

SP's



AN SP GUIDE PUBLICATION



₹55.00 (INDIA-BASED BUYER ONLY)

MAI

ONLY FORTNIGHTLY ON

MILITARY
AEROSPACE
INTERNAL SECURITY

www.spsmai.com

Vol: 2 Issue 12 ■ June 16-30 ■ 2012



Indo-US ties on song

PAGE 4


**General Bikram Singh's
modernisation plans** PAGE 5

**Show report:
Eurosatory 2012** PAGE 8

**FROM THE
EDITOR'S DESK** 3
SP'S EXCLUSIVES 4
SECURITY BREACHES 22

MILITARY
 Seminar Report 13
 Updates 14

AEROSPACE
 Developments 15
 Unmanned 17

INTERNAL SECURITY
 Viewpoint 19

CORPORATE
 News 20
 Technology 21

Veiled Vipers on a roll

As India gears up to order six more C-130Js, the six aircraft in country are stretching their legs well. After landing at the Car Nicobar airbase recently, the 77 Squadron 'Veiled Vipers' based at Hindon is now pushing the aircraft fleet to its limits, flying in formation, exercising with the Army in combat drills and generally setting the stage for a larger number of the force-multiplying aircraft.

The C-130Js, the newest aircraft in the Indian Air Force (IAF) inventory, have proved themselves well and the IAF has reported very positively on the ownership experience so far. In fact, costs saved on early deliveries of the first six aircraft will be discounted from the contract price on the follow-on six aircraft,



a figure pegged at approximately \$80 million—something that has gone down extremely well with the IAF leadership. The next six C-130Js will be largely the same, but with certain minor modifications of a classified nature. The IAF has been in touch with Lockheed-Martin conveying the fine-tuning it requires on the aircraft to execute missions that range from disaster relief and search and rescue, to special covert operations in hostile air space, low-level troop insertion and surveillance. **SP**



Cover:

The US Secretary of Defense, Leon E. Panetta, meeting the Defence Minister, A.K. Antony, in New Delhi on June 6, 2012

Cover image: MoD

PUBLISHER AND EDITOR-IN-CHIEF

Jayant Baranwal

ASSISTANT GROUP EDITOR

R. Chandrananth

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

© SP Guide Publications, 2012

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. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, photocopying, recording, electronic, or otherwise without prior written permission of the Publishers.



SP GUIDE PUBLICATIONS
www.spguidepublications.com



India intends to move beyond buyer-seller relationship

It is heartening to note that the Minister of Defence, A.K. Antony made it clear to the visiting US Secretary of Defense, Leon Panetta that military trade between the two countries need to move beyond simply the transfer of equipment. He emphasised that the priority for India is to move beyond the buyer-seller transactions and the focus is on transfer of technologies and partnerships to build indigenous capabilities.

Some of the advanced technologies, the US is not willing to transfer, particularly those coming through the foreign military sales (FMS) route. When the government-to-government talks are held and the modalities are defined, India is now in a position to tell what and how it wants. The US Secretary has assured the Indian side that the US Government will initiate measures to facilitate technology access and sharing. Many of the OEMs have indicated that this is quite possible, it only needs to be defined by the governments, particularly in the light of the military industrial eco-system in India maturing.

There are many deals that are on the horizon and if the US is to expand its defence market then it has to be a lot more flexible. The contracts that are yet to be concluded include 15 heavylift helicopters (Boeing CH-47 Chinook), 22 medium-attack helicopters (Boeing AH-64D Block III Apache Longbow), new engines for the IAF's Jaguars (Honeywell F125IN) and six more C-130Js.

Given India's ambitious military modernisation programmes, it is imperative to have well-laid out acquisition policies.

General Bikram Singh has taken over as the 25th Chief of Army Staff when the modernisation programme is in full swing, needing proper direction. The new General has his hands full, with several programmes still to reach any level of maturity. Apart from the onerous F-INSAS infantry modernisation programme, General Singh's tenure will see a renewed focus on modernisation of Artillery, Army Aviation and significantly, the Special Forces units.

For technologies, India has to scout and one place to do that certainly is Eurosatory where nearly 400 products and innova-

tions get launched at the biennial event. R. Chandrakanth, in his report from Paris, outlines how the OEMs are looking eastward in the light of the Eurozone crisis and also the slashed defence budgets in Europe. The OEMs find that while the Indian market is humongous, it is a difficult market, due to bureaucratic legacies. While we have the intent to fast-track the development process, we need to shed the legacies quick and fast.

In his fortnightly column, Lt General (Retd) P.C. Katoch dwells on the topic of heightened cyber threats to national infrastructure and defence and the need to build solid walls. China continues to pose major threat in the cyber domain. In India, while Stuxnet infected some 6,000 computers in 2009, Ghostnet penetrated over 1,200 systems in 103 countries and purportedly originated in China had also hit India. We need to guard not just the borders, but critical infrastructure and technology is the only answer to that.

Jayant Baranwal
Publisher and Editor-in-Chief



US Secretary of Defense Leon Panetta assures India of technology transfer

On the back of a slew of high value defence deals with the US, India has conveyed that it is no longer interested in remaining in a buyer-seller relationship, and will exercise its rights as a customer to get the technologies that it needs. The US Secretary of Defense Leon Panetta met his Indian counterpart A.K. Antony on June 6 for an hour, a meeting where Antony is believed to have said in no uncertain terms that military trade needed to move beyond simply the transfer of equipment.

In a statement, the Ministry of Defence (MoD) said, "During the discussion of the defence trade, Antony emphasised that the priority for India is to move beyond the buyer-seller transactions and to focus on transfer of technologies and partnerships to build indigenous capabilities. The US Secretary of Defense assured the Indian side that the US Government will initiate measures to facilitate technology access and sharing."

While the US lost the monumental

MMRCA competition, it has still managed to shore up deals worth billions with India in the last decade. Big ticket items include C-130J Super Hercules transports, P-8I maritime reconnaissance jets and the single largest deal yet for 10 C-17 Globemaster III heavylift transports. Other smaller deals have included Harpoon Block II anti-ship missiles, CBU-105 sensor fused munitions and torpedos for the Navy. While most of these deals have included offset commitments, none involve the transfer of technology—certainly nothing that is meaningful to Indian indigenous capabilities. It is India's intention that enough deals have been struck to give India a bargaining chip with Washington for technology, and these could include deals that are expected to be awarded to the US, but haven't been concluded yet—contracts for 15 heavylift helicopters (Boeing CH-47 Chinook), 22 medium-attack helicopters (Boeing AH-64D Block III Apache Longbow), new engines for

the IAF's Jaguars (Honeywell F125IN) and for six more C-130Js.

MoD sources say the Indian military-industrial complex is ripe for an infusion of fresh technology, and the opportunity hasn't been lost on planners in South Block. Coupled with the projection that India, as a stabilising, mature force in the region, cannot be seen to be a customer like Turkey or Pakistan, has compelled the new paradigm. Secretary Panetta on his part assured Antony that every effort would be made to meet India's technology demands.

Interestingly, even though the actual subject didn't arise, India continues to resist three crucial agreements—the Logistics Support Agreement (LSA), Communications Interoperability and Security Memorandum of Agreement (CISMOA) and BECA—that the US has consistently insisted are required for access to advanced technologies, including encrypted communications, electronic warfare equipment, sensors and source codes. **SP**

Army Chief General Bikram Singh's modernisation plans



General Bikram Singh taking over baton from outgoing General VK. Singh on assumption of office of Chief of Army Staff; Defence Minister A.K. Antony compliments the new Chief of Army Staff; General Bikram Singh poses for shutterbugs with his wife; General Bikram Singh at work on day one.

General Bikram Singh, the country's 25th Indian Chief of Army Staff, has hit the ground running, vowing to bring a strong focus on modernising the Army and continuing the work of his predecessor. The new General has his hands very full, with several programmes still to reach any level of maturity. Apart from the onerous F-INSAS infantry modernisation

programme, General Singh's tenure will see a renewed focus on modernisation of Artillery, Army Aviation and significantly, the Special Forces units.

The General will be taking comfort from Defence Minister A.K. Antony's words to him at their first meeting following the change of guard. Antony conveyed that the Ministry of Defence would extend full sup-

port and cooperation towards the Army's multifarious requirements. The new Army Chief has laid down an intention to make the Army powerful, efficient, nimble and lethal. Programmes likely to see maturity in his tenure include deals for artillery, light utility helicopters, UAVs, radars, network-centric infrastructure backbone equipment and intelligence infrastructure. **SP**

HAL scouts engine for HTT-40 basic trainer

HAL has floated a bid for the supply of a turboprop engine for the in-development HTT-40 ab initio trainer programme. For the 3-tonne basic trainer, HAL has stipulated to turboprop OEMs that it requires an operating envelope of Mach number 0-0.6M, calibrated air speed of maximum 500 kmph and ceiling altitude of 7,000 metres. The engine should be capable of operation in dry and humid tropical climate as well as in saline sea side environment. It should be capable of carefree handling and surge free operation throughout the



flight envelope. HAL will look to procure 16 engines outright from the manufacturer, and build 108 under licence as part of initial contract, following which it could increase the number of licence built units. HAL will be taking great care with the engine selection

and integration on the HTT-40 considering that it was the problem of frequent engine cutting out on the HPT-32 that caused most incidents in the air. While the Lycoming AE0-540 piston engine is certified and safe, integration issues meant that there were several problems with transmission and performance, creating a highly unsafe fleet in the HPT-32. HAL will be looking to work around such potential pitfalls right from the drawing board. The HTT-40, first unveiled as a model at Aero India 2011, will progressively replace India's HPT-32 Deepak trainers, that have been grounded since July 2009. The Indian Government also recently placed an order for 75 Pilatus PC-7 Mk.2 basic trainers. **SP**

Indian Navy to get dedicated satellite

In a major leap in capabilities, the Indian Navy is to receive its first dedicated military communications satellite, the GSAT-7 shortly after it is put into orbit by the French Ariane-7 rocket. While not formally acknowledged to be a Navy-only satellite, the GSAT-7 is understood to be a 2.5-tonne satellite that will be used for military communications, largely by the Indian Navy.

The satellite will give the Navy much needed bandwidth for quick and secure communications between its shore units, ships, submarines and aircraft. According to ISRO, the "GSAT-7 is a multi-band satellite carrying payloads in UHF, S-band, C-band and Ku-band. The satellite weighs 2,330 kg with a payload power of 2,000W. The configuration of the satellite has been finalised and the design of new payload elements is completed." In a related development, the Indian Navy has created a new post in its structure specifically to deal with space and network-centric operations. Rear Admiral Kishan K. Pandey took over as the first incumbent of the newly created post Assistant Chief of Naval Staff (Communications Space and Network Centric Operations), ACNS (CSNCO), at Navy HQ.

Recognising the critical need to harness these technological capabilities, the Indian Navy has been taking rapid steps to seamlessly integrate all combat platforms and terrestrial nodes through state-of-the-art communications and space systems towards network-centric operations. In addition to making platforms and infrastructure for network-centricity, the Navy has also made organisational changes to create and efficiently manage the transition to seamless network-centric capabilities. The creation of a new post of Assistant Chief of Naval Staff

(Communications Space and Network Centric Operations) is a step in the process to migrate from a 'Platform-centric Navy' to a 'Network-enabled Navy.' **SP**

DCNS and Pipavav tie up to build ships in country

French shipbuilding major DCNS and Indian private shipbuilder Pipavav are in the process of establishing a strategic partnership to bring DCNS technologies, methods and skills into Pipavav, one of India's largest upcoming shipbuilding companies. The partnership is understood to be focused on bidding for Indian warship projects and building them in India using technologies from DCNS. The tie-up will look to build ships for both the Indian Navy and Indian Coast Guard.

Speaking on the partnership, Patrick Boissier, DCNS Chairman and CEO said, "Through the P75 Scorpene submarines, the on-going indigenisation programme and DCNS India, we are working to enlarge our footprint in India. This strategic partnership with Pipavav again demonstrates DCNS' confidence in the growing capabilities and long-term development of the Indian defence industries." Pipavav Chairman Nikhil Gandhi said, "DCNS is well-known for its high tech and very efficient platforms

such as Scorpene submarines, Mistral class LPDs, FREMM frigates and innovative Gowind vessels (Corvettes and Offshore Patrol Vessels) among others. DCNS and Pipavav are to provide India with advanced expertise on naval ships.

The synergies between India's largest integrated shipyard and the proficiency of the largest European naval defence company will allow cost effective and timely manufacturing of high class vessels for the benefit of all customers." Pierre Legros, DCNS Head of the Surface Ships division added, "DCNS's pledge is to become a key technology and know-how provider (KHP) to Pipavav. Our objective is to propose modern manufacturing processes together with state-of-the-art platforms. DCNS is committed to transfer the technologies needed to support India's national security needs." According to a joint statement, the partnership is aimed at boosting India's drive for self-reliance in the field of defence manufacturing and to create a large number of local jobs. **SP**

HAL developing turbofan engine

Hindustan Aeronautics Ltd has decided to go in for ab initio development of a new turbofan engine for military and civil use. The proposed 20 kN jet engine, to be designed and developed by the Engine Test Bed Research & Development Centre (ETBRDC), will be aimed at powering trainer aircraft, military transports, business jets, light tactical aircraft, UCAVs and reconnaissance drones. The project will effectively be India's third project aimed at creating an engine for unmanned aircraft use. The other two are the modified Kaveri and the HAL-Safran Laghu Shakti. HAL has already begun scouting for a technology partner for the effort. **SP**





Indian Army for fixed-wing mini-UAV for infantry units

The Indian Army has announced its interest in procuring an undisclosed number of mini-UAVs for its infantry units, for real-time surveillance and reconnaissance, detection of enemy movement, target detection, recognition, identification and acquisition and post-strike damage assessment. The Army's Infantry Directorate, after studies, has stipulated that each integrated system should comprise three flying platforms (air vehicles), one man-portable ground control system, three launch and recovery systems (depending on requirement), one remote video termi-

nal, optical sensors (three colour day video cameras plus three night monochromatic night thermal sensors) and one radio relay.

The weight of one UAV with its ground control system, one launch and recovery system and one set of optical sensors should not be more than 35 kg, all man portable in a backpack. Indicating its preference for fixed-wing platforms, the Army has said it should be possible to launch and recover the UAV within an area of 50 x 50 metres and in case of a wheeled launch/recovery the UAV should takeoff/land from an unpaved surface in a distance of not more than 50 metres. Interestingly, the Army requires that interested vendors offer their products in two variants—for deployment in plains and hills, and in high-altitude. The first variant needs to be capable of being launched and recovered up to an elevation of 3 km above mean sea level (AMSL) and operate up to 1,000 metres above ground level (AGL). It should have an endurance of 120 minutes with a minimum loiter time of 60 minutes with maximum payload at 1,000 metres above take off altitude. On the other hand, the high-altitude variant must be capable of being launched and recovered up to an elevation of 4 km AMSL and operate up to 1,000 metres AGL. It should have an endurance of 90 minutes with a minimum loiter time of 45 minutes with max payload at 1,000 metres above take off altitude. Both variants need to have a range of not less than 10 km. **SP**

DRDO chief does sortie in Gripen

A week after IAF Chief Air Chief Marshal N.A.K. Browne did a sortie in a French Air Force Rafale at the Saint-Dizier air force base in France, DRDO chief Dr V.K. Saraswat was flown in the Gripen NG fighter at the Malmen air base near Linköping, Sweden during an air show.

While the Rafale has been chosen by the Indian Government in the massive MMRC competition, the Gripen was one of the four aircraft that was knocked out of the competition last year. It is unclear what Dr Saraswat's sortie was about and whether it had anything to do with the Gripen platform itself. Dr Saraswat was in Sweden to attend the Aerospace Forum



Sweden, where he gave a detailed presentation on India's unmanned technologies and ongoing projects. "By 2030, the percentage of the manned fleet will be reduced significantly. But it depends very much on how smart and intelligent we can make these systems," he said. Dr Saraswat highlighted the Nishant UAV, Rustom-1 MALE UAV and, significantly, the IUSAV (Indian unmanned strike air vehicle)—the country's classified UCAV programme, based on a stealth flying wing design similar to existing stealth UCAVs like the Neuron and Taranis. Dr Saraswat said the IUSAV would enter service in 10-15 years, and would operate alongside a solar-powered HALE UAV under development with HAL **SP**

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

Coast Guard inducts first of dozen ACVs

The Indian Coast Guard has inducted the first of 12 advanced 8000TD hovercraft, H-187, designed and built by Griffon Hoverwork Limited (GHL), UK. The first air cushion vehicle (ACV) was commissioned by Coast Guard DG Vice Admiral MP Muralidharan in Okha, Gujarat, on June 11. The 21-metre-long air cushion vehicle displaces 31 tonnes and can achieve a maximum speed of 45 knots on two Iveco diesel engines. The ACV is capable of undertaking different tasks including surveillance, interdiction, search and rescue and rendering assistance to small boats/craft in distress at sea.

The air cushion vehicle H-187 will be based at Okha under the administrative and operational control of the Commander Coast Guard Region (North-West). The hovercraft is commanded by Commandant Anurag Kaushik, who is a communication specialist, aided by another officer and 11



personnel. The £34 million signed in 2011 was the single largest hovercraft contract ever signed by the UK. The order for 12 hovercraft was placed following the Coast Guard's operationalisation of six 8000TDs earlier procured, two of which were locally built. The new units being delivered are upgraded and with enhanced technology compared to the earlier fleet. **SP**

Eurosatory 2012 looks eastward

[By R. Chandrakanth in Paris]

In the backdrop of a major financial crisis in Eurozone, the five-day Eurosatory, a leading land, airland defence and security event, has had its share of hiccups. Though well attended and a skew of new launches and announcements, the mood at Eurosatory reflected a cautious approach.

Understandably so, with several European nations having slashed their defence budgets, the mood, if not pessimistic is 'wait and watch'. The British think-tank, International Institute for Strategic Studies, has reported that defence spend by European NATO states dropped by an average of 7.4 per cent per country in real terms between 2008 and 2010, with double-digit drops in France, Italy and Spain. A worrisome factor, indeed.

However, many of the 1,433 firms which had their wares on display pinned their hopes on delegations from the emerging economies. There were 155 delegations from 84 countries with nearly 55,000 visitors, 54 per cent being international.

Strong Indian presence

The Indian delegation was led by the Minister of State for Defence, Dr M.M. Pallam Raju who in an exclusive brief interaction with SP Guide Publications said: "Eurosatory is an important event for India as we get to see here the latest offerings from OEMs from all over the world. As we have embarked upon modernisation of the armed forces, attending such events is always beneficial. The government is committed to providing the best equipment to the Indian soldier."

Indian presence at Eurosatory was strong with both public and private sector showcasing various capabilities. OEMs reportedly held several discussions with the Indian delegation and exhibitors in the hope of securing partnerships which in the medium and long term would be winners.

Indeed, the best and the latest weaponry, military equipment and solutions, communication networks, warfighter essentials were showcased during the week-long fair. Many of the OEMs proudly presented some of the products and solutions as having gone through severe tests in Afghanistan, indicating they were 'combat proven'.

The refrain at Eurosatory, no doubt, was that OEMs had to continue looking east to keep their businesses going. The Asian pie, with India leading, was hard to ignore for any OEM. The need to woo the Asian buyer was evident. The worldwide arms market is

said to be worth over \$1 trillion a year.

This year, Eurosatory is said to have consolidated its position in security (police, civil security, fire service) by gathering companies which displayed dedicated or dual offering. About 40 per cent (560 exhibitors) belonged to this segment. The largest group of exhibitors was from the US (158), followed by the United Kingdom (109) and Israel (59), not to miss out on the Russian, Indian, Chinese, Korean and Indonesians who were almost all over the place.

In 2010, Eurosatory had over 350 new product announcements and this number has been surpassed at this year's event which had clusters for UAVs-UGVs; simulation;

UAVs, helicopters, missiles, networked communication, command control, etc were accentuated by these two companies to great effect.

The biggies in the defence realm such as BAE Systems, General Dynamics, Raytheon, EADS, Finmeccanica, L-3 Communications, Thales, Oshkosh, ITT, Honeywell, Textron, Rockwell Collins, Safran, HAL, Goodrich and a host of others were armed with their latest offerings.

Not to be outdone were medium and small players. From Amphemol's rugged USB 3.0 keys to FN Herstal's FN Scar assault rifle to Insitu's NightEagle to Iveco's VBTP 6X6 armoured, amphibious vehicles, Eurosatory



Minister of State for Defence Dr M. Pallam Raju with SP Guide Publications' Rohit Goel (left) and Indian Ambassador to France Rakesh Sood (right) at Eurosatory 2012

operational medicine; day and night vision; defence and security operational individual equipment; high technology subcontracting; embedded electronics and CBRNe.

New products and innovations

The highpoint of the show, however, were products and solutions which gave that fighting edge in warfare through complete terrain dominance. The Israelis were right up front in this area. Israel Aerospace Industries (IAI) and Elbit Systems, with stalls next to each other, had amazing footfalls, most of them overawed by their offerings in 'complete terrain dominance'. The use of radars,

had an array of products and solutions that had potential of shock and awe of the firepower that land systems could generate.

Eurosatory 2012 was packed with amazing warfare capabilities to deal with any kind of threat. While the OEMs seem to have answers to such asymmetric and regular warfare, they however seem clueless on dealing with the recessionary trends, except looking for solutions eastward. Will the east bail the OEMs out is a question that has many strings, including technology transfer. The oriental story is slowly but surely unfolding. **SP**

More to follow in next issue of SP's M.A.I., Issue 13, July 1-15, 2012

Raytheon's sees Javelin with FICV

*The Indian Army is looking for a Future Infantry Combat Vehicle (FICV) and four Indian companies are battling it out to meet the requirement of 2,600 such vehicles over 20 years. Tata Motors is one of the bidders and US company Raytheon which has a partnership with Tata Motors is hoping that it comes through. The reasons are clear: Tata Motors and Raytheon are building synergies that could give the FICV, something that is not only futuristic but also lethal. **Brad Barnard**, Senior Manager, International Business and Strategy, told SP's M.A.I., gave an insight into the Javelin missile programme and how it was linked to the FICV. Excerpts of the interview:*



Javelin missile

[By R. Chandrakanth in Paris]

SP's M.A.I. (SP's): Could you tell us about the Javelin programme and also on the progress made on the FICV?

Brad Barnard: We are very excited about the programmes in India. We are part of the Tata Motors team and part of their solution to meet the FICV requirement, working along with Rheinmetall on the turret solution. For us the FICV is coming along at the right time to show our capabilities. As for Javelin missiles, it is still at the government to government dialogue stage. Javelin has been demonstrated in India in 2009 and in Alaska in 2010, but trials are dependent on the progress made at the government to government level. As a joint venture (Raytheon and Lockheed Martin) we are standing by to take the programme forward depending on the way the governments define it.

SP's: If it is going to be the foreign military sale (FMS) route, what are the chances of

Javelin missile proves new capability in winter conditions

The Lockheed Martin and Raytheon Javelin joint venture recently demonstrated the capability to launch Javelin missiles from a vehicle in winter conditions at a test range in Norway. This was announced by Joe Elmer, International Business Development Senior Manager, Lockheed Martin at Eurosatory.

Two Javelin missiles scored two direct hits when fired from a Piranha V vehicle configured with a Kongsberg Protector Remote Weapon Station (RWS) and the Javelin Vehicle Launcher (JVL) electronics. The two targets were located 800 and 1,650 metres from the launch vehicle.

getting transfer of technology as sought by Indian Government for many of the programmes?

Barnard: It certainly will be an FMS programme and it will be defined by the two governments, particularly because of the advanced technology on the Javelin programme. There is recognition on both the sides that transfer of technology is critical and part of the requirement. However, we should wait for the outcome of the discussions between the governments. Nevertheless, we can support any programme India and the US want.

SP's: What are the features that you are positioning?

Barnard: The Javelin launch capability can be applied to just about any tactical (light or medium) vehicle or a combat vehicle. The major advantages of a Javelin launch vehicle are its 'quickability' and 'flexibility' across the spectrum. FICV is a near term real programme and we can start positioning to meet this requirement, working along with Tatas who have a broad portfolio of vehicles.

SP's: Could you give us details of your other product offerings?

Barnard: Raytheon has many offerings — the RMS, Excalibur mm GPS guided munitions, Stinger missile which is part of the Apache helicopter package. We are looking at offering for the dismounted soldier too. Our product line covers the spectrum of close combat weapons to advanced munitions.

SP's: What is the highpoint of Javelin?

Barnard: The compelling thing about Javelin is its high level of reliability. First gunner hit is good and has been pegged at 94 per cent strike rate. Importantly, it has been proven in theatre. We have over 2,000 combat firings and we are doing a study with soldiers on how it has been employed in theatre and what improvements can be made. I will be presenting this study at the Soldier Modernisation conference in Delhi in later part of the year. **SP**

ITT Exelis out in front

*ITT Exelis, a leader in command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) related products and systems, has strengthened its presence in India with partnership with the Tata Advanced Systems Limited. ITT Exelis is here for the long haul and explaining the intent to SP's M.A.I. are **Dave Prater**, Vice President, Networked Communications, Communications and Force Protection Systems and **Nick Bobay**, Vice President and General Manager, Geospatial Systems, Night Vision & Imaging.*



[By R. Chandrakanth in Paris]

SP's M.A.I (SP's): What is ITT Exelis footprint in India?

Dave Prater: ITT Exelis has an office in Delhi and I have been to Delhi and Bangalore a couple of times. We are in the pursuit of tactical communication systems, battlefield management systems of the Indian Army and of the National Security Guard (NSG) and Special Protection Group (SPG). We understand that the dismounted soldier needs compact and secure networked communications not limited by traditional radio frequency line of sight. It is here that SpearNet, which Indian customers seemingly are attracted to, is a 21st century communications system bringing voice, situational awareness (SA) and inter-networking access that surpasses traditional point-to-point communication system limitations on range and data rate.

SP's: What are the features that SpearNet offer as per Indian requirements?

Prater: Primarily SpearNet radio is mobile networking design... it is unmatched in the world, in terms of size, weight, throughput and cost. We are quite happy that some of the Indian customers have shown interest in the product and we are waiting for the first

ITT Exelis upgrades SpearNet

ITT Exelis has upgraded its handheld SpearNet radio with enhancements that further extend its capabilities beyond competitor offerings. SpearNet is a high throughput radio that provides large amounts of voice, data and video communications over a self-forming and self-healing ad hoc network.

The first enhancement allows the radio to move around the battlefield in a cellular-like fashion while maintaining communications without reconfiguration or dropped calls. Well-known for its ability to move large amounts of data, Exelis also improved on this already strong SpearNet capability in the second enhancement by greatly increasing its data transfer rate. When compared to fielded dismounted technology, SpearNet—using wideband direct sequence spread spectrum—provides users with two to eight times the amount of voice, data and video that can be moved from the dismounted soldier to the commander. This is more throughput than any other military radio used by dismounted forces today, ITT Exelis claimed.

order in India. Outside of India, we have good number of customers.

In terms of improvements, we have doubled the throughput. The little handheld radio has now 2 megabits per second sustained throughput and can achieve much higher throughput than this. The SpearNet radio was built commercially and fielded extensively in Spain. It is only now we have doubled the throughput.

Also it has unique capabilities. It is an open packetised radio which you can plug in USB, Ethernet, wireless or an Internet protocol as per requirements.

SP's: Where do you stand in the selections?

Prater: There are two customers in India. The Directorate General of Information Services (DGIS) and we are going to get into prime contract. We are working with a couple of them very closely to integrate our products to meet the TCS programme. It has now come to a down-select, but we haven't heard as yet.

SP's: What is the marketing strategy?

Prater: We are making separate efforts as a direct prime for the NSG and SPG who are looking more at available radios today. As far as TCS and BMS are concerned, they are technologies to develop solutions for the future. We will do that with an Indian-led prime.

SP's: Are you working with anyone in India?

Prater: We are working with Tatas and we are competing for a position on their team. They are looking at us as potential partners. Recently, we have done good work with Tata Power and we would love to be on their team.

SP's: What other products are you pitching for the Indian market?

Prater: We have Software Defined Radio (SDR) products that we think are well positioned for what India is doing with the BMS and future infantry soldier as a system (F-INSAS). The plan is to supply components to an Indian prime and then develop it for the Indian BMS requirement. SP



Saab offers RBS 70 NG to India, first time on display in France

India has embarked upon a major replacement of SA-18 Very Short Range Air Defence Systems (VSHORAD) with modern weapons. The cost of replacement of about 800 manpads and delivery of 5,000 missiles is put at \$5.2 billion. Trials of the offerings of the four downselected OEMs are on and Sweden's Saab is one of them. At Eurosatory, Saab had on display for the first time in France, the RBS 70 NG which was only officially launched to the world market in autumn 2011. Here in an interaction with SP's M.A.I., Lars Campner, Vice President, Group Marketing & Business Development; Ake Soderlindh, Director, Regional Marketing and Sales, Business Area Dynamics; and Thomas Hammarlund, Office Authority Manager, Industrial Cooperation, speak about RBS 70 NG.

[By R. Chandrakanth in Paris]

SP's M.A.I. (SP's): Could you give an update on the various offerings in India?

Saab: The first one is the VSHORAD which is a major acquisition programme in India. Right now, RBS 70 NG is in the trial phase and it is happening at four different stations. The trials have just started at the first location and all the trials are expected to go through fall and hope the evaluation process will be over by the end of the year.

SP's: What are the prospects of RBS 70 NG?

Saab: Good. From our side we are confident that we have the right product to offer India.

SP's: What are the unique features of RBS 70 NG which differentiate you from the

other three competitors?

Saab: The RBS 70 NG system with integrated 24/7 all-target capability has been developed for the most demanding air defence combat situations. Its integrated sighting solution, enhanced missile operator aids, unbeatable range and unjammable laser guidance combine to produce a system with world-leading capabilities.

Its integrated thermal imager and night sight capability combine to provide true 24/7 performance. Three-dimensional target designation and automatic target detection improve reaction times, while the auto-tracker aids the missile operator during engagement, increasing hit probability throughout the missile range.

SP's: Is this a major improvement on the

RBS 70 system?

Saab: Yes, it is. Saab has sold over 1,600 systems and more than 17,000 missiles to 18 countries. After taking into the dynamic warfighting environment, we have incorporated new features in RBS 70 NG which is expected to take the VSHORAD capability to a brand new level of performance.

SP's: Any other major offering that Saab is making to India?

Saab: We have the SR SAM (Short Range Surface to Air Missile). The down-select is yet to take place. We are looking at various opportunities in India such as the early warning systems and for all the systems we are interested in strategic partnerships with Indian vendors as offsets and technology transfers are key in any of the programmes. **SP**

Thales-BEL in talks to manufacture radars in India

Thales is having major talks with Indian public sector Bharat Electronics (BEL) to create an international supply chain in the products the two find synergies. "We are working hard with BEL. We are planning to set up a unit to manufacture radars in India," said Jean-Loic Galle, Senior Vice President, Air Operations Division, Thales.

At Eurosatory, Thales team met up with BEL counterparts to discuss the various possibilities of setting up the radar manufacturing plant and other cooperation.

Speaking to SP Guide Publications on the sidelines of a press conference, Jean-Loic Galle said Thales was awaiting the decision of the Indian authorities on the LR SAM (long range surface to air missile) and the SR SAM (short range surface to air missile). "There are more than five players and there will be a down-select soon. On SR SAM, we have the perfect answer for Indian requirements. However, you know the rules in India that the bid will go to L1, the lowest bid, nevertheless we will be fully compliant."

Earlier, making a presentation, Jean-Loic Galle announced the launch of a comprehensive package of 'advanced air defence' from Thales and Thales Raytheon Systems that includes: consultancy on concept of



operations (Conops) to national defence capability enhancement; system of systems design and integration; and through-life support and enhancement, globally. The package is defined as air and missile defence solutions – Shield; command and control systems – Skyview; air surveillance radars – Ground; weapon coordination – Control; mobile integrated weapon systems – Rapid and missiles – Star.

Thales, he stated, is the only company in Europe with the full range of air defence capabilities from sensors through to effectors. It provides full 'plug and fight' interoperability with existing air defence assets. These capabilities have seen NATO deployment.

At Eurosatory, Thales launched among other things RapidFire, a new mobile gun or gun/missile system to provide protection against air and ground threats. **SP**

—R. Chandrakanth in Paris



Expanding night vision through ITT Exelis, Tata partnership

ITT Exelis continues to provide international allies with advanced generation 3 night vision technology and in this effort we have partnered with Tata Advanced Systems Limited (TASL), said Nick Bobay, Vice President and General Manager of ITT Exelis, Geospatial Systems, Night Vision & Imaging business.

Gen 3 night vision technology provides an unprecedented "own the night," opera-

tional advantage to our service members; it is simply the most technically advanced night vision capability on the battlefield.

Under the partnership, the two companies, he said, would supply manufacturing capabilities in India, maintenance and life-cycle support for Gen 3 night vision products.

To start with, Exelis will provide TASL with the latest Gen 3 night vision image intensifier tubes, kits and other materials required to build night vision devices in India, to expedite the delivery of the systems to customers in India. This will be followed by manufacture of high precision components and sub-assemblies of the devices by Tata Advanced Systems. "By the end of the year we [partnership] should be up and running," said Nick Bobay.

"The partnership allows us to increase our international footprint and provide our allies with superior products they need to be successful during night missions."

The market for night vision is huge and the requirement could be over 5,00,000 over the next five years. **SP**

—R. Chandrakanth in Paris

FLIR Systems showcases high definition, long range thermal imaging system

At Eurosatory 2012, FLIR Systems launched integrated systems products Cerberus MX, an all-terrain vehicle-based long range detection system and the Ranger HDC, a high definition, internally cooled, long range thermal imaging system.

Explaining the features of the two new products, James Pinsky, Public Relations Manager, Detection & Protection, FLIR Systems, said "These products are highly suitable for Indian requirements, considering that you have long borders, extensive coastline, all of which need surveillance of the highest order."

Cerberus MX, he explained, is designed for use by security professionals as it is a self-contained mobile integrated surveillance system for rugged environments. This ATV solution hosts on-board integrated surveillance, communications and power systems. The Cerberus MX is compatible with FLIR ground surveillance radar, C2 systems, EO/IR and over-water radar sensors. Security professionals now have the ability to detect, assess and respond to a threat with this advancement in ATV surveillance.

The Ranger HDC is a long-range sensor which allows the operator to maintain situational awareness in wide field of view and zoom in for target assessment without losing sight of the target at any time. The 1280 x 720 imagery allows for twice as much wide-area coverage, at any distance, compared to a legacy 640 x 480 system. This technological advancement is viewable on a 16:9 wide screen monitor that shows more of the important part of the scene.

Pinsky said these products would be aggressively marketed in India due to the geographical features of the country and also because of the huge requirement. "What we do is imagery and we can put it on anything. The Cerberus which allows you to see thermo images up to 6 km. It is compatible with any vehicle and has a wide range of versatility with sight. It offers amazing surveillance capabilities which India needs badly." **SP**

—R. Chandrakanth in Paris

GeoIntelligence Asia 2012



The sixth edition of the annual GeoIntelligence Asia conference-cum-exhibition organised by Geospatial Media and Communications saw the participation of more than 350 delegates including many officers of the Indian defence services. The two-day conference on “Building a Credible Geo-Intelligence Infrastructure for Defence and Internal Security”, was organised in association with DRDO Labs (CAIR, DEAL, DTRL, ISSA, SASE), Indo Tibetan Border Police and Central Reserve Police Force on June 14 and 15.

Delivering the inaugural address, Lt General K. Surendra Nath, GOC-in-C, Army Training Command (ARTRAC), said, “Geospatial technology revolution will continue at a faster pace in future—Geospatial lies at the core of all future wars.” Shankar Agrawal, Additional Secretary in the Ministry of Defence, explained, “Technology is changing the nature of wars. Due to advancement in IT and migration towards command, control, communications and computers, intelligence, surveillance and reconnaissance (C4ISR) structures, future wars will be fought on digitised battle zones.”

Speaking about the importance of geo-intelligence in armed forces, Lt General Anil Chait, GOC-in-C, HQ Central Command, Indian Army, said that the lack of accurate intelligence can cost a soldier his life. Representing the industry was John Day, Director of Global Defence, Esri, USA, who spoke about how his company can aid in providing solutions to the Indian security agencies. Lt General A.K.S. Chande, Managing Editor, GeoIntelligence and Advisor-Conferences, spoke about the gradual power shift that’s taking place in the world today.

Session 1 - GeoTech: Essential requirement of modern warfare

Lt General K. Surendra Nath, GOC-in-C, Army Training Command (ARTRAC), Indian Army, chaired the session. Major General R.C. Padhi, MOGSGS, Military Survey, Indian Army, said,

“There is a tremendous requirement for large-scale maps. In fact, after the success of the DSSDI project, we are being approached by other states as well,” and added, “We will be able to cater to everyone’s data requirements.” Derek Ireson, Vice President, Defense & Intelligence Solutions Intergraph, USA, spoke about the need to have multi-intelligence data fusion and described data volume, speed and mobility and social media/threat as some of the major intelligence challenges before the security agencies. N.S. Shankaranarayana, Senior Director, DigitalGlobe, spoke about the need to provide online on-demand value-added images/data.

Session 2 – Building GIS ready intelligent data infrastructure

Lt General Rajesh Pant, MCTE Commandant, Military Headquarters of War (Mhow), who chaired the plenary, said, “GIS plays a pivotal role in military domain. Accurate information with spatial tags is needed for efficient decision-making.” Dr R. Ramachandran, Centre Director, National Technical Research Organisation, explained the importance of data for an efficient geospatial setup. Bryn Fosburgh, Sector President, Emerging economies, Trimble Navigation, USA, deliberated upon how data collection is becoming commonplace, quicker and accurate. Rakesh Verma, Managing Director, MapmyIndia, India, discussed ways in which GIS infrastructure can be built using GIS-ready data, devices and applications. Ashwagosha Ganju, Director, Snow and Avalanche Study Establishment (SASE), India said, “Geoint can enhance the mobility of Army and common man in mountainous regions.”

Session 3 – Collaborative approach to common geo-infrastructure

Lt General (Retd) P.C. Katoch, former DGIS, Indian Army, chaired the session. Mark Reichardt, President, Open Geospatial Consortium, USA, spoke about the importance

of interoperability. Manish Choudhary, Managing Director, Pitney Bowes Software India, explained how standardisation can bring evolution in the functioning of an industry. Brigadier (Retd) A.S. Nagra spoke about the importance of seamless collaboration in today’s world. “Geospatial data goes beyond imagery and maps and much beyond what’s available in the public domain,” said Colonel Sunil Mishra, Director, BMS, DGIS, Indian Army.

Technical Sessions

The technical session on ‘Geospatial for Border Management’ was chaired by Major General S.V. Chinawar, Additional Director General Military Survey, Indian Army.

The session on “GIS for Tactical Military Roles-Developers Perspective” was chaired by Major General R.P. Bhadrans, ADGIS, Directorate General of Information Systems, Indian Army. Lt General S.M. Mehta, Commandant, MCME, Secunderabad, Indian Army, chaired the session on “Positioning and Navigation”. “Internal security involves protection of people, infrastructure and economy,” said Richard Sundharam, General Manager, Defence, Esri India, during the session on “GIS for Internal Security”.

The session on “Maritime Security” was chaired by Vice Admiral Pradeep Kaushiva, Director, National Maritime Foundation, India. According to the session on “Emerging Trends”, human terrain analysis and cloud are increasingly gaining popularity among the defence forces. The session was chaired by Lt General N.B. Singh, Director General EME, Indian Army.

An exhibition was also organised during the conference. BAE Systems, Bentley Systems, DigitalGlobe, ESRI, GeoEye, Geospatial Media and Communications, Integrated Digital Systems, Intergraph, MapmyIndia (CE Info Systems (P) Ltd), RSI Softech, Survey of India, Trimble, etc participated with their latest technological innovations. **SP**

Rolls-Royce secures £1 billion contract for UK's future submarine programme

Rolls-Royce, the global power systems company, has signed a contract worth in excess of £1 billion with the Ministry of Defence (MoD) to deliver reactor cores for the UK's nuclear-powered submarine fleet.

This contract includes regeneration of the current Rolls-Royce submarine reactor core manufacturing facility in Derby, UK. The Group will introduce the latest technology and manufacturing techniques to deliver increased efficiencies committed by the MoD and industry as part of the Strategic Defence and Security Review.

Jason Smith, Rolls-Royce President



Submarines and Chief Operating Officer - Nuclear, said: "This is excellent news that demonstrates the high level of trust the MoD has in both our technology and the expertise of our highly skilled workforce. This new facility will deploy advanced manufacturing techniques to enhance our world leading nuclear manufacturing capability."

Under this contract Rolls-Royce will continue to maintain and operate its existing reactor core manufacturing facility in Derby. In parallel the group will complete a phased rebuild to provide a leading-edge manufacturing facility with the highest standards of safety to support future MoD programme needs.

Rolls-Royce is the UK's lead company, on behalf of the MoD, in nuclear submarine reactor systems and support services; incorporating design, manufacture, procurement and operation. **SP**

Textron wins Canada's TAPV programme



The Canadian Army is rolling ahead with its plans to acquire a fleet of Tactical Armoured Patrol Vehicles. The Associate Minister of National Defence Julian Fantino has announced that Textron Systems Canada Inc. has been selected to supply 500 vehicles for Regular and Reserve Forces.

"Our investments in the Canadian Army now will provide our troops with the modern equipment they need to conduct their missions safely and effectively for decades to come," said Fantino.

The new TAPV fleet will complement the light utility vehicle wheeled (G-Wagon) fleet, and will be capable of fulfilling a number of roles on the battlefield, including reconnaissance, surveillance, security, command and control, cargo and armoured personnel carrier.

The TAPV project is one of four Family of Land Combat Vehicles (FLCV) projects announced in July 2009, which seek to modernise the existing fleet—a key step in the implementation of the Canada First

Defence Strategy. All major Canadian Army bases and training areas will be receiving vehicles from the TAPV project.

The Canadian Army will acquire two variants of this vehicle: a reconnaissance variant and a general utility variant. The army will replace the Coyote with 193 reconnaissance variant vehicles and the remaining 307 vehicles will serve as new armoured personnel carriers, equipped with remote weapon stations.

Vehicles will begin arriving on bases in 2014, with full operational capability expected by 2016. **SP**

General Dynamics bags radar replacement contract

A General Dynamics C4 Systems-led team has been awarded a contract to develop and deploy modernised range instrumentation radars, replacing an aging and outdated fleet of radar systems currently operating at US Army test ranges.

The range radar replacement programme (RRRP) has a total potential value of \$385 million over 10 years if all options are exercised. The initial award, valued at \$29 million, provides funding for the engineering, manufacturing and development phase of the program and initial production and integration of the new radar systems at White Sands Test Center, New Mexico; Yuma Test Center, Arizona; Aberdeen Test Center, Maryland; and Redstone Test Center, Alaska.

The General Dynamics RRRP solution leverages the XSTAR family of instrumentation radars developed by STAR Dynamics.

"Capable of tracking up to 40 test objects simultaneously, the XSTAR instrumentation radars provide extremely accurate time, space and position information and significantly reduce the time required to deliver high-quality test data and results," said Chris Marzilli, President of General Dynamics C4 Systems. **SP**

Raytheon wins Tomahawk missiles deal



Raytheon is being awarded a \$338 million firm-fixed-price contract for the procurement of 361 Tomahawk block IV all-up-round missiles for the Navy. The missile is capable of launch from surface ships equipped with the vertical launch system (VLS) and submarines equipped with the capsule launch system (CLS).

This effort provides for the procurement of 238 VLS missiles and 123 CLS missiles. Work is expected to be completed in August 2014. Contract funds will not expire at the end of the current fiscal year. The Naval Air Systems Command, Patuxent River, Maryland, is the contracting activity. **SP**

Boeing, US Navy conduct F/A-18E/F satellite communications test

Boeing and the US Navy have successfully completed an in-flight demonstration of a satellite communications (SATCOM) system that, if implemented, will enable F/A-18E/F Super Hornet aircrews to conduct two-way, secure voice and data communications with other SATCOM-enabled aircraft, ships, ground forces and command centres.

The test took place at the Naval Air Warfare Center Weapons Division's Advanced Weapons Lab at China Lake, California, and was conducted by Air Test and Evaluation Squadron VX-31. The SATCOM system was installed on a Navy EA-18G Growler—a variant of the F/A-18F that includes a SATCOM antenna.

During the flight testing, the VX-31 aircrew conducted satellite-enabled secure voice and data transmissions with a ground-based team at China Lake and at Naval Air Station Patuxent River, Maryland.

"Using the existing EA-18G architecture allowed Boeing and the Navy to demonstrate this capability less than 90 days after the initial request," said Mike Gibbons, Boeing F/A-18 and EA-18 Programmes Vice President. "This approach significantly reduced risk, cost and testing schedule, while demonstrating this important communications capability for the Navy." **SP**



Black Hawks for Qatar



The Defense Security Cooperation Agency has notified the US Congress of a possible foreign military sale to the Government of Qatar of 12 UH-60M Black Hawk Utility Helicopters, 26 T700-GE-701D engines (24 installed and 2 spares), 15 AN/AAR-57 V(7) common missile warning systems, 15 AN/AVR-2B laser detecting sets, 15 AN/APR-39A(V)4 radar signal detecting sets, 26 M240H machine guns, and 26 AN/AVS-6 night vision goggles. The estimated cost is \$1.112 billion.

Also included are M206 infrared countermeasure flares, M211 and M212 advanced infrared countermeasure munitions (AIRCUM) flares, M134D-H machine guns, system inte-

gration and air worthiness certification, simulators, generators, transportation, wheeled vehicles and organisation equipment, spare and repair parts, support equipment, tools and test equipment, technical data and publications, personnel training and training equipment, US Government and contractor engineering, technical, and logistics support services, and other related elements of logistics support.

The prime contractors will be Sikorsky Aircraft Company in Stratford, Connecticut, and General Electric Aircraft Company in Lynn, Massachusetts. There are no known offset agreements proposed in connection with this potential sale. **SP**

DynCorp International to provide support services for T-6 aircraft

DynCorp International (DI) has announced that it has been awarded a contract with the US Air Force Materiel Command to provide support services for T-6A and T-6B aircraft at several Air Force and Navy locations throughout the US.

"This contract builds on our core business in aviation and expands our experience working on T-6 aircraft," said Jim Myles, Group Vice President, Aviation, DynCorp International. "We are honored that the US Air Force has chosen DI to work on this programme."

DI will establish, operate and manage contractor operated and maintained base supply (COMBS) facilities at Columbus Air Force Base (AFB), Mississippi, Laughlin AFB, Texas, Randolph AFB, Texas, Sheppard AFB, Texas, Vance AFB, Oklahoma, Naval Air Station (NAS) Pensacola, Florida, NAS Whiting Field, Florida, NAS Patuxent River, Maryland, NAS Corpus Christi, Texas. Each COMBS facility will provide spare parts and equipment necessary to support T-6A and T-6B aircraft.

The competitively-awarded, firm-fixed-price contract has one base year with four, one-year options and a total contract value of \$432 million if all options are exercised. **SP**



Unique formation flight of five A400Ms



At the unique occasion of having the five Airbus Military A400M flight test aircraft in Toulouse all at the same time, the Airbus Military Flight Test team put in place a formation flight including all five aircraft, after which each aircraft continued its specific flight test activity.

This technical flight of the five Grizzlies, MSN1, 2, 3, 4 and 6, was crewed with Airbus Flight Test teams and no particular manoeuvres or tests were undertaken. Following the formation exercise, the different aircraft continued on their daily activity: MSN1 continued with handling quality tests, MSN2 with air-to-air refuelling wing pods hose stability tests, MSN3 with engine performance tests, MSN4 with pressurisation and oxygen tests and MSN6 with function and reliability tests.

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

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

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

Boeing delivers Wedgetail AEW&C aircraft to Australia

Boeing has delivered the sixth and final Wedgetail Airborne Early Warning and Control (AEW&C) aircraft to the Royal Australian Air Force (RAAF).

Boeing also has delivered all ground segments to support the fleet, which is based at RAAF Base Williamtown in Newcastle, Australia.

"Through the Australia-based Wedgetail One Team, Boeing is working together with the RAAF AEW&C System Program Office and No. 42 Wing to provide the best value-for-money engineering, maintenance, training and supply support and the highest levels of aircraft availability to meet the RAAF's operational needs," said Rick Heerdt, AEW&C Vice President for Boeing.

Based on the Boeing Next-Generation 737-700 commercial airplane, the 737 AEW&C aircraft is designed to provide airborne battle management capability with an advanced multirole electronically scanned



radar and 10 state-of-the-art mission crew consoles that are able to track airborne and maritime targets simultaneously. The mission crew can direct offensive and defensive forces while maintaining continuous surveillance of the operational area.

Boeing also has delivered three Peace Eye AEW&C aircraft to the Republic of Korea, with one more scheduled for delivery later this year. Turkey's first Peace Eagle AEW&C is on plan for delivery by the end of the year. **SP**

Upgrades revitalise B-1B Lancers

B-1B Lancers are currently undergoing the most advanced hardware and software upgrades to date as part of the sustainment-block 16 programme. The upgrades include a fully integrated data link in the aft station and vertical situation display upgrade in the front station as well as updates to navigation, radar and diagnostic systems.

The aft crew station will now receive five new colour displays, all capable of providing moving maps and data link integration. Weapon systems officers will receive full "QWERTY" keyboards and new controllers to interface with the integrated battle station software. **SP**

DARPA selects Rockwell Collins to develop synthetic vision avionics backbone for helicopters

The Defense Advanced Research Projects Agency (DARPA) has selected Rockwell Collins to develop the synthetic vision avionics backbone for next-generation helicopter operations under the multi-function radio frequency (MFRF) programme.

Rockwell Collins is teamed with BAE Systems on the first two phases of the \$5.1 million contract. An optional third phase would bring the contract value to \$6 million.

The DARPA MFRF contract calls for Rockwell Collins to develop a 3D synthetic vision-based imagery system that will be used with multifunction radar. Rockwell Collins will fuse radar data with terrain and obstacle data to produce an integrated 3D

view of the operational environment.

"Rockwell Collins has been an industry leader in developing synthetic vision for commercial aircraft and helicopters and now we're bringing that capability to the military rotary wing market segment," said Dave Nieuwsma, Vice President and General Manager of Airborne Solutions for Rockwell Collins. "Working with the Army, we have successfully flight tested this technology on a Black Hawk helicopter and are looking forward to working with DARPA to further develop this capability."

The Army Black Hawk synthetic vision flight tests were conducted in conjunction with a Cooperative Research and Development Agreement between Rockwell Collins and the US Army's Aviation Applied Technology Directorate. The agreement calls for Rockwell Collins to provide its CAAS cockpit as a test bed, enabling the Army to quickly develop and demonstrate new technology for the warfighter in a cost-effective manner. **SP**

Boeing Phantom Eye completes first autonomous flight

Boeing's Phantom Eye unmanned airborne system (UAS) completed its first autonomous flight on June 1 at NASA's Dryden Flight Research Center at Edwards Air Force Base, California.

"This day ushers in a new era of persistent intelligence, surveillance and reconnaissance (ISR) where an unmanned aircraft will remain on station for days at a time providing critical information and services," said Darryl Davis, President, Boeing Phantom Works. "This flight puts Boeing on a path to accomplish another aerospace first – the capa-

bility of four days of unrefuelled, autonomous flight."

Phantom Eye is the latest in a series of Boeing-funded rapid prototyping programmes, which include Phantom Ray, Echo Ranger, ScanEagle Compressed Carriage, and an associated common open mission management command and control (COMC2) system capable of managing all of the company's unmanned assets.

Phantom Eye's innovative and environmentally responsible liquid-hydrogen propulsion system will allow the aircraft to stay on station for up to four days while providing persistent monitoring over large areas at a ceiling of up to 65,000 feet, creating only water as a byproduct. The demonstrator, with its 150-foot wingspan, is capable of carrying a 450-pound payload. **SP**



Skeldar provides troops with real-time information



Defence and security company Saab recently performed a unique live demonstration of how the Skeldar system operates together with other tactical systems – adding a link in the sensor-to-shooter loop. The demonstration took place at the Swedish Armed Forces Ground Combat Days in southern Sweden.

The ability to be rapidly tasked and dynamically re-tasked during flight is one of the key capabilities in the concept of operation (CONOPS) for the Skeldar UAS. This ability depends not only on Skeldar's VTOL capabilities, but also on the capability to deliver near real-time information and visualisation of the battle space, i.e. adding a link in the sensor-to-shooter loop.

"It is critical for a battlefield commander to easily integrate the capabilities of a system like Skeldar with those of other combat

units," said Håkan Ekström, Director of Marketing at Saab's business area Aeronautics.

Saab has integrated the Skeldar UAS with a battle management system (BMS) enabling the exchange of target data and other tactical information. This exchange allows all units using the BMS to request and use information from the Skeldar UAS. **SP**

Russia, Israel in UAV talks

Russia and Israel are negotiating a joint project to build an unmanned aerial vehicle, according to the Russian Deputy Prime Minister Dmitry Rogozin. "We are negotiating with Israel. Our aim is to persuade them to start technological cooperation and to develop a product that will be used in both countries, and could also be sold to third countries," Rogozin has said.

Russia will no longer buy ready-made weapon systems from the West but is only interested in new technology, said Rogozin, who is responsible for Russia's military-industrial complex. "Technology should be attracted by localising production on Russian territory."

In mid-May a source in the Russian defence industry said Moscow may buy a large new consignment of unmanned aerial vehicles from Israel and 24 command and control systems worth around \$50 million in the foreseeable future.

Israel Aerospace Industries previously delivered to Russia two Bird Eye-400, eight I-View Mk150 and two Searcher Mk.2 UAVs, totaling \$53 million. **SP**

Denmark selects AeroVironment's Puma



The Danish Acquisition and Logistics Organization has announced that it has awarded AeroVironment a firm fixed-price order of \$9.6 million to supply the Danish Armed Forces with the company's Puma AE small unmanned aircraft systems (UAS).

"Allied armed forces are procuring our small unmanned aircraft systems to give small tactical teams the ability to operate more effectively and safely, without requiring support from more expensive, scarcer resources," said Roy Minson, Senior Vice President and General Manager of Unmanned Aircraft Systems at AeroVironment.

Eighteen nations outside the United States have purchased AeroVironment's Puma AE, Wasp or Raven B small UAS. The 13-pound, battle-proven Puma AE is designed for land-based and maritime operations and is operated by AeroVironment's common Ground Control System. **SP**

Sweden also picks up Puma

AeroVironment has received a firm fixed-price order for 12 hybrid small unmanned aircraft systems (UAS) from the Swedish Defence Materiel Administration (Försvarets Materielverk) on behalf of the Swedish Army.

The order consists of Puma AE and Wasp air vehicles, ground stations, training, and logistics support. The order is the result of a competitive evaluation and procurement process. Contract options could increase the procurement to a total of 30 systems.

Demonstrating the family of systems concept, the Swedish deployment will include AeroVironment Puma AE and Wasp UAS to provide intelligence, surveillance and reconnaissance capabilities in support of a wide variety of missions. AeroVironment's portable, common ground control system operates the unmanned systems, thereby minimising logistics and equipment. **SP**

Sagem Patroller UAS completes tests

Sagem's Patroller unmanned aircraft system (UAS) completed a new series of flight tests, demonstrating new multi-sensor technologies.

Among the tests, Sagem said the Patroller demonstrated the ability to fuse information from different sensors and to transmit them to a command and control centre for coastal surveillance. The 1-tonne class drone completed 18 test flights, where it



was equipped with a version of the Sagem Euroflir 350 gyrostabilised optronic pod with a high-definition, infrared channel and a laser rangefinder. The Patroller also carried an automatic identification system receiver, which enabled real-time monitoring of maritime traffic over a large zone, and a distress beacon detector.

In December, Sagem received authorisation from French authorities to fly the Patroller over densely populated zones in civilian airspace, and the company said it expects to deliver a fully operational Patroller drone by early 2013. **SP**

New cameras to collect 'invisible' data

The Israeli Air Force (IAF) is examining a new camera which will allow UAV aircraft to collect information invisible to the human eye. The IAF hopes that the camera will assist in uncovering underground bunkers which are camouflaged with vegetation.

Aerial photography advances every day

at an increasing pace. Years back, a camera was positioned in a hole in the underbelly of an aircraft. These days, the IAF is examining a new camera that will assist in collecting intelligence information and will open a new world of capability options.

The camera, called "Hyperspectral", is structured on UAVs and its purpose is to aerially examine details hidden from the human eye. This would help, for example, in the tracking of hidden ammunition.

"Once a suspected target such as chemical has been detected, the camera's system will alert the user", explains Lieutenant Colonel Yoav, Head of intelligence Department in the Equipment Squadron. "The camera's functionality is based upon the wave lengths that are extrapolated from certain natural substances which aren't visible. Each substance produces a different wave and the camera is able to tell the difference between the various options". Put simply, the camera could help differentiate between a natural bush and a bush that produces irregular waves.

The "Hyperspectral" technology can tell the difference between the lengths of waves outside the spectrum that is visible to the human eye, and has existed for a few years. In the civilian world it has been used to identify harmful pests from above.

Now, the IAF has begun a series of experiments in order to examine if the system is suitable for integration in the force. If the experiments prove that it is a match, the cameras will be acclimatised into the UAV Squadrons—after long-term training that will be conducted by professional engineers. **SP**

French Army awards Sagem new tactical drone contract

French defence procurement agency DGA has awarded Sagem (Safran group) a contract for five Sperwer Mk II drones, which will join the fleet of SDTI (Système de Drones Tactiques Intérimaires) tactical drones already in service with the French army.

These new systems will be delivered between the second half of 2012 and mid-2013, and will enable the French army to maintain its tactical drone capability.

At the same time, the DGA announced another contract award for Sagem, this time to modernise the GPS code P(Y) module on all Sperwer drones in service. Developed by Sagem for the Rafale multirole fighter, this GPS module is coupled to the drone's navigation system, enabling very precise geo-location of ground targets by the Sagem Euroflir 350+ optronics pod.

The Sperwer tactical drone system has been deployed in Afghanistan since 2003 to support NATO troops. For France, the 61st Artillery Regiment has deployed this system since November 2008.

The drones themselves are produced by Sagem's Montluçon



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



LT GENERAL (RETD)
P.C. KATOCH

Cyber space hotting up

Recent discovery of a highly sophisticated malware, dubbed 'Flame', that has been targeting systems in Iran, Syria, Sudan, Lebanon, Middle East and North Africa for past two years has created considerable commotion. Flame spies on infected computers, steals data including documents, recorded conversations and keystrokes, opens backdoor to allow attackers to tweak toolkit and add new functionalities. Multiple modules can steal conversations over Skype, Bluetooth and enabled devices in the vicinity, e-mails, instant messaging and local network. The discovery was made by Kaspersky Lab, who terms it 20 times more potent than 'Stuxnet' that hit various countries in 2009-10. In contrast to 'Stuxnet', geographic scope of the systems targeted by Flame, its complexity and behaviour indicate that this is not handiwork of common cyber criminals.

Developments in Iran and the Arab Spring can help indicate who the originators might be. Whether it is a state or state hiring 'non-state actors' for developing spyware, non-state actors are misnomer as they need to live in a country and any state permitting cyber attacks from its territory is simply party to the crime advertently or inadvertently. Significantly, Iran's computer emergency response team announced in May this year that it had developed a detector to uncover Flame and has also developed a removal tool for the malware.

In case of India, China poses major threat in the cyber domain. In India, while Stuxnet infected some 6,000 computers, in 2009, 'Ghostnet' that penetrated more than 1,200 systems in 103 countries and purportedly originated in China had also hit India. Then were cyber attacks on Commonwealth Games hosted in New Delhi and one that caused partial failure of INSAT 4B aside from hosts of government including defence-related sites periodically hacked.

Significantly, China has formed several Cyber Warfare Units hiring best IT graduates and culling required manpower from some 25,000 software companies. Focused research is being done at the State

Laboratory for Information Security. Scores of specialists are working at another research facility at Datang since the past eight years to take control of national networks of countries like India, Taiwan, Japan.

A recent US Department of Defense report quoted in *Defense News* during May 2012 talks of China continuing to invest heavily in the development of offensive cyber warfare capabilities that pose a direct threat to global computer networks and that many of the efforts to target global computer networks for intrusions and data theft in 2011 originated in China. Interestingly, Ellen Nakashima quoting serving and former US officials wrote in the *Washington Post* dated March 19, 2012 that Pentagon is accelerating efforts to develop a new generation

of cyber weapons capable of disrupting enemy military networks even when those networks are not connected to the Internet. This research is possibly to cater for eventualities like attacking enemy targets like air defence systems in countries where these are not connected to the Internet—preparing for hostilities against Iran and Syria? It is possibly also due to US/NATO experience in Libya where air defence systems could not be neutralised through cyber attack since they were not connected to Internet.

Military assets like command-and-control systems relying on Internet connections are theoretically vulnerable to cyber attacks. Incidentally, the US Cyber Command established in 2010 at Fort Meade has an annual declared budget in the region of \$160 million. What needs to be noted is that both the US and China have hundreds of civilians in their cyber warfare programmes other than government officials. India must aim not only to match Chinese cyber threat but outpace it as adequate deterrence. Investments in terms of manpower, technology, money and strategic partnerships must be constantly reviewed. **SP**

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



India must aim not only to match Chinese cyber threat but outpace it as adequate deterrence. Investments in terms of manpower, technology, money and strategic partnerships must be constantly reviewed.



HAL to invest ₹600 crore in new unit

Hindustan Aeronautics Limited (HAL) plans to invest ₹600 crore to establish a unit for manufacture of 'new fighter aircraft' and 'engine production' at Chellaghatta, adjacent to HAL Airport in Bangalore.

The Karnataka Government has agreed to support the growth and expansion of HAL in Karnataka. A memorandum of understanding was signed between HAL and the Government of Karnataka at the Global Investors' Meet in Bangalore.

"The new unit requires access to runway. It is a time bound programme to establish the infrastructure, production facilities and supply of the Aircraft", said R.K. Tyagi, Chairman, HAL. The company has around 16 hectares of land at Chellaghatta. A new division for aircraft assembly and testing and another new division for engine assembly and testing are proposed for the new fighter aircraft programme.

The production facility has a potential to create direct employment for around , personnel. Another 3,600 jobs are expected to be created because of logistics, services and outsourcing activities. **SP**

Lockheed Martin reaches strategic supply chain agreement

Lockheed Martin signed a new strategic enterprise agreement with Arrow Electronics covering procurement of more than 22,000 electronic components used in advanced technology systems such as missiles, satellites, radar systems, tactical fighter aircraft and unmanned surveillance systems.

It represents Lockheed Martin's largest agreement with any single supplier for these commodities, and concentrates procurement of parts covered under the agreement with a leading national franchised distributor, down from 240 suppliers in 2011. **SP**

Sagem acquires Brazilian company Optovac

Sagem (Safran group) announced at the Eurosatory land defense exhibition that it has signed an agreement to acquire Optovac Mecânica e Optoeletrônica Ltd, a Brazilian company specialised in optronics and night vision equipment. It is one of the small businesses in Brazil that has been recognised by the Ministry of Defence, which has all the assets needed to become a strategic defence company.

The acquisition reflects Sagem's strategy based on developing local partnerships with the Brazilian defence industry. Sagem plans to support Optovac's growth, making it a benchmark player in optronic systems, components and technologies.

Optovac will produce and support a wide range of equipment drawing on Sagem's expertise. Its business will also include the local development of solutions meeting the requirements of Brazil's armed forces. **SP**

ST Kinetics and Paramount Group collaborate on armoured wheeled vehicles

ST Kinetics and Paramount Group have announced a strategic collaboration to market a family of high mobility armoured wheeled vehicles. Under the agreement, the two companies will pool their expertise to jointly market, manufacture and support a family of protected wheeled vehicles.



ST Kinetics and Paramount Group recognise that modern conflicts demand highly protected wheeled vehicles with superb mobility that can increase the survivability of the crew and ensure mission success. The collaboration, which brings together the strengths of these two companies, will address the market needs for such highly protected and vastly manoeuvrable vehicles. It will allow their respective customers to enjoy highly cost-effective solutions through global best sourcing and localised through-life support.

Resulting from this collaboration is a comprehensive range of wheeled vehicles for military and homeland security applications. These include ST Kinetics' highly manoeuvrable and network-enabled Terrex 8x8 armoured personnel carrier, and Paramount Group's mine-protected and highly mobile Mbombe 6x6 armoured fighting vehicle, Maverick 4x4 internal security vehicle, Marauder 4x4 wheeled troop carrier and Matador 4x4 multi-role mine protected vehicle.

"ST Kinetics and Paramount Group each has a proven track record in the design and development of land systems vehicles. This partnership allows us to bring together the reputable products of Paramount Group with our capabilities in systems integration and manufacturing to offer cost-effective protected mobility solutions to our customers," said SEW Chee Jhuen, President, ST Kinetics.

"Our collaboration with ST Kinetics represents an invaluable springboard into the Asia-Pacific region for Paramount Group. We are both ambitious, innovative businesses which understand our customers' needs and the changing demands of modern defence and peace-keeping. Our in-region partnership means that we can be very quick to market and very quick to respond to customers' changing needs," said Ivor Ichikowitz, Executive Chairman, Paramount Group. **SP**

Piramal Healthcare to invest in BlueBird

Indian pharmaceutical giant Piramal Healthcare is to invest in Israeli unmanned air systems manufacturer BlueBird. Piramal plans to establish a new defence subsidiary, and its initial investment could potentially lead to it signing deals with other Israeli companies, sources say. Its agreement with BlueBird follows the Israeli manufacturer's previous pact with India's Dynamic Technologies. **SP**

ReconRobotics introduces the Throwbot XT Reconnaissance Robot

ReconRobotics, Inc., the world leader in tactical micro-robot systems, introduced an advanced military and police robot with state-of-the-art reconnaissance capabilities at the Eurosatory defence and security exhibition held in Paris. The Throwbot® XT is a throwable, mobile micro-robot that provides both audio and video reconnaissance of dangerous environments. Military fire teams and SWAT personnel will use the new micro-robot to quickly gain situational awareness during high-risk operations and surveillance missions.

The Throwbot XT is inherently water and dust resistant, weighs just 1.2 lbs (540 grammes), and can be thrown up to 120 feet (36 metres). It is also exceptionally quiet and is equipped with an infrared optical system that activates automatically when the ambient light is low, enabling the operator to see in complete darkness. Once deployed, the micro-robot can be directed by the operator to quietly move through a structure and transmit video and audio to the handheld Operator Control Unit II (OCU II). These stealth capabilities can be utilised to locate armed subjects, confirm the presence of hostages or innocent civilians, listen in on conversations, and reveal the layout of rooms—information that can save lives and increase the success of high-risk operations. The robot may be specified in any of three predetermined transmitting frequencies,



enabling operators to use up to three robots in the same environment at the same time.

“Our objective with this product evolution was to dramatically increase the capabilities of our micro-robot without increasing its weight, and we accomplished that,” said Jean-Luc Panetta, Vice President of Product Management and Engineering. “We are very mindful of the soldier’s burden, and we believe that the new Throwbot XT is, pound-for-pound, the most versatile, robust, stealthy and easy-to-deploy robot system in the world.”

In 2007, ReconRobotics introduced the Recon Scout® robot and created an entirely new class of robots called tactical micro-robots. Unlike other military and law enforcement robots, which weighed 40 to 80 lbs and were transported in a vehicle, Recon Scout robots were sublimely small and simple.

Today, soldiers and SWAT personnel carry their Recon Scout robots in small packs or pockets and deploy them in under five seconds to gain lifesaving situational awareness and greater standoff distance. More than 3,700 of the company’s micro-robot systems are deployed by the US military and allied friendly forces, and by nearly 500 police tactical teams and bomb squads, worldwide. Nearly 2,000 of these robots are currently deployed with US Army and Marine Corps fire teams in Afghanistan for use in urban warfare and compound clearing operations. **SP**

Rutgers to develop military armour to save soldiers’ lives

Rutgers’ longstanding expertise in ceramic engineering is being tapped by the military to develop armour that better shields soldiers from modern-day battlefield threats — most notably from IEDs (improvised explosive devices).

The Department of Materials Science and Engineering is part of a Johns Hopkins University-led research consortium that the US Army agreed to fund with up to \$90 million for as many as 10 years. Rutgers is one of the consortium’s five core universities that will work with the US Army Research Laboratory to develop new lightweight materials for body and vehicle protection. Consortium members, in turn, will engage other universities, national laboratories and corporations in its work.

Richard Haber, professor of materi-

als science and engineering, oversees the Rutgers component that is slated to receive up to \$9 million. He says the effort will bring a more scientific approach to armour development than has been done in the past. This involves examining potential materials down to the atomic level and modelling their performance with computers.

“When you look at all the pieces of armour a soldier wears, before you know it a soldier is carrying 60 to 80 pounds of armour,” said Haber. The Army would like to cut that weight, but “the bad guys are constantly coming up with new and innovative ways to kill a warfighter.”

Armour behaves differently under different threats, he added, and armour that protected Vietnam-era soldiers from a bullet might not adequately shield Middle Eastern soldiers from a shower of nails packed in a roadside bomb.

The consortium is going to explore a range of materials that show promise for being lightweight and tough, including

metals, plastics and ceramics. Rutgers will focus on ceramics, applying managerial and technical expertise gained during the past decade through the school’s Ceramic, Composite and Optical Materials Center (CCOMC). The centre, originally funded by the National Science Foundation, cultivated industrial partnerships that brought in further funding as well as expertise on translating research into manufacturing technology. Haber, the centre’s director, says the Army-funded effort will benefit from these same relationships with their private funding opportunities.

Armour’s function is to shield personnel and vehicles from the fast, high-pressure impacts of bullets, shrapnel and other projectiles. To do that, armour material has to bend, stretch or compress when struck to absorb the projectile’s energy. But it can’t break or shatter. With today’s threats, it also has to withstand repeated hits. Some materials can absorb one impact, and then having been weakened, may fail on subsequent hits. **SP**

Johnny Depp's security apprehend 'pirates'

Johnny Depp's security guards apprehended two men dressed as pirates after they attempted to sneak into the actor's movie trailer. The Hollywood star was in London filming scenes for his new swashbuckling blockbuster *Pirates of the Caribbean: On Stranger Tides*.

Two fans attempted to get close to Johnny Depp on set by donning costumes but bodyguards spotted the men and wrestled them to the ground before they reached the actor, reports Britain's *The Sun*.

A source tells the publication, "The pair were rugby tackled by Johnny's personal bodyguards outside his trailer. There was no way they were getting past them. Because they were dressed in costume, they thought no one would bat an eyelid but security were too good." SP



Mitt Romney's Hotmail account hacked?

According to a Gawker report, the US Presidential nominee from the Republican Party, Mitt Romney's e-mail account was hacked recently and it exposed a surprising lapse of security judgement on the part of the US Presidential nominee for using Hotmail as his personal e-mail.

Gawker said that given that Romney's background has been in equity capital and allied financial markets—where he would have used highly secure email technology due to financial and regulatory requirements—the use of Hotmail is something of a jaw dropper.

Gawker added that the reality, however, is that a Hotmail account is never going to be secure enough for a high profile Presidential candidate or a member of his team, and is therefore unlikely to be his sole account. Even if this e-mail address did genuinely belong to

Romney, it's unlikely that his confidential campaign plans would be found on it. SP

Heist at Heathrow terminal

In February 2002, two men held up a security van at Heathrow's Terminal 4 and made off with 4.6 million English pounds. The men attacked as security guards were unloading the money from a plane that had just arrived from Bahrain.

A month later, a similar heist occurred at the airport involving a plane that had just arrived from South Africa. The February heist was the largest ever at Heathrow. The area has been a hotspot for heists over the last few decades—in 1983, gold bullions worth £25 million were stolen from a Heathrow warehouse. SP

Undercover agent with gun gets past airport security

An undercover Transportation Security Agency (TSA) agent was able to get through security at Dallas/Fort Worth International Airport with a handgun during testing of the enhanced-imaging body scanners, according to media reports. The undercover agent carried a pistol in her undergarments when she put the body scanners to the test.

The officer successfully made it through the airport's body scanners every time she tried, according to reports. "In this case, where they had a test, and it was just a dismal failure as I'm told," said Larry Wansley, former head of security at American Airlines. "As I've heard (it), you got a problem, especially with a firearm."

The TSA did not deny that the tests took place or the what the results were. The agency would only provide the following statement: "Our security officers are one of the most heavily tested federal workforces in the nation. We regularly test our officers in a variety of ways to ensure the effectiveness of our technology, security measures and the overall layered system. For security reasons, we do not publicise or comment on the results of covert tests, however advanced imaging technology is an effective tool to detect both metallic and nonmetallic items hidden on passengers." SP

TREASURE HOUSE

visit: www.spsmilitaryyearbook.com

Web World of SP's

www.spsmilitaryyearbook.com

www.spsaviation.net

www.spslandforces.net

www.spsnavalforces.net

www.spsairbuz.net

www.spsmai.com



Since 1964

SP GUIDE PUBLICATIONS