10 potential customers, and I believe that in the near future we are going to sign new export contracts," Fedorov said.

Russia's Rosoboronexport arms agency is promoting the Yak-130 in the Philippines, and Bangladesh and Syria have also been named as potential future users. Irkut plans to fly a combat trainer version at the Royal International Air Tattoo and Farnborough air show in the UK during July. SP

PHOTOGRAPHS: Indian Air Force, Eurofighter, Wikipedia

BAE Systems to enhance Royal Saudi Air Force training capability

Following agreement between the Governments of the Kingdom of Saudi Arabia and the United Kingdom of Great Britain and Northern Ireland, under the Saudi British Defence Cooperation Programme, BAE Systems have been awarded a contract for £1.6 billion to support the future aircrew training requirements of the Royal Saudi Air Force (RSAF).

The contract, aimed at meeting the growing demands of a world class air force, covers the provision of equipment and training devices such as aircraft simulators, training aids and aircraft on which to train aircrew.

Included within this requirement is the supply of 55 Pilatus PC-21 aircraft to fulfil the basic training role and 22 BAE Systems Hawk Advanced Jet Trainer aircraft, which will be used to fulfil the fast jet training part of the syllabus.

Commenting on the announcement Guy Griffiths, Group Managing Director International, said: "We are honoured that BAE Systems has been awarded this contract to provide the Royal Saudi Air Force with aircraft and training equipment to meet their future aircrew training needs. We have a long history in the Kingdom of Saudi Arabia and working with Pilatus, we will provide the RSAF with the best training platforms to meet their requirements.

"Through the Hawk Advanced Jet Trainer, the trainee fast jet pilots will have access to the very latest in advanced simulation for radar, weapons and defensive aids training to enable a smooth transition to front line aircraft, including Typhoon."

Deliveries of the Pilatus PC-21, manufactured in Switzerland, will commence in 2014. The UK-built Hawk aircraft will be delivered from 2016. SP

Boeing to modernise flight deck and avionics for US and NATO AWACS fleet

The Boeing Company has received a $368 million engineering, manufacturing and development (EMD) contract to develop a design that modernises the flight deck and avionics of the US and NATO E-3 707 airborne warning and control system (AWACS) aircraft fleet.

The contract, awarded by the Electronic Systems Center at Hanscom Air Force Base, Massachusetts, is the second phase of a cooperative programme between the US Air Force and NATO. The initial phase included sub-system requirement reviews completed in March.

Under the EMD contract, Boeing will integrate new and existing avionics and communications systems; develop a design to install the new equipment; upgrade one aircraft for each AWACS fleet; flight-test the new systems; develop logistics support data; and train flight crews and maintenance personnel.

Rockwell Collins will supply the flight management system suite, including glass displays and air data and flight management computers. Other suppliers include Telephonics of New York, Thales of Belgium, EMS of Canada and Raytheon of Maryland. SP

Oman orders eight Airbus Military C295 aircraft

The Royal Air Force of Oman (RAFO) has signed a contract with Airbus Military for the acquisition of eight C295 aircraft, five of them configured as tactical transports and three as maritime patrol aircraft (MPA). They will be delivered from next year.

As well as upgrading the tactical transport capability of the RAFO in hot and dusty conditions, the aircraft will enhance Oman´s ability to patrol its territorial waters and to conduct missions against piracy, illegal immigration and smuggling.

This new deal means that 108 C295s have now been ordered, with 85 currently in operation with 13 countries. SP

UH-72A Lakota fleet 1,00,000 flight hour milestone

The US Army's fleet of 219 UH-72A Lakota helicopters surpassed the 1,00,000 flight hour milestone during operations on May 10. The 1,00,000 flight hour aircraft, configured for Opposing Force training missions, was flown by Chief Warrant Officer 3 Jason Lacrosse and Chief Warrant Officer 4 Christopher Ezell of the Joint Multinational Readiness Center's Falcon Observer/Controller-Trainer Team in Hohenfels, Germany, during a multinational training exercise.

The Army's fleet of Lakota helicopters, built by the company's American Eurocopter business unit in Columbus, Mississippi, have been in operation since November 2006 with all 219 helicopters to date delivered on schedule and within budget. The Army's requirement is 345 Lakotas through 2016. An additional five aircraft have been delivered to the US Navy for test pilot training. SP

PHOTOGRAPHS: Pilatus, Airbus Military, Eurocopter

Panetta orders USAF to take further steps on F-22

With safety remaining his top concern, Defense Secretary Leon E. Panetta has ordered the US Air Force to take additional steps to mitigate risks to F-22 pilots, George Little, acting Assistant Secretary of Defense for Public Affairs, has said.

Beginning in 2008, a few pilots experienced hypoxia-like symptoms when flying the aircraft, Little told reporters at a Pentagon news conference. Hypoxia is a deficiency of oxygen. There have been a total of 12 cases of these hypoxia-like symptoms affecting pilots.

Little said the Secretary has followed developments in the F-22 closely and has directed the Air Force to expedite the installation of an automatic backup oxygen system in all of the planes.

In addition, effective immediately, all F-22 flights will remain near potential landing locations to enable quick recovery and landing should a pilot encounter unanticipated physiological conditions during flight, Little said.

Finally, Panetta directed the US Air Force to provide him with a monthly progress report as the service continues the search for the root cause of the problem. SP

New RAF C-17 aircraft touches down in the UK

A new C-17 transport aircraft was unveiled recently by the Defence Secretary at RAF Brize Norton in Oxfordshire. Philip Hammond welcomed the £200 million aircraft which arrived in the UK this week from Boeing's production plant in California.

This aircraft is the eighth C-17 in the RAF's fleet. Known as "the workhorse of the RAF", they play a vital role in sustaining the UK's 'air bridge' with Afghanistan – carrying supplies and passengers into and out of the country.

"The Royal Air Force's C-17 fleet together with Voyager and the A400M aircraft will be the mainstay of the Royal Air Force's Air Transport Force for the next decade on the transition of our venerable Tristar and VC-10 aircraft. SP

Russian AF to get first T-50 fighters in 2013

The Russian Air Force will receive the first batch of prototypes of its fifth-generation T-50 fighter for performance testing in 2013, Colonel General Alexander Zelin has said.

The T-50, developed under the PAK FA programme (Future Aviation System for Tactical Air Force) at the Sukhoi experimental design bureau, is Russia's first new major warplane designed since the fall of the Soviet Union.

"The work on the fifth-generation fighter is going according to schedule," Zelin, a former Air Force commander, told a news conference in Voronezh (central Russia). "The third prototype has joined the testing programme and the fourth is being built."

The T-50 made its maiden flight in January 2010 and three prototypes have since been undergoing flight tests. Zelin earlier said that the number of T-50 aircraft involved in testing would be increased to 14 by 2015. SP

Rolls-Royce receives $315 million contract to supply lift system technology

Rolls-Royce has received a contract for $315 million from Pratt & Whitney to supply the Rolls-Royce lift system for 17 F-35B Lightning II aircraft.

Rolls-Royce is the only company in the world to produce the advanced technology that enables F-35B aircraft to perform short take-off and vertical landings (STOVL), and that provides increased mission flexibility.

Neil Mehta, Rolls-Royce LiftSystem Programme Director, said, "Rolls-Royce continues to focus on increasing efficiency as we provide this vital capability to the F-35 Lightning II Joint Strike Fighter programme. We anticipate continuous cost improvements as production volumes ramp up to meet the needs of the F-35 programme."

The LiftSystem comprises a Rolls-Royce liftfan, roll posts and a 3-bearing swivel module. SP

China's stealth fighter takes to the sky

The second copy of China's stealth fighter prototype has just flown at a research facility in the city of Chengdu. The first flight of the J-20 Mighty Dragon with the nose number 2002 doubles Beijing's stealth test fleet.

The first aircraft, painted black like its predecessor, made its first appearance in April in photos snapped by Chinese bloggers. The second J-20 spent a month or so performing ground tests before launching on its inaugural test sortie sometime in the past few days.

With two airframes to work with, the Chengdu engineers can now double the roughly five-flights-a-month development programme apparently aimed at producing a front line stealth warplane. SP

PHOTOGRAPHS: USAF, sukhoi.org

Boeing delivers first EA-18G Growler featuring BEL cockpit subassembly

Boeing on May 3 delivered to the US Navy the first EA-18G Growler electronic attack aircraft with a cockpit subassembly produced by Bangalore-based Bharat Electronics Limited (BEL). The subassembly provides cockpit floodlighting compatible with the aircraft's night vision imaging system (NVIS).

Boeing awarded BEL an initial contract in March 2011 for work on Super Hornet cockpit subassemblies. That contract included options to renew annually for up to four years. As a result of BEL's demonstrated performance, Boeing recently exercised an option to renew the contract for another year.

"BEL continues to demonstrate its capabilities and its position as a valued partner to Boeing," said Dennis Swanson, Vice President of International Business Development for Boeing Defense, Space & Security in India. "BEL's work on P-8I, Super Hornets and Growlers is another example of how Indian companies are becoming a part of the global supply chain while Boeing helps them expand their opportunities across the global aerospace industry."

Other EA-18G parts produced by BEL include a complex-machined stowage panel for the Joint Helmet Mounted Cueing System connector cable and an avionics cooling system fan test switch panel with an NVIS-compatible floodlight assembly. Some of these cockpit subassemblies also will be installed on Boeing F/A-18E/F Super Hornets.

In addition to its F/A-18E/F and EA-18G work, BEL provides Identification Friend or Foe interrogators and Data Link II communications systems for the Indian Navy's fleet of P-8I maritime reconnaissance aircraft. Boeing and BEL also partnered to establish the Analysis & Experimentation Centre in Bangalore in 2009. The centre is a resource for collaboration, experimentation and discovery where the two companies work together to help the Indian armed forces understand the potential operational impacts of new system concepts, innovative technologies, and emerging and evolving processes. SP

Boeing delivers 3rd Peace Eye AEW&C aircraft to Korea

Boeing delivered the third Peace Eye 737 Airborne Early Warning and Control (AEW&C) aircraft to the Republic of Korea Air Force (ROKAF) on May 16.

The aircraft was delivered ahead of schedule to ROKAF Base Gimhae, the main operating base for the Peace Eye fleet. Peace Eye No. 3 is the second aircraft in the fleet to be modified into an AEW&C configuration by Korea Aerospace Industries (KAI) at its facility in Sacheon.

The Peace Eye programme includes four 737 AEW&C aircraft, plus ground support segments for mission crew training, mission support and system maintenance. Five AEW&C aircraft are in operation for the government of Australia. Turkey's first AEW&C aircraft is on plan for delivery later this year. SP

Typhoon growth continues with reformation of No.1(F) Squadron

The Royal Air Force (RAF) has announced that the fourth front line Typhoon squadron will stand up at RAF Leuchars in September. Number 1 (Fighter) Squadron will reform officially at the RAF Leuchars Jubilee Airshow on September 15 becoming the fourth front line squadron to operate the multi-role FGR4 Typhoon. It will be the second Typhoon Squadron based in Scotland, following the stand up of 6 Squadron at Leuchars in 2010.

1(F) Squadron has a distinguished history becoming a founder squadron in the Royal Flying Corps, the RAF's predecessor, in 1912. Typhoon will join iconic aircraft like the Hurricane and Harrier that the squadron has flown. The reformed squadron will look to build on the recent success of the multi-role Typhoon now 'battle-proven' after its deployment over Libya in 2011.

Air Officer Scotland and Station Commander RAF Leuchars, Air Commodore Gavin Parker said: "2012 is the 100th anniversary of the creation of 1(F) Squadron. I can think of no better way to celebrate in this Diamond Jubilee year than to return the Squadron to front line status, equipped with Typhoon, an aircraft that is central to the RAF's current and future combat air capabilities.

"The stand-up of the fourth front line squadron is the next major milestone in the growth of Typhoon as we build towards Future Force 20. The success of the programme to date is testament to the MoD's continued investment in future battle-winning capabilities for the UK's armed forces, the excellent work done by Defence Equipment & Support in continuing to develop and deliver 1 Sqn Creston the aircraft's huge potential, and the hard work and professionalism of all RAF personnel, both service and civilian, here at RAF Leuchars and at RAF Coningsby. SP

PHOTOGRAPHS: US Navy, Boeing, Eurofighter

RSAF welcomes inauguration of Heron 1 UAV

The Republic of Singapore Air Force (RSAF) enhanced the intelligence, surveillance and reconnaissance (ISR) capabilities of the 3rd Generation Singapore Armed Forces (SAF) as it inaugurated the Heron 1 unmanned aerial vehicle (UAV) into 119 Squadron (SQN).

Minister for Defence Dr Ng Eng Hen, who officiated at the inauguration ceremony at Murai Camp, pointed out that the SAF's vision for UAVs started as early as the 1970s, quoting Singapore's first Defence Minister Dr Goh Keng Swee: "For our kind of terrain, we must have Remotely Piloted Vehicles. We must see the enemy without being seen."

Featuring state-of-the-art avionics, detection capabilities and communication systems, the Heron 1 UAV will replace the Searcher class UAV that has been in service since 1994.

Compared to its predecessor, which has a maximum operating altitude of 10,000 feet, the Heron 1 UAV can fly twice as high at 20,000 feet. It has a flight endurance of over 24 hours, more than three times that of the Searcher UAV (eight hours). Furthermore, the Heron 1 UAV has a maximum operating range of 200 km, double that of the Searcher class. SP

Aerovironment introduces digital Wasp AE small UAS

At SOFIC, AeroVironment introduced the Wasp AE small unmanned aircraft system and announced that it has been accepted by the US Air Force for inclusion in its battlefield air targeting micro air vehicle (BATMAV) programme. Inclusion into the BATMAV programme enabled the Air Force to place an order for Wasp AE systems valued at $2,447,949.

The Wasp AE represents the continuing evolution of the Wasp small UAS, which was previously adopted by the Air Force and Marine Corps for small unit tactical intelligence, surveillance and reconnaissance. Designed with AeroVironment's digital data link, Wasp AE is interoperable with the company's digital Puma, Raven, Shrike VTOL and portable ground control station, and is capable of encrypted communication, beyond line-of-sight operation and voice, video, text and data relay.

Wasp AE also incorporates the smallest of AeroVironment's Mantis suite of miniature gimbaled payloads, the 275 gram Mantis i22 AE, giving operators both colour and infrared video imagery from a single sensor package. Weighing 2.8 pounds (1.3 kilograms), the Wasp AE air vehicle is designed for ground and water landing, making it suitable for both land and maritime missions, and is capable of 20 per cent greater flight duration than the prior Wasp. SP

Orbital to supply Flexdi engines to AAI

Orbital has been contracted to supply heavy fuel engines for use in AAI unmanned aircraft systems' (AAI) Aerosonde small unmanned aircraft system (SUAS). AAI Unmanned Aircraft Systems recently won significant military contracts from the US Navy and Special Operations Command to provide SUAS fee-for-service operations utilising the newest configuration of its Aerosonde SUAS.

Orbital is contracted to supply engines up to a value of approximately $4.7 million throughout 2012.

This new engine and system uses Orbital's FlexDI™ Engine Management system to enable spark ignition operation of heavy fuels such as JP5 (naval operations) and JP8 (land based operations) satisfying a US Department of Defense initiative to eliminate gasoline fuels for safety and logistic reasons – the "one fuel" policy. SP

Predator UAV demos Galileo AESA radar

General Atomics Aeronautical Systems, Inc. , a leading manufacturer of UAS, tactical reconnaissance radars, and electro-optic surveillance systems, along with SELEX Galileo and Cobham Aviation Services, demonstrated a new open payload architecture during the sovereign payload capability demonstration (SPCD) held at GA-ASI's Gray Butte Flight Operations

Facilities in Palmdale, California.

The SPCD is part of a joint Independent Research and Development (IRAD) effort between GA-ASI and SELEX Galileo to prove the concept and architecture for a fully certified Predator B incorporating a separate mission management system that supports the independent and cost-effective upgrade of future sovereign payloads. SP

PHOTOGRAPHS: mindef.gov.sg, AeroVironment, GA-ASI

Elbit Systems awarded UAS to a European country

Elbit Systems announced recently that it was awarded an approximately $160 million contract by a European customer, to supply unmanned aircraft systems (UAS). The systems will be supplied over the next two years.

Joseph Ackerman, President and CEO of Elbit Systems, noted: "More and more customers worldwide have come to the conclusion that Elbit Systems' UAS are the ultimate solution for their operational needs, following years of extensive operational experience accumulated in service with the Israeli Defense Forces (IDF), as well as additional world leading armed forces for their air, land and special forces. Technological advancement, a deep understanding of the customer's needs, ongoing development processes that adapt our UAS to the changing requirements of the modern battlefield as well as logistic support, all strengthen Elbit Systems' position as a world leader in this field. We are very proud of this new award, which marks a significant milestone in the chain of our UAS contract awards and we hope that additional customers will follow in selecting our UAS." SP

Bluesky launches drones for aerial surveying

Aerial survey company Bluesky has launched a fast response aerial survey service using state of the art unmanned aerial vehicles (UAV) or drones. The technology, originally developed by the military, includes Artificial Intelligence (AI) guided autopilot, high resolution integrated camera and environmentally friendly rechargeable propulsion system. Autonomous take-off and landing ensures the system is easy to use and with a wingspan of less than a metre it can be easily transported without the need for complex assembly.

"Using UAV's we can respond quickly to demands to collect site specific images and data in a very cost effective way," commented James Eddy, Technical Director at Leicestershire-based Bluesky. "The integrated camera captures high resolution photogrammetric images that can be used to create map accurate aerial survey data including height models. The system is compact and lightweight making it easy to store and transport and can be launched by hand from virtually any location. Flight planning software and an Artificial Intelligence-guided autopilot make it easy to control and the system will gently and safely return to the ground with a single touch of a button." SP

Boeing QF-16 aerial target completes first flight test

The Boeing Company and the US Air Force completed the first manned flight of the QF-16 Full Scale Aerial Target (FSAT) on May 4 at Cecil Field in Jacksonville, Florida. The Air Force awarded a multi-year contract to Boeing in March 2010 that represented Phase I of the initial engineering, manufacturing and development of the QF-16, with options to buy up to 126 FSATs.

"With this successful first flight of the QF-16, the Air Force, Boeing and our supplier-partners have laid the groundwork for the programme to enter low-rate production in 2013 and make its first production delivery in 2014," said Torbjorn Sjogren, Boeing Vice President, Global Maintenance and Upgrades. SP

X-47B gears up for summer milestones

In recent months, Pax River personnel may have noticed a new, uniquely shaped tailless aircraft on the runway, the X-47B unmanned combat air system demonstrator (UCAS-D).

The X-47B is the first unmanned vehicle designed to take off and land on an aircraft carrier. As part of the programme's demonstration, the X-47B will perform arrested landings and catapult launches at Pax to validate its ability to conduct precision approaches to the carrier. The base is one of only a few sites in the world where the navy can run performance tests on aircraft-carrier catapult operations at a land-based facility with flight test and engineering support resources not available on a ship. SP

PHOTOGRAPHS: Elbit Systems, Bluesky, Boeing, Navair

LT GENERAL (RETD)
P.C. KATOCH

Hostage dilemma

The scramble to chalk out a uniform hostage policy within days of the Prime Minister chairing an internal security meeting of Chief Ministers shows our pathetic approach in dealing with the Maoist problem. This, despite the Prime Minister declaring it as the biggest threat to national security for past several years in the background of numerous hostage situations having occurred in the past.

In 1989, the government accepted the demands of the terrorists and released five jailed JKLF terrorists in exchange for Rubaiya Sayeed, daughter of Mufti Mohammad Sayeed, Indian Home Minister (HM). There had been talk of stage managed kidnapping with JKLF Chairman Mohammad Yasin Malik working in tandem with the HM and Indian intelligence operatives as the event occurred within five days of HM taking oath and Rubaiya was reportedly kept for initial three days in a government official's residence. This is no surprise considering R&AW's cross purpose games in Sri Lanka while the IPKF battled LTTE and present-day funding of Hurriyat by the Intelligence Bureau.

The release of the JKLF militants set off a self-perpetuating spiral of violence in J&K. Later, 1999 witnessed the IC 814 hijack drama and our government gave in by releasing three jailed HuM terrorists—Mushtaq Ahmed Zargar, Ahmed Omar Saeed Sheikh and Masood Azhar – all Pakistanis who stoked militancy in J&K, Masood Azhar later raising JeM and having maximum Indian blood on his hands including attacks on J&K Legislative Assembly and the Indian Parliament in 2001.

Had the recent abductions of Italian Paolo Bosusco, Orissa MLA Jhina Hikaka and Chhattisgarh's Sukma District Collector Alex Paul Menon not taken place, the Indian state would have felt no need to chalk out a uniform hostage response policy. The entire gamut in every hostage drama has reeked of a hapless state negotiating under extreme duress. Drift has been the name of the game all along. The number of hardcore Maoists released in exchange of these individuals will never be known but more significant is the issue of gross ignorance in so doing on the psyche of the security forces pursuant to releasing jailed terrorists/militants apprehended at the cost of sweat, blood and sacrifices. No wonder the tail of the Maoists is up. The recent attack on the National Mineral Development Corporation, Dantewada killing five CISF men, taking away their weapons and concurrent killing of a police officer in Kanker indicate more such incidents will follow.

More hostage taking, particularly of ground level politicians and government officials, are well on the cards – a weak buckling government will have rippling effect in other Maoist-infested states. Chalking out a uniform hostage response policy by itself is no panacea because for it to yield result the twin requirements of political will and execution have to be met.

How is the Centre going to ensure political will at state level when the latter show them two fingers like in the instant case of NCTC? Then comes the execution part – just about anyone cannot handle negotiations. The interlocutors must be trained and skilled followed by physical action where required – take the IC 814 hostage case where a trained force like the NSG could not even be activated while the aircraft was on ground in Amritsar for considerable time. There is no alternative other than a centralised response to hostage situations – this should be the forte of the Home Ministry. For the states to not accept it on grounds of turf encroachment will be suicidal. State Counter Terrorism Centres (SCTC) must be established duly linked with NCTC through NATGRID. If we are to fight terror successfully, it must be delinked from law and order and fought in a centralised and synergised manner. SP

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

More hostage taking, particularly of ground level politicians and government officials, are well on the cards – a weak buckling government will have rippling effect in other Maoist-infested states

Immigration processing office inaugurated

The Union Home Minister P. Chidambaram, who inaugurated the IVFRT Central Processing Office in Delhi, said that this will help in bringing more efficiency in immigration, visa and online registration of foreigners, security and other services.

The Immigration, Visa and Foreigners Registration & Tracking (IVFRT) Central Processing Office will now be the nerve centre for immigration related matters. The main activities in this office would include: Management of central advance passenger information system (APIS); technical and operational support to Missions and Immigration Check Posts (ICP); management of unique case file (UCF); management of IVFRT Central Data Centre; dedicated call centre for general public etc.

The core objective of the IVFRT project is to develop and implement a secure and integrated service delivery framework that facilitates legitimate travellers while strengthening security. It has a global outreach. This project includes 176 Indian missions abroad, 80 ICPs (Immigration Check Posts), 10 FRROs (Foreigners Regional Registration Offices), and over 650 FROs (Foreigners Registration Offices) in the state/district headquarters. SP

PHOTOGRAPH: PIB

India Manufacturing Show to showcase potential

BloombergUTV, India's premier business news channel, along with Reliance Broadcast Network Ltd. (RBNL) and IMS Foundation (IMSF), hosted a curtain-raiser event to announce the second edition of the biennial India Manufacturing Show 2012.

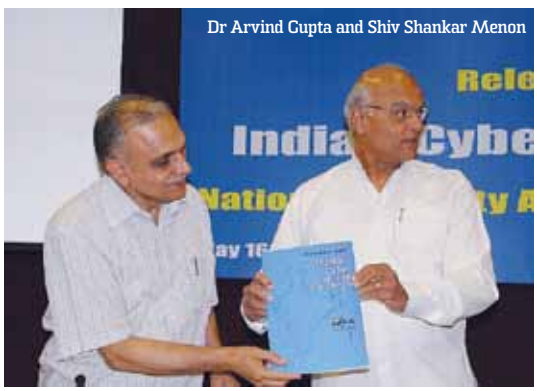
The Karnataka Chief Minister, D.V. Sadananda Gowda, said, "The small and medium industries along with large industries contribute significantly to this socio-economic development of the country by way of employment generation and revenue contribution to the exchequer. It is the vision of my Government to make Karnataka the Asian epicenter of engineering manufacturing in the aerospace, automotive, energy and infrastructure sectors."

The IMS 2012, to be held from September 27-30, 2012 at the Bangalore International Exhibition Centre, is supported by the Government of Karnataka; Ministry of Heavy Industries & Public Enterprises, Government of India; Ministry of Science & Technology; Ministry of Coal; Ministry of Micro, Small and Medium Industries and Micro, Small and Medium Enterprises (MSME).

The prime objective of the IMS is to promote micro, small & medium enterprises and to provide a platform for them to interact with large public sector industries/private sector industries/industrialists/business leaders/customers from India and abroad for an overall development of industrial sector in India. The exhibition will prove to be complementary to the government's initiative in inviting foreign investments as the exhibitors/participants will be from India and the rest from other countries. SP

IDSA taskforce report on **India's cyber security challenges**

India needs to create a climate and environment within which security is built into our cyber and communications working methods", said National Security Advisor (NSA), Shiv Shankar Menon. Menon while releasing the Institute of Defence Studies and Analyses' (IDSA) report on India's Cyber Security Challenges here recently.


Dr Arvind Gupta and Shiv Shankar Menon

The NSA stated categorically that India was not in favour of curbing freedom of expression on the Internet, but at the same time, in a democracy a line will need to be drawn between the collective right to security and individual's right to privacy.

The nation needs to "harden its critical networks and develop metrics to certify and assure that our critical cyber networks, equipment and infrastructure are secure", said Menon, adding that "we must find ways to indigenously generate manpower, technologies and equipment that we require for our cyber security."

Terming the IDSA report as "topical", coming in at a time when the government is in the final stages of preparing a 'whole-of–government cyber security architecture, Menon welcomed it as a "significant contribution towards increasing an understanding of the issue of cyber security and of what we should be worrying about in this field."

Menon spoke about the effects of ICT on warfare, highlighting how the ICT revolution has redistributed power and brought into play the non-state actors, individuals and terrorists in particular. Citing the example of West Asia, Menon pointed out that technology places increasingly lethal powers in the non-state actors, who use it in popular movements to mobilise people and influence opinions against regimes.

What makes the cyber security issue even more complicated, insisted Menon, is the fact that these technologies are not just available to the state where law and policies can control and limit their use, they are widely available in the public domain where commercial and individual motives can easily lead to misuse.

Drawing a comparison between states, the NSA said that information technologies and their effects have made asymmetric strategies much more effective and attractive. He added that the weaker states use cyber war and anti satellite capabilities to neutralise or raise the cost and deter the use of its military strength by a stronger sate.

The NSA concluded that India should be prepared to deal with both the threats to cyber space and risks arising through cyber space, as a "step towards a coherent and comprehensive cyber security policy", adding that while the NTRO is tasked to deal with the protection of our critical security cyber infrastructure, institutions like CERT-IN have proved their worth during events like Commonwealth Games in defending our open civil systems.

The Director General, IDSA, Dr Arvind Gupta said, that the report, written in a non-technical style, is aimed at raising awareness about the dynamic nature of cyberspace and cyber security challenges that India is facing.

He further added, that in analysing the various dimensions of cyber security challenge to India, the Task Force argues that India must foresee and plan for various challenges arising out of the growth of Internet and digitalisation of governance. Failure to do so can be catastrophic and could affect national security, Indian economy and social stability. India is particularly vulnerable to the threats from cyber crime, cyber terrorism, cyber espionage and cyber warfare. India's critical infrastructure is also vulnerable.

The report argues that government and the private sector give cyber security some priority in their security and risk management plans, and do this jointly. Being a report that is addressed to the security community in the widest sense and intended to stimulate public discussion, it relies on publicly available information. SP

The Flame computer virus strikes Iran

Iranian security experts report a virus far more dangerous than the Stuxnet worm has struck the country's computer systems.

Dubbed the "Flame," the virus is one that has struck not only Iran, however, but a number of other adversaries of Israel as well.

The Kaspersky Internet security firm is calling the "Flame" data-stealing virus the "most sophisticated cyber weapon yet unleashed" and hinted it may have been created by the makers of the Stuxnet worm.

Kaspersky called the virus a "cyber-espionage worm" designed to collect and delete sensitive information, primarily in Middle Eastern countries.

The "Flame" has struck at least 600 specific computer systems in Iran, Syria, Lebanon, Egypt, Sudan, Saudi Arabia and the Palestinian Authority, Kaspersky malware expert Vitaly Kamluk told the BBC. He added that the virus has probably been operating discreetly for at least two years.

"This virus is stronger than its predecessor," he said. "It is one that could only have been created by a state or other large entity."

Problems in Iran's computer systems are also continuing to surface in connection with the 2010 "Stuxnet" virus. The malware successfully disabled the computers that operated Iran's uranium enrichment facility. More than 16,000 of the Natanz facility's centrifuges were destroyed as a result of the cyber attack. SP

PHOTOGRAPH: IDSA

Amol Newaskar takes charge as Director (Other Units) BEL

Amol Newaskar took charge as Director (Other Units) of Navaratna Defence PSU Bharat Electronics Limited (BEL) on May 24, 2012. As Director (Other Units), Newaskar will head eight units of BEL located at Ghaziabad, Panchkula, Navi Mumbai, Kotdwara, Pune, Hyderabad, Chennai and Machilipatnam.

Newaskar was General Manager of "Military Communication" Strategic Business Unit at BEL's Bangalore complex before his elevation. He graduated in electronics engineering from SGSITS, Indore and joined the Research and Development Division of BEL, Bangalore, in February 1978. SP

Azimuth Technology starts hiring

A new defence manufacturing company has fired up in Collier County, with plans to hire more than two dozen employees by the end of the summer. The company is called Azimuth Technology. Behind it are local entrepreneurs Len Zaiser and Len Zaiser IV.

The father-and-son team expects to grow their new company to more than 30 employees over the next few months. They've already hired about a dozen workers for their newly finished plant at the Westport Commerce Center, near Collier Boulevard.

Under one of those contracts, the company is producing an accessory to light arms products, such as the M16 rifle. The company's clients will include the US Department of Defense, Homeland Security, law enforcement and private sportsmen.

"We will be producing multiple products," Zaiser said. "We hope to quickly expand into aerospace and other related industries." SP

KMW takes over WFEL

Krauss-Maffei Wegmann GmbH & Co. KG has taken over the UK company WFEL Ltd. based in Stockport, Cheshire. WFEL is regarded as the world market leader for mobile bridging systems in both military and civil applications. The acquisition provides an exit for WFEL's private equity investors Dunedin, which backed a management buyout of the business in 2006 for £48 million.

This is KMW's first in the UK, it will provide WFEL with new opportunities to accelerate its international sales growth, while generating synergies for new and existing customers through a combined product portfolio of vehicle and bridging solutions offered by KMW. WFEL bridges are used in places where other opportunities for crossing terrain, obstacles and bodies of water have been destroyed. The self-supporting structures can span up to 46 metres with a maximum load capacity of 125 tonnes. The global WFEL portfolio numbers about 40 governments, includes the USA, UK and Switzerland. SP

Boeing touts business opportunities in Malaysia

The Boeing Company co-sponsored a conference with the Malaysian Investment Development Authority (MIDA) on May 2 in St. Louis to showcase current business opportunities in Malaysia and to discuss the goals of Malaysian industry. Conference attendees included representatives from 75 Malaysian and US companies.

"Strategic and cultural alliances are shifting back to markets in Asia," said former US Senator Christopher "Kit" Bond, who spoke at the conference. "Establishing partnerships with Malaysian industry is critical in capturing new opportunities. Malaysia has transformed into a competitive, high-tech economy that is actively seeking areas of mutual collaboration in the medical, technology, and aerospace industries."

Boeing's involvement with Malaysia dates back to 1947 and continues today through a variety of programmes, including the country's fleet of F/A-18D Hornets, Harpoon Weapon System, MEASAT satellites, training programmes, and commercial aircraft. Most recently, Insitu Pacific, a wholly owned subsidiary of Insitu and Boeing, announced a contract for the ScanEagle unmanned aircraft system in Malaysia and a partnership with Composites Technology Research Malaysia to provide in-country support for ScanEagle operations.

In addition to improving its intelligence, surveillance and reconnaissance capabilities with ScanEagle, Malaysia also is looking to bolster its fighter capability. Boeing is offering the next-generation F/A-18E/F Super Hornet in Malaysia's multi-role combat aircraft competition. SP

PHOTOGRAPH: BEL

Security events

Eurosatory 2012
11-15 June
Paris, France
www.eurosatory.com

Cyber Warfare and Security Summit
25-27 June
Washington DC
www.cyberwarfareevent.com/Event.aspx?id=716770

3rd Ballistic Missile Defense
28 June
Avenue Conference Center, Airport City, Israel
www.technologies.co.il/beta/en-us/Conference.aspx?Id=48

CSIsrael 2012 – C4I & Cyber Conference
8 July
David Intercontinental, Tel Aviv, Israel
http://c4i.events.co.il

Military Airlift Asia-Pacific
9-10 July
Grand Copthorne Waterfront Hotel, Singapore
www.smi-online.co.uk/events/overview.asp?is=1&ref=3748

MSPO 2012
3-6 September
Kielche, Poland
http://www.targikielce.pl/index.html?k=mspo_en&s=index

CBRNE Asia 2012
3-7 September
Bangkok, Thailand
www.ibcevents.com

Israel HLS
11 September
Avenue Conference Center, Airport City Israel
www.technologies.co.il/beta/en-us/Conference.aspx?Id=49

Berlin Airshow (ILA 2012)
11-16 September
Berlin, Germany
http://www.ila-berlin.de

DRS launches the C4Insight Integrated C4ISR management system

DRS Technologies has announced that its DRS Tactical Systems (DRS TS) division has launched the C4InSight Integrated C4ISR management system at the Special Operations Forces Industry Conference in Tampa, Florida.

Developed and manufactured by DRS TS, C4InSight delivers an integrated C4ISR management system. It enables commanders and platform operators to control and interface with sensors, communications equipment, mission command applications, navigational devices, and platform vetronics from any workstation in the platform. All of the voice, video and data from these platform devices can be connected across the tactical network with adjacent platforms, remote command posts, higher headquarters, and when desired, with coalition partners.

C4InSight is the latest in DRS TS' line of ultra-rugged, MIL-STD qualified hardware and software solutions. It builds on its legacy as the premier supplier of over 2,00,000 platform computing devices and peripherals for the US Army Force XXI Battle Command Brigade and Below (FBCB2) programme.

At the core of C4InSight is the DRS Data Distribution Unit (DDU) and the Mission Command Software Suite (MCSS). These components can be employed to interoperate with existing platform displays and computers, or can be augmented by a suite of available DRS TS products, such as the joint platform tablet (JPT) computer and Scorpion handheld devices.

In addition to providing new capabilities to integrate various platform C4ISR devices, C4InSight also achieves significant reductions in size, weight, power and cost (SWaP-C). The modular, open architecture is consistent with the Army's Vehicular Integration for C4ISR/EW Interoperability (VICTORY) efforts as well as the US Special Operations Command (USSOCOM) Mobile Distributed C4ISR Architecture (MDCA) objectives. It provides a scalable, cost-effective and integrated C4ISR management system to meet current tactical platform modernisation objectives as well as future platform C4ISR requirements.

First deployed to meet the C4ISR management requirements of USSOCOM's Family of Special Operations Vehicles (FOSOV), C4InSight addresses the challenges of tactical platform C4ISR modernisation by providing a greater allocation of already constrained space on FOSOV vehicles. C4InSight's capability to control and manage an array of peripherals allows for the reduction of redundant hardware. It also enables device consolidation on platforms where installing additional hardware is extremely limited, such as the US Army's fleet of tracked combat vehicles.

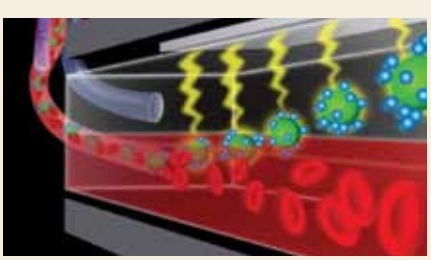
"DoD Programme Managers and platform original equipment manufacturers (OEMs) will be able to take advantage of DRS Technologies' most rugged and sophisticated platform C4ISR management system when they integrate C4InSight into their platforms," said Mike Sarrica, Vice President and General Manager of DRS Tactical Systems.

"For nearly two decades, DRS has developed and fielded platform networking and computing technology for America's warfighters and first responders. Now, these advanced technologies are available as a fully integrated architecture to aid the military and other agencies to deliver state-of-the-art network with mission command on-the-move (MCOTM) capabilities. This is also available to OEMs battling for a significant competitive edge in the C4ISR marketplace," added Sarrica. SP

Revolutionary approach for controlling sepsis key to saving warfighter lives

Sepsis is an overwhelming blood infection, which when coupled with shock (such as that which may be experienced following a combat injury) has a mortality rate near 50 per cent. Current methods to identify and treat sepsis may take 48 hours or longer – resulting in increased recovery time from combat wounds and hundreds of preventable deaths.

In fall 2011, DARPA began research to limit the impact of sepsis on the US warfighter through the Dialysis-Like Therapeutics (DLT) programme. The goal of DLT is to demonstrate a portable device capable of sensing and removing various targets in the blood (e.g. bacteria, viruses, toxins, and cytokines) on clinically relevant time scales. As pathogen load is strongly correlated with patient morbidity and mortality, early detection and rapid reduction is considered fundamental to programme success and eventual clinical impact. Research to date has focused on advancing the components needed for such a device.



Today, DARPA announced a solicitation seeking integration of previously awarded DLT projects to develop sensors, complex fluid manipulation architectures, separation technologies and closed-loop control algorithms. After integration, DARPA hopes for a single device capable of removing at least 90 per cent of sepsis-causing material from a patient within 24 hours. The DLT device sought by DARPA would differ from kidney dialysis devices by potentially enabling continuous, early sensing based on the entire blood volume, removing the need for anticoagulants, and facilitating label-free separation of multiple targets within the blood. SP

PHOTOGRAPHS: DRS, DARPA

PHOTOGRAPH: 3.bp.blogspot.com

Brad Pitt's fears about Angelina

Brad Pitt and Angelina Jolie decided to get married because of her work with the United Nations, according to some media reports. Apparently the couple feared she may not survive a dangerous new mission with the UN helping to battle drug lords.

The mother of six adopted and biological children, who is a goodwill ambassador for the UNHCR refugee organisation, will be involved when the UN launches a fresh war on South American crime bosses. A report said: "Brad's terrified something bad will happen to her. It's why he wanted to cement things with a wedding."

Earlier this year, Angelina wrote a farewell letter to her fiancé Brad after becoming scared for her life on a UN mission. SP

Freak road mishap due to security lapse

The Maharashtra police has admitted that there was a major security lapse in the handling of the January 25 freak road mishap recently in Pune, in which the allegedly mentally unbalanced State Road Transport Corporation bus driver Santosh Mane caused the deaths of eight persons. Civilians grappled with Mane and overpowered him after 45 minutes, with no help from the elite Quick Response Team (QRT).

The state control room that fateful morning received a call from a Deputy Commissioner of Police (DCP) in Pune calling for the QRT, but there were no clear instructions about when, where and for what purpose the special teams were to be sent. There is no entry on record to say that the QRT was activated.

Senior officials have admitted that the police did not follow proper protocol to contain the damage. Given that Pune's name has figured prominently on the target list of terrorists, the lapse is severe.

Pune has 12 QRT teams comprising 96 commandos who are trained at the state's elite Force One headquarters. The QRT teams were formed after directives from the State following the Ram Pradhan Committee report on the 26/11 terror attack in Mumbai. SP

Oleg Penkovsky, hot spy from the Cold War era

Oleg Penkovsky, a colonel in Soviet military intelligence, is in the record books for his spying. His information – passed to MI6 and the CIA in the early 1960s – helped President Kennedy manage the Cuban missile crisis successfully by identifying the extent of Soviet missile capability and how far the Soviet leader Nikita Kruschev was likely to push events.

The most useful strategic intelligence comes from penetrating the leadership of your enemy so that you understand not just their military capability but their intentions. That was something MI6 only managed late in the Cold War largely thanks to KGB Colonel Oleg

Gordievsky, who spent a decade towards the end of the Cold War supplying intelligence to MI6 which revealed how paranoid the Soviet leadership was of a first nuclear strike by NATO. The British service could not initially believe it, but they eventually believed it. SP

Cocaine security flop angers President Kufuor

In 2011, the then Ghana President J.A. Kufuor was worried and also angry with his Security Chiefs over the monumental security blunder that culminated in a dramatic escape of a cocaine-laden vessel from Ghana's territorial waters.

The President then charged his Security Chiefs to provide answers as to why and how the cocaine-laden Vessel, MT Jano sailed through Ghana's territorial waters without being captured. Kufour then sought an answer from the security heads stating, "Unlike the other case. I demand immediate answers on this particular case," clearly pointing out his frustrations over the security blunder. SP

48

Years of Excellence Personified

6

Aesthetically Noteworthy Publications

2.2

Million Thought-Provoking Releases

25

Million Expert Reports Voicing Industry Concerns

*.... aspiring **beyond excellence.***

SP GUIDE PUBLICATIONS

www.spguidepublications.com

TREASURE
HOUSE

visit: www.spsmilitaryyearbook.com