PERMANENT CHAIRMAN OF COSC NEEDED : A VIEWPOINT PAGE 4

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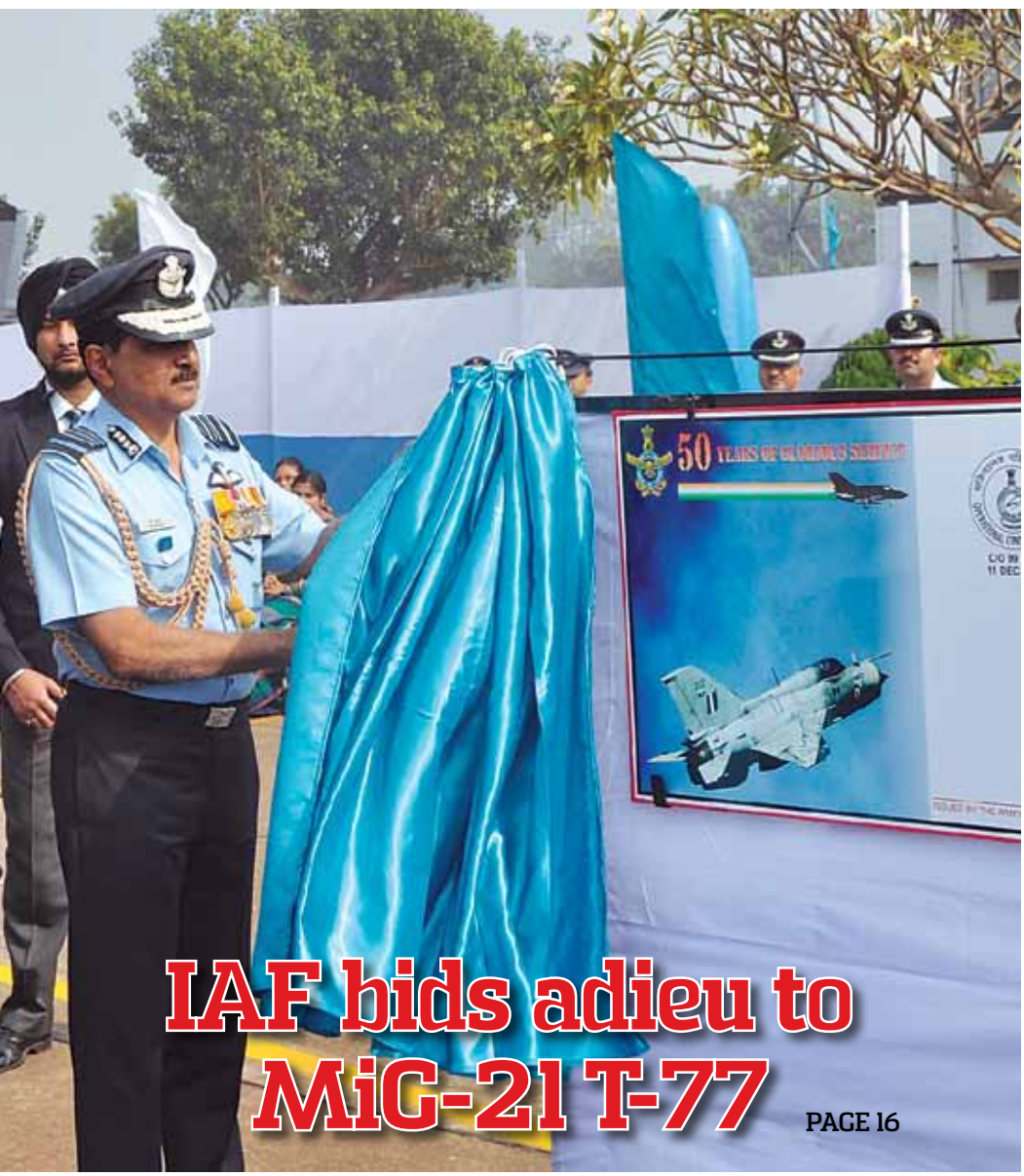

IAF bids adieu to MiG-21 T-77

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LCA Tejas completes 2,400 sorties

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Indian Army's TCS programme

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HAL Dhruv handed over to Maldives

The Hindustan Aeronautics Limited's (HAL) indigenously designed and produced Dhruv helicopter has been symbolically handed over to the Maldivian defence forces at a function organised by the Southern Naval Command at Kochi Naval Base (INS Garuda) on December 14, 2013. The Maldivian Defence and National Security Minister Mohamed Nazim unveiled, what he called, "precious gift from India in the presence of Vice Admiral Satish Soni, Commander-in-Chief, Southern Naval Command, and T. Suvarna Raju, Director (Design and Development), HAL.

Dr R.K. Tyagi, Chairman of HAL hailed the momentous occasion and said the advanced light helicopter (ALH) would be in Male in the beginning of the new year. "We are proud that ALH handed over to Maldives is 'Made in India' with proven track record in both military and civil operations," he added.

HAL technical support team is positioned at GAN, Maldives, to provide maintenance and logistic

PHOTOGRAPH: HAL

support. Dhruv has also been exported to Ecuador, Mauritius and Nepal. The Ecuador Air Force (FAE) operates six Dhruv helicopters with their President choosing to fly in one of them.

Dhruv is extremely useful in meeting the arduous tasks in difficult terrains. It played a key role in search and rescue operations during tsunami (2004), flash floods in Leh (2010), earthquake in Sikkim (2011) and the biggest ever helicopter based rescue operations undertaken by Indian defence forces in flood and rain-hit areas of Uttarakhand this year. Dhruv is already operational in Maldives which is extensively used for surveillance, medical evacuation, in assisting civil administration, training and rescue operations.

Dhruv is being operated by the Indian Air Force, the Indian Army, the Indian Navy, the Coast Guard, the Border Security Force and state governments since 2002. Currently, over 130 Dhruv helicopters are serving the Indian defence forces. HAL has also built 12 civil variant Dhruv helicopters. SP

Cover:
The Chief of the Air Staff Air Chief Marshal N.A.K. Browne unveiling the plaque during the phase-out ceremony of MiG-21 T-77, at Air Force Station Kalaikunda on December 11, 2013.

Cover images: PIB, IAF, SP Guide Pubns

PUBLISHER AND EDITOR-IN-CHIEF
Jayant Baranwal

ASSISTANT GROUP EDITOR
R. Chandrakanth

SR TECHNICAL GROUP EDITORS
Air Marshal (Retd) B.K. Pandey
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R. Adm (Retd) S.K. Ramsay

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

ASSISTANT EDITOR
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CHAIRMAN & MANAGING DIRECTOR
Jayant Baranwal

PLANNING & BUSINESS DEVELOPMENT
Executive Vice President: Rohit Goel

ADMIN & COORDINATION
Bharti Sharma

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

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subscribe@spsmai.com

LETTERS TO THE EDITOR
editor@spsmai.com

FOR ADVERTISING DETAILS, CONTACT:
advertise@spsmai.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: info@spguidepublications.com

REPRESENTATIVE OFFICE
204, Jal Vayu Vihar
Kalyan Nagar
Bengaluru 560043
Tel : +91 (80) 23682204

MOSCOW, RUSSIA
LAGUK Co., Ltd, Yuri Laskin
Krasnokholmskaya, Nab.,
11/15, app. 132, Moscow 115172, Russia.
Tel: +7 (495) 911 2762,
Fax: +7 (495) 912 1260

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Quicker induction of combat aircraft essential

The Indian Air Force (IAF) retired its last squadron of 15 Soviet-era MiG-21FL (Type 77) fighters on December 11, after nearly five decades of operational service, and the farewell was an emotional moment. The workhorse of the Air Force, the MiG-21s were introduced in service in 1963 and proved their mettle in the 1971 war.

However, the MiG-21 era for the Air Force is far from over. As many as 10 squadrons of more modern variants of the fighter are still in service. This fleet of over 200 fighters is still the biggest in the Air Force but will soon be dwarfed with the Su-30MKIs progressively getting into service.

India also should see faster induction of Rafale and the indigenously designed, developed and produced fourth-generation plus light combat aircraft (LCA) – Tejas. On December 20, the initial operational clearance-II of the aircraft will be done in Bengaluru after which it will be inducted into the Air Force. The aircraft will be the LCA Mark 1 and 40 of them will be inducted by the IAF. There is murmur within the Air Force that the aircraft needs further improvements. If we may recall what the former Air Chief, Air Chief Marshal P.V. Naik had called the aircraft as a MiG-21++. Be that as may, the aircraft recently achieved a milestone by launching an infrared seeking air-to-air missile that hit the target in a direct hit with precision and destroyed the target.

However, what the IAF is seriously looking at is the induction of the Rafale which, for some reason or the other, has got delayed. The Chief of the Air Staff, Air Chief Marshal N.A.K. Browne has indicated that the French fighter aircraft may be inducted into the IAF by 2017. Whether it is the indigenous Tejas or the French Rafale, the IAF needs these aircraft on the double.

Moving from air to land, we have another example of protracted decision-making – the tactical communication system (TCS). In an in-depth article on TCS, Lt General (Retd) P.C. Katoch has underlined the need to quickly establish a reliable and robust information and communication technology (ICT) network which allows interoperability of the three services. The Army's modernisation plan has been seriously affected by the void of TCS.

Not just interoperable ICT network, what the country needs is a permanent Chairman of the Chiefs of Staff Committee (COSC) and there are indications that the government may take a decision in 2014. Lt General (Retd) Katoch opines that the time is now to appoint a COSC as the threats faced by India were increasing from across the borders.

The need to coordinate in the battlefield is gaining credence and technology is also moving in that direction. In the US, research agency DARPA is developing a programme called Mobile Ad hoc Interoperability Network Gateway (MAINGATE) which is expected to help multinational forces, US Government agencies and US troops operating in forward-deployed locations in timely command and control decision-making.

We look forward to your feedback as to help us improve our coverage of security issues.

Wishing our readers a Very Happy and Prosperous New Year !

Jayant Baranwal
Publisher & Editor-in-Chief

LT GENERAL (RETD)
P.C. KATOCH

Permanent Chairman of COSC needed

Amid statements by our hierarchy that we are as vulnerable to terrorist strikes as during the 26/11 Mumbai terrorist strikes, Nawaz Sharif proclaiming he has a dream of seeing Indian Kashmir free and hopes to see it happen during his lifetime, Raheel Sharif (another Musharraf protégé) as Pakistani army chief and amidst Chinese muscle flexing, comes the news that our government is poised to appoint a permanent Chairman of the Chiefs of Staff Committee (COSC) at the turn of the new year.

This is ostensibly in line with the task force appointed under former Ambassador Naresh Chandra, with former R&AW Chief K.C. Verma, Admiral (Retd) Arun Prakash, ACM (Retd) S. Krishnaswamy and Lt General (Retd) V.R. Raghavan as members to undertake a review of national security. Ironically, every time India woke up to order a security review was after a crisis; Sino-Indian War of 1962, Indo-Pak War of 1965, Mizo uprising of 1966, Kargil conflict of 1999 and the 26/11 Mumbai terrorist attack. If we had a strategic culture, a comprehensive defence and security review should have been institutionalised every five years.

The impression created in respect of the Kargil review committee recommendations is that less than appointing a Chief of Defence Staff (CDS) everything has been implemented. Nothing could be further from the truth. The major implementation failings, mostly advertent, are: one, no CDS has been appointed; two, HQ Integrated Defence Staff (IDS) created as a separate HQ instead of merging it with the Ministry of Defence (MoD); three, Chairman COSC gradually eased out from the loop of control of Strategic Forces Command (SFC); four, Defence Intelligence Agency (DIA) stopped from its authorised mandate of operating transborder intelligence sources; five, Andaman & Nicobar Command remains toothless without requisite forces under its command; and six Directorate General of Armed Forces Medical Services and Directorate General of Quality Assurance not brought under HQ IDS.

The fact remains that no matter what façade of Services jointness and integration, it is simply not going to come through without appointing a CDS. Former Army Chief General (Retd) V.P. Malik had gone on record to say, "It is not my case that the Service Chiefs do not cooperate in war. Were they not to do so, it would be churlish. But in war cooperative synergies are simply not good enough." Connected with this is the crying need to go in for integrated theatre commands and integrated functional commands, which cannot come through without a CDS. Former General S. Padmanabhan had said, "There is no escaping the military logic of creating suitably constituted integrated theatre commands and functional commands for the armed forces as a whole."

In UK, the debate over the CDS raged for l8 years, till the government forced a CDS on the military.

At a time when we are faced with heightening threats, jointly by China and Pakistan, the need for appointing a CDS was never more. The system of committees is at best ad hoc and anyone who has served in HQ IDS knows full well, the HQ has little power. There have been suggestions that only an act of Parliament like the Goldwater Nichols Act, Berlin Decree, or political leadership can break the logjam but in our case, it is difficult to identify a political leader or a bureaucrat who could push for such an Act of Parliament. Paradoxically, the government-appointed task force had no active services representation. Interacting with services is not the same as having full-time members on a task force.

A permanent Chairman of COSC is no substitute for a CDS. The former will make little difference to existing arrangement. It is surprising that the Naresh Chandra Committee did not recommend full integration of HQ IDS with the MoD, in addition to appointing a permanent Chairman of COSC even if constraints had been put on them. Such an arrangement could indeed have considered a step forward. Without integrating HQ IDS with MoD, appointment of a permanent CDS is just another embellishment. The task force recommendations give the impression of a 'fixed match.'

Are we not playing into the hands of our enemies? Addressing the combined Commander's conference in 2004, Prime Minister Manmohan Singh had stated, "Reforms within the armed forces also involve recognition of the fact that our Navy, Air Force and Army can no longer function in compartments with exclusive chains of command and single service operational plans". The permanent Chairman of COSC can certainly not provide the required synergy in the services, which in turn adversely affects national synergy without which we cannot adequately cope with threats to our security in any segment of the conflict spectrum including the asymmetric and proxy wars that we are already engaged in. SP

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

The permanent Chairman of COSC can certainly not provide the required synergy in the Services, which in turn adversely affects national synergy without which we cannot adequately cope with threats to our security in any segment of the conflict spectrum

Interoperability prevails here.

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Tactical Control Radar Reporter

Indian Army's TCS programme

[By **Lt General (Retd) P.C. Katoch**]

The Tactical Communication System (TCS) of the Indian Army has been in the news in recent times in terms of Tata Consultancy Services having assisted the Indian Army replace its legacy messaging system with an automated messaging system; a messaging system that relays secured information from one user to another, using the concept of mobile nodes which can be deployed in far-flung locations including in disaster relief situations with highly secure system having multiple levels of security incorporating FORTIORA suite of security products. This is just a small part of upgrading networked communications, which form the backbone of an effective command and control system though some modern frequency hopping radio sets with integral encryption have been introduced into service in recent years.

In 1996, the existing Plan Army Radio Engineering Network (AREN) system, earlier designed as the backbone of Army's communication that was designed to roll forward, came up for urgent review having become outdated. The TCS was born out of a realisation that AREN had to be replaced and an upgrade would not be sufficient, as was envisaged earlier especially since legacy radio systems were not designed to connect to broad-reaching IP-based networks. Interestingly in 2005, when Pakistan purchased RF-5800H-MP Harris radios at a cost of $76 million, they already had state-of-the-art TCS equipment.

As the alternative to the surrendered 3G spectrum by the Military, the new optical fibre cable (OFC) network being laid will provide modern landline communications in peace stations and to limited extent in the tactical battle area (TBA). However, the critical void is in supporting the tactical command, control, communications and information (Tac C3I) system coming up in the Army, particularly in the battlefield management system (BMS), battlefield surveillance system (BSS) and the command information and decision support system (CIDSS), besides others, all of which require wide-band data capabilities to facilitate real-time transmission of images and battlefield video while on the move all the way down to the cutting edge including infantry battalions, armoured and artillery regiments. The Indian Army has a complete Corps nominated as test bed but none of the operational information systems (OIS) under development and already fielded could be tested as required at full Corps level. This was because of lack of the TCS. The TCS had been approved thrice by Defence Ministers in the past and should have been fielded in the Army in year 2000 but every time the whole case was worked afresh after closing the previous case file – an extreme in red tape-ism and lackadaisical approach to vital issues. Truncated test bed for information systems result in avoidable problems coming up at fielding and equipping stage that could have been corrected in the test bed stage itself. Concurrent are avoidable additional costs accruing through required immediately post fielding these systems.

PHOTOGRAPHS: PIB, SP Guide Pubns

The TCS is to have a new generation meshed network exploiting the growth in microprocessor, radio, mobility and satellites; based on lightweight high mobility vehicles which will form highly mobile communication nodes connected as a grid; largely based on tested commercial off the shelf (COTS) technologies; high bandwidth with voice, video and data; high capacity point to point radio backbone with multiple redundancies; high capacity point to multipoint wireless access at the user end; robust and survivable trunk and access radios; redundancy and scalability based on satellites; in-built protection against cyber and electronic attacks using firewalls and frequency hopping spread spectrum techniques; encryption and multi-level network security; real-time management of spectrum; integration with legacy systems, strategic networks, national communication systems; effective interoperability within the Army and other services during joint operations; lightweight user terminals; and finally effective integration of all OIS.

Since 2002, the MoD has been vacillating on categorisation of the TCS project under Make (high-tech systems) and Make (strategic, complex and security sensitive systems), since private sector participation is allowed in the former category and not latter, and classifying it as former category was attributed to the secrecy of the "frequency hopping algorithm" contained in a tiny microchip. The frequency hopping algorithm provides anti-jamming and electronic counter-measures (ECM) functionality. Tactical communications networks need to be multi-hop wireless networks in which switches and endpoints are mobile nodes. In a tactical environment, system performance degraded when switching nodes or communication links fail to operate, narrow band electronic jamming is widespread and bandwidth is at premium. Fast and adaptive algorithms for performance analysis are desirable for optimising the network. Further, tactical networks commonly use pre-emptive algorithms to achieve low blocking probabilities for high-priority connections when the loss of equipment or electronic warfare in the battlefield is considerable. Under infavourable conditions, adaptive channel hopping (ACH) algorithm lets sensors switch to a new operating channel/ACH reduces the channel scanning and selection latency by ordering available channels using link quality indicator measurements and mathematical weights. Plenty of research on the hopping algorithms is being done internationally in the public domain and details such as configuring the programme are country specific.

Network Connect Centre

However, now the Bharat Electronics Limited (BEL) and a consortium of L&T, Tata Power SED and HCL Infosystems Limited has reportedly been selected by the government. This is the first project under the 'Buy Indian, Make Indian' clause introduced in the Defence Procurement Procedure (DPP). The government will pay 80 per cent of the development cost while 20 per cent will be funded by the industry. For TCS, both the selected parties will make the prototype system and the best bidder will then execute the whole project. The TCS is vital for operational preparedness and force multiplication endeavour. Decisive victory in future conflicts will be difficult to achieve without robust and survivable communications, both in the strategic and tactical domain. We should learn from the TCS in foreign militaries as to how they have tackled the challenges of spectrum, bandwidth, laws of physics etc. British Win-T programme, developed by BAE Systems, Canada's tactical command and control, and communications system (TCCCS), developed by CDC Systems of UK, America's JTRS and contact programme of France, all have lessons for us including how these countries have optimised participation and contribution of private sector, use of COTS, time bound closure of procurement procedures keeping in mind criticality of the project and electronics manufacturing, and IT delivery self-sufficiency.

TCS is India's second project under the, make, procedure, after the future infantry combat vehicle (FICV) development project but according to the Ministry of Defence (MoD) sources, FICV is a stand-alone armoured vehicle in contrast to which the TCS is the network-centric backbone that connects crucial systems in the electronic battlefield; connecting sensors, shooters, decision systems and th command and control set up. Therefore, TCS together with the Tac C3I are the very nerve centre of the TBA as future battles will take place concurrently in the three domains of information, physical and the cognitive. The strategic value of information can hardly be optimised without efficient battlefield management, in which TCS plays a vital role.

The battlefield of tomorrow requires traverse communications. Not only is interoperability imperative intra-service and inter-service in the military, it is required across the entire security sector since unconventional warfate and asymmetric threats are borderless in contrast to classical conventional battlefields. Communication systems need to meet multi-mission requirements, functioning through cyber and electronic warfare environment while engaged in battle. Development of software defined radios and cognitive radios are operational breakthroughs.

There is increasing overlap of communications and information systems in militaries across the world, optimising information and communication technology (ICT). Command, control, communications, computers, information and intelligence, surveillance and reconnaissance (C4I2SR) system provides great operational advantage for the defence establishment; force multiplier for commanders at all levels. Communications, information and their confluence are vital for our military given present and future conflict scenarios. In the jointmanship paradigm our military has only taken some nascent steps. Actually, we are decades away from integration in its true form and spirit. We need to take measures from the existing state of 'cooperative functioning' and 'patchy jointness' to 'de-conflicted operations', advancing to 'joint' and finally 'integrated operations'. Unless vital steps as indicated above are taken, shedding the baggage of legacy thinking, jointmanship will be elusive and our goal of achieving net-centric warfare (NCW) capabilities will remain utopian. MoD and the military need to take holistic stock and act. We must speedily establish a reliable and robust ICT network which allows interoperability of the three services within themselves, and with the requisite government agencies spanning the strategic, operational and tactical domains.

Development and production of the TCS, which will provide a robust, snoop proof, mobile cellular network for the Indian Army's voice and data communications during battle will likely cost upwards of ₹10,000 crore. The Army's modernisation plan has been seriously affected by the void of the TCS. This must be developed and fielded at the earliest keeping in mind its criticality, timelines, capability to deliver and complexity of sensors and requirement of multiple nodes in delivering the trinity of voice, data and video, speedily and securely. SP

New SATCOM capabilities from communications innovator Rockwell Collins: More flexible, more powerful, and more portable

As SATCOM technology continues to evolve rapidly, the Rockwell Collins family of mobile CommuniCase® SATCOM terminals minimises the risk of technological obsolescence with a flexible modular design.

CCT SATCOM terminals from Rockwell Collins use a modular architecture that allows the modems and transceivers to be swapped out with different products in the CCT family, from suitcase terminals to flyaway terminals.

When technologies change, the architecture permits the replacement of existing modems and transceivers with the latest technology, or with custom-designed modules in the same form factors. Swappable modules include the antenna system, transceiver, controller, network processor, power supply and software.

The more flexible designs of CCT SATCOM terminals provide the opportunity to 'future-proof' these terminals. They address a major concern in procurement of SATCOM terminals or any hardware that it will become obsolete within two or three years due to technological change. With a CCT terminal from Rockwell Collins, only a new modem, transceiver or other swappable module needs to be purchased.

Rockwell Collins' technological pursuits extend beyond SATCOM, however SATCOM is a strong area of interest for the company. In India, technological capabilities are advanced and government interest in expanding SATCOM for defence is growing. Rockwell Collins' widely-used SATCOM technologies are among the most proven and advanced in the industry.

miSAT-X silhouette

CCT120 Suitcase

The CCT family of terminals features auto acquisition and the capability to utilise X-, Ku- or Ka-band based on customer requirements. They feature a modular design concept that allows customers to select and combine components in order to customise key characteristics of their SATCOM systems for mission, portability, speed and budget requirements.

Interchangeable CCT modules help to maximise the value of a customer's technology investment, reduce the logistics load and lend flexibility to adapt to future needs.

CCT products include the SWE-DISH® CCT120 Suitcase®, with an efficient 1.2-metre by 0.84-metre Gregorian offset antenna. The antenna and feed system achieve low loss and up to 20 Mbps data speeds. The CCT120 is also available in a drive-away model.

Set-up speed can be critical in defence applications. With a time to air of 5 to 10 minutes, the CCT120 is the quickest-to-air terminal in the world and is also among the fastest to tear down. Changing modems can be accomplished in only three minutes.

The smallest, most portable Rockwell Collins terminal is the miSAT™. The miSAT man-portable SATCOM terminal provides secure and non-secure data, voice and video in a briefcase-size package that can be stowed in the overhead compartment of an airplane. Since it weighs under 18 kilograms, the miSAT can be deployed on the ground, on window sills, on balconies, on vehicle roofs and on rooftops.

Setting up the miSAT terminal takes less than five minutes for a person with no SATCOM experience, by simply opening the case, connecting the reflector pieces and pointing the antenna using simple instructions provided on an integrated display. It provides T1 speed, as well as everything over IP connectivity.

Rockwell Collins sees many opportunities to serve customers beyond their equipment needs. The company's global field support services include training, technicians, depot-level spares, logistics support and a network operations centre. The centre provides 24/7 access to expert technicians, trouble ticketing and warranty support.

To help customers manage SATCOM networks, Rockwell Collins offers the SATCOM MaxView® Management and Control Software. MaxView is a cross-platform software suite for network management, control and automation. Intuitive and easy to use, it is used at over 4,000 sites in 40 countries after more than 13 years in the market.

Rockwell Collins in India employs more than 500 people at its state-of-the-art India Design Centre in Hyderabad, which is dedicated to hardware and software development. A growing India presence also includes staff in the company's New Delhi office, which opened in 2011 to provide business development, programme management, systems engineering and other support. SP

PHOTOGRAPHS: Rockwell Collins

India and Maldives to strengthen defence relations: Antony

The Defence Minister A.K. Antony has reiterated India's commitment to continue to strengthen bilateral defence relations with Maldives. Meeting with Maldivian Minister of Defence and National Security Mohamed Nazim in New Delhi recently, Antony conveyed continued support to the strengthening of medical facilities and expertise for the Maldives National Defence Force (MNDF).

During the meeting, training of Maldivian medical specialists in India, deputation of Indian armed forces medical specialists to Maldives and strengthening of medical infrastructure in Maldives were among the proposals discussed. Antony also announced that all MNDF personnel will henceforth be eligible for treatment in armed forces medical institutions in India for major surgeries and for treatment of major and serious illnesses. The Maldivian Defence Minister conveyed his appreciation of the assistance being provided by India in this regard.

Both Ministers discussed and agreed to pursue measures to enhance interactions between the armed forces of both countries. The continued conduct of bilateral exercise was discussed and it was agreed that the next joint exercise between both sides will be held in 2014. The Defence Ministers also discussed a number of issues relating to regional security and matters pertaining to bilateral defence cooperation between both countries. The Maldivian Defence Minister was accompanied by the Maldivian High Commissioner to India and senior officers of the MNDF. From the Indian side, Defence Secretary, Vice Chief of Naval Staff and senior officers of the armed forces, Ministry of Defence and Ministry of External Affairs were present at the meeting.

Earlier, the Maldivian Defence Minister laid a wreath at Amar Jawan Jyoti and was accorded a ceremonial Guard of Honour.

The dignitary also visited Kochi and went to the naval facilities under the Southern Naval Command. During the visit, an advanced light helicopter (ALH) manufactured by HAL was symbolically handed over to the MNDF in the presence of the Minister. The ALH is expected to be positioned in Male by early 2014 and would be the second ALH to be provided to Maldives. SP

Inshore patrol vessel Rajdhwaj commissioned

The Indian Coast Guard ship Rajdhwaj, the 50-metre-long inshore patrol vessel (IPV), the last in the series of eight IPVs designed and built by the Garden Reach Shipbuilders and Engineers, Kolkata, was commissioned recently at Chennai by G.K. Vasan, Union Minister of Shipping. Those present included Vice Admiral Anurag G. Thapliyal, Director General Indian Coast Guard, Inspector General S.P. Sharma, Commander Coast Guard Region (East) and other senior dignitaries.

The IPV is equipped with the most advanced and sophisticated navigational and communication sensors and equipment. The ship is propelled to a maximum speed of 31.5 knots by three MTU 4000 series diesel engines of 2,720 kW capacity at 2,100 rpm each, coupled with three 71S2 Rolls-Royce Kamewa Jets. At economical speed of 14 knots, it has an endurance of 1,500 nautical miles. The special features of the ship include an integrated bridge system (IBS), integrated machinery control system (IMCS), and an indigenously built 30mm gun mount with fire control system. The ship is designed to carry one rigid inflatable boat and two Geminis for search and rescue, law enforcement and maritime patrol.

ICGS Rajdhwaj, which is manned by five officers and 30 men under the Command of Commandant (JG) V.K. Parmar will be based at Kakinada under the administrative and operational control of the Commander, Coast Guard District Headquarters No. 6, Visakhapatnam. The ship on joining the Coast Guard fleet will enhance Coast Guard's capability in its mandate of maritime safety and security, environmental protection and coastal security on the Eastern sea board. SP

PHOTOGRAPHS: PIB, ICG

Protector RWS order to Switzerland valued NOK 196 million

Kongsberg has received an order valued at NOK 196 million from the Swiss Army for the delivery of protector weapon control system including logistics for the Swiss vehicle programme GMTF RP13.

This contract is the fourth major Protector RWS contract between the Swiss Army and Kongsberg since 2006. Deliveries will commence by February 2015, and the systems will be produced in Kongsberg, Norway.

Protector remote weapon station is designed for small and medium calibre weapons and can be installed on any type of platform; it is a fully stabilised, combat proven system qualified for global operations. The protector weapon control system protects military troops by allowing the vehicle's weapons to be operated from a protected position inside the vehicle.

As of 2013 the Protector has been chosen by 17 nations and Kongsberg continues to be the world's leading provider of remote weapon stations. SP

Lockheed Martin JLTV completes manufacturing review

The Lockheed Martin Joint Light Tactical Vehicle (JLTV) team successfully completed the government's manufacturing readiness assessment (MRA), an important milestone on the path to vehicle production at the company's Camden, Akansas, manufacturing complex.

The MRA, which measures manufacturing maturity and assesses technical risk, took place at Lockheed Martin's Camden operations. In October, the company announced plans to produce the JLTV at the Camden facility, where programme officials expect to gain significant production efficiencies and cost reductions.

"We look forward to adding another joint US Army/Marine Corps vehicle-manufacturing programme to our Camden operations," said Scott Greene, Vice President of Ground Vehicles for Lockheed Martin Missiles and Fire Control. "With proven assembly methods, a keen focus on efficiency and a highly skilled

workforce, we are confident that the tremendous success we've achieved producing the HIMARS launcher for the Army and Marines will translate to an outstanding JLTV for those very same customers."

The Lockheed Martin JLTV is designed to replace many of the current Army and Marine Corps HMMWV "Humvee" vehicles, providing significant advances in survivability and capability.

The Lockheed Martin JLTV is systems-engineered to provide the crew protection of mine resistant ambush protected vehicles, while returning crucial mobility, reliability and transportability to soldiers and marines. SP

PHOTOGRAPHS: Raytheon, Lockheed Martin

Raytheon Excalibur demonstrates precision in live-fire testing

The US Army and Raytheon successfully fired 10 precision-guided Excalibur projectiles during the final phase of compatibility testing at Yuma Proving Ground. This live-fire demonstration, funded by the US, Germany and supported by Raytheon-funded initial testing, marked the completion of a multi-phase assessment that verified Excalibur's compatibility and performance with the PzH2000 self-propelled howitzer.

During the testing, the PzH2000 fired 10 Excalibur projectiles at targets at ranges from nine to 48 kilometres. Every round delivered precision effects, striking within three metres of the targets, reaffirming warhead lethality and the required three fuze modes. Average miss distance at 48 kilometres was less than one metre. Additionally, the PzH2000 test demonstrated the projectile's ability to manoeuvre from the ballistic trajectory to an offset target.

"These trials clearly demonstrate Excalibur's ability to provide true precision to the PzH2000, giving warfighters in multiple nations a superior advantage on the battlefield," said Michelle Lohmeier, Vice President of Raytheon Missile Systems' Land Warfare Systems product line. "The PzH2000 is one of many highly capable cannon artillery systems currently deployed, and now we've proven that it can fire the only mature, true precision solution available today." SP

Babcock to deliver additional Phalanx systems to UK

Babcock has been contracted by the UK Ministry of Defence (MoD) to deliver four Phalanx 1B kit modifications and undertake two conversions of the land Phalanx weapons system to its original marinised configuration, to provide naval close-in weapon systems (CIWS) capability.

Phalanx CIWS – a rapid-fire, computer-controlled radar and 20mm Gatling gun system – is the UK's primary defence for ships against the threat of anti-ship missiles. The Phalanx 1B upgrade incorporates a side-mounted forward looking infrared camera (FLIR) enabling the CIWS to defend the ship against surface targets and slow air targets in addition to anti-ship missiles. The 1B configuration is valuable both in terms of countering the threat from small surface craft in littoral waters, and to counter forthcoming obsolescence issues.

Babcock is the in-service support provider to the MoD for Phalanx systems under a long-term availability contract awarded in 2006, managing and executing all upkeep support activities, including a 24/7 help desk for the Royal Navy, as well as providing logistics support for spares and repairable units. Additionally the company is under contract to upgrade 16 Phalanx systems to the 1B configuration in an ongoing programme.

The latest requirement for four further 1B kits and two conversions will be delivered under an amendment to the existing support and upgrade contract. Babcock will procure the Phalanx 1B systems from original equipment manufacturer Raytheon, and will be undertaking the conversion of the two land-based Phalanx weapon systems using their own weapons support engineers. The systems are due to be delivered by March 2014.

Babcock Weapons Business Development Manager, Martin Laity, said: "We are delighted to be applying our expertise and working with Raytheon to help the MoD and Royal Navy build the Phalanx CIWS capability it needs. Babcock is already known for our weapon support work for the UK MoD and our expertise in the assembly, test and setting to work of naval weapon systems. We hold long-term contracts to support the Phalanx CIWS and 4.5-inch Mk8 Mod1 Gun as well as upgrade contracts, and are well placed to support the MoD and Royal Navy in meeting this further Phalanx capability upgrade, and future gun system needs." SP

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Laser goes intense

There is no denying that the best defence against nukes, missiles and intercontinental ballistic missiles (ICBM) are lasers based in aerospace. To that end, weaponisation of space is a reality. China's continuing ASAT (anti-satellite) tests provide credence to the requirement albeit her latest ASAT test conducted this year involved manoeuvring satellite with mechanical arms that captured another satellite, as monitored by US.

A host of countries have focused R&D in developing directed energy weapons (DEWs); both laser and plasma weapons and delivery systems – land, sea, air and space based. These are referred to as the proverbial 'death ray' travelling at the speed of light. The DEW emits energy in the desired direction, onto the desired target destroying or disabling it without using any projectile. Not only will this be the next paradigm of war, they will likely be deployed in large numbers by the year 2020.

Most significantly, laser weapons will have limitless ammunition given sufficient power source. In addition, their range will be much more as compared to ballistic weapons with favourable atmospheric conditions and power level. Ground, sea and aerial laser weapon systems have already been involved in addition to hand-held laser assault rifles. What is booming in the scientific community is development of the ultrafast intense laser.

The intense laser can produce the shortest pulses ever in a laboratory (femtosecond timescale, 1 fs = 1,015 seconds). Such laser beams are the size of a small pancake of particles (photons) with thickness in the order of the micrometre (10-6 m). Such unique feature opens up broad prospects in many areas of basic and applied science; opportunity to study the matter in unexplored regimes; ability to zoom down to a timescale corresponding to elementary displacement of matter in biology, chemistry, molecular atomic physics; revealing fastest dynamics of electrons. All this can be optimised to take advantage of this short pulse duration to produce high intensity laser systems while keeping compactness of the infrastructure. The laser intensities at which a target can be irradiated become such that matter is placed under very high excited states.

America's HERCULES intense laser system is reportedly the fastest for generating GeV range electron beams using Laser Wakefield Acceleration (LWFA). Japan's research institute RIKIN (RIKIN spring-8 centre) has recently awarded Thales of France a €10-million contract for development and installation of two intense laser beam lines of 500 terawatts each. The system will significantly expand the capabilities of the current SACLA (Spring-8 Angstrom compact free electron Laser), used by researchers in Japan. Our Defence Research and Development Organisation (DRDO) identifies DEWs, along with space security, cyber-security and hypersonic vehicles as future projects. India has been developing the KALI (kilo ampere linear injector) linear electron accelerator for some time.

At present, it is not a laser weapon albeit China thinks so since it can be progressed into a high-powered microwave weapon. A Laser Dazzler has been developed that will impair vision temporarily to control unruly crowds. In addition, DRDO's Laser Science & Tech Centre (LASTEC) is developing ADITYA – a vehicle mounted gas dynamic laser-based DEW system (as technology demonstrator) – a 25-kilowatt laser system under development to hit a missile in terminal phase at a distance of 5-7 km. The next step is to create solid state lasers which are very portable and can be fitted on various platforms. This is projected to be achieved by 2020. MoD's "Technology Perspective & Capability Roadmap" identifies DEWs and ASAT weapons as thrust areas over next 15 years.

India has identified development of ASAT weapons for electronic or physical destruction of satellites in both low earth orbit (2,000-km altitude above earth's surface) and the higher geosynchronous orbit in the long-term integrated perspective plan (2012–27). DRDO is working on 6,000-square-kilometre radius systems in respect of exo-atmospheric kill vehicles. It would be prudent to simultaneously develop intense laser system, indigenously, through joint ventures and through leveraging our strategic partnerships as this is one area that can contribute to removing asymmetry vis-à-vis China. DEWs when mounted on satellites will be difficult to detect unless actually fired. Chinese military strategy of shock, deception and surprise coupled with its record of ambiguity and deceit lends itself to space weaponisation. There is no reason why India should not cater to such asymmetry. SP

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

PHOTOGRAPH: Boeing

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1964

Our Journey Starts as Guide Publications was founded by its Founder Publisher & Founder Editor Shri S P Baranwal...

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

1974

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

1984

50

JUST 1 STEP SHORT O

2014

WE SHALL BE 50 THIS YEAR

Guide Publications is rechristened as SP Guide Publications offering tribute and gratitude to its Founder...Also envisioned is the path of introduction of a few magazines...

2013

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

2004

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

1994

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

50 YEARS

1964 - 2014

50 YEARS

SP GUIDE PUBLICATIONS

Rafale to enter Indian service in 2017: Air Force Chief

The Chief of Air Staff of the Indian Air Force, N.A.K. Browne said the Rafale are expected to be inducted into the force by 2017, three years approximately after the contract is signed. The Indian Air Force is negotiating with French aviation major Dassault Aviation's Rafale for 126 medium fighter jets in a multi-billion dollar deal.

The deal suffered a "set back" due to the death of an official, who handled the negotiation, in September. Now a new Joint Secretary has joined last week to take the negotiations forward, Browne told reporters here.

"They have had meetings as of this time and I am hopeful that by early next year we should be able to wrap this case for the Air Force," Browne said.

According to the request for proposal (RFP) of the IAF, 18 aircraft will be brought in the next three years while the remaining aircraft is likely to be manufactured at HAL facilities at Bengaluru, defence sources said. SP

Tejas fires missile killing the target

Tejas, India's first indigenously designed, developed and produced fourth-generation plus light combat aircraft (LCA) has achieved yet another milestone by launching an infrared seeking air to air missile that hit the target in a direct hit with precision and destroyed the target. The test, demonstrating required parameters was conducted off the coast of Goa in Arabian Sea, and has taken the aircraft closer to its induction in the Indian Air Force.

Tejas has been developed by DRDO with Aeronautical Development Agency (ADA), Bengaluru, as the lead laboratory and HAL as the production partner. Avinash Chander, Scientific Advisor to Defence Minister and Secretary, Department of Defence R&D, said "With this launch of missile from Tejas and successfully hitting the target in the first shot, we have demonstrated the total weapon system capability of LCA Tejas."

Tejas has been undergoing weapon release flight tests, for its operational clearance. SP

LCA Tejas completes 2,400 sorties

The indigenously-developed light combat aircraft (LCA) Tejas has undertaken 2,400 sorties to meet the requirements of the IAF. "The LCA has clocked over 2,400 flights till now with highest ever number of sorties achieved in the current year. The programme has achieved highest ever average number of flights per aircraft per month during this year," HAL officials said here.

The aircraft had recently met its final parameter by displaying its missile firing capabilities with the launching of an infrared seeking air-to-air missile that hit the target with precision and destroyed it.

The initial operational clearance-II of the aircraft will be done at its home-base in Bengaluru after which it will be inducted into the IAF by Defence Minister A.K. Antony.

The aircraft will be the LCA Mark I and 40 of them will be inducted by the IAF and the DRDO and HAL will continue to make improvements in it, they said, adding more powerful and capable version would be inducted later in the force. SP

KAI signs contract with Iraq for T-50

Korea Aerospace Industries Ltd. has signed the contract with Iraq for exporting its T-50 aircraft, total of over $1.1 billion. Government of Iraq and

KAI announced in Baghdad that the contract is signed for exporting its indigenous 24 T-50 aircraft to Iraq, including training for Iraqi pilots.

The signing ceremony was made with KAI's President and CEO, Ha Sung-yong, Defense Acquisition Program Administration's Administrator, Lee Young-geol and the ROKAF Deputy Chief of Staff, Kim Hyung-chol as well as Iraqi Prime Minister Nouri al-Maliki in attendance.

Following the contract, KAI will be entitled to supply its follow-on support to Iraq Air Force for over two decades. The combined amount of export would reach more than $2 billion.

In April 2011, KAI introduced the T-50-variant aircraft to Iraqi Prime Minister Nouri al-Maliki during his visit to Korea and set out on marketing campaigns for those trainer airplanes. After July of the same year, the company started to enter negotiations with Iraq in earnest. SP

PHOTOGRAPHS: French Air Force – R. Nicolas-Nelson / Dassault Aviation, KAI, DRDO

Eurofighter Typhoon Tranche 3 takes to the skies

The first of a new standard of Typhoon has started its series of flight tests. The latest Typhoon, known as a Tranche 3, represents a major stepping stone in the evolution of one of the world's leading combat aircraft.

The Tranche 3 standard embodies a number of under the skin changes that effectively future-proof the aircraft and make it more attractive to current and potential export customers.

Taken together there have been hundreds of modifications, changes and additions which effectively means Typhoon has now taken a massive step forward.

Mark Kane, BAE Systems Managing Director - Combat Air said: "For casual observers the aircraft is little changed from its sleek predecessor but it has a number of provisions that will allow it to take on additional capability in the future. One of the few visual clues is a number of small panels on the fuselage which are there to accommodate the fitting of conformal fuel tanks.

"Once fitted, these would give the aircraft greater range and free up positions under the aircraft for larger or additional weapons.

"At the nose a new internal structure has been built and work has been carried out on power, cooling and electronics so that a new E-Scan radar could easily be accommodated."

Under the Tranche 3A contract signed in 2009, a total of 112 aircraft have been ordered for the four European partner nations of Germany, Italy, Spain and the UK, with 40 aircraft bound for the Royal Air Force. SP

Textron AirLand announces successful first flight of Scorpion

Textron AirLand, LLC, a joint venture between Textron Inc. and AirLand Enterprises, LLC, has announced that the Scorpion intelligence, surveillance and reconnaissance (ISR)/strike aircraft completed its first flight on December 12, 2013.

The aircraft took off from McConnell Air Force Base in Wichita, Kansas, and conducted a range of handling manoeuvrs for approximately 1.4 hours of flight. The flight marks one of the fastest developments of a US-built tactical jet, progressing from initial design to first flight in less than 24 months.

The Scorpion was announced in September 2013 as a demonstration aircraft designed to accommodate the budget constraints and shifting mission requirements of the US Department of Defense and US partner nations. Powered by twin turbofan engines generating 8,000 lbs of thrust, the Scorpion transitions easily between low speed and high-subsonic speed, as needed for diverse missions such as irregular warfare, border patrol, maritime surveillance, emergency relief, counter-narcotics and air defence operations. SP

US Government receives 200th C-130J Super Hercules

An MC-130J Commando II designated for Kirtland Air Force Base, New Mexico, was ferried recently from the Lockheed Martin plant here. This MC-130J has the distinction of being the 200th C-130J Super Hercules delivered to the US Government, which is the largest Super Hercules operator.

This aircraft is assigned to Air Force Special Operations Command. The Commando II supports such missions as in-flight refuelling, infiltration/exfiltration, and aerial delivery and resupply of special operations forces. SP

Reliance and Dassault facility in Bengaluru to produce warplane wings?

France's Dassault Aviation and Reliance Industries are planning to set up a facility to produce wings of Rafale combat aircraft selected by IAF for meeting its requirement of 126 fighter planes. The two firms are planning to set up a ₹1,000-crore facility for producing the wings of the Rafale combat aircraft and it is most likely to come up in Bengaluru.

Under the plan, Dassault Aviation would help Reliance to establish the factory similar to its production facilities in France where the aircraft is produced, they said. SP

PHOTOGRAPHS: BAE Systems, Textron, Lockheed Martin, Dassault Aviation

IAF bids adieu to MiG-21 T-77

The Kalaikunda airbase recently witnessed three MiG-27 aircraft perform the Trishul break manoeuvre as a salute to the MiG-21 Type 77 aircraft that was towed out and into the hangar for the last time. The Kalaikunda based operational conversion unit (OCU) bid a final farewell to its oldest workhorse.

Air Chief Marshal N.A.K. Browne, Chief of the Air Staff, said, "The event marks a watershed moment in IAF's history as we reach the end of nearly five decades of remarkable operational service rendered by this iconic fighter."

The induction of first batch of six MiG-21s way back in March-April 1963 heralded the arrival of IAF in the 'Supersonic era.' Its unprecedented combat versatility afforded the IAF great amount of operational flexibility. Over the years, this delta wing marvel slowly evolved into the combat backbone of the IAF and close to 1,000 fighters (which include all variants) have served in the IAF till date. In 1980-90s the MiG-21s constituted nearly 60 per cent of our combat fleet strength.

The T-77 may have flown its last sortie today, but its imprint on the 'operational DNA' of the IAF will continue for a long time. Gradually the other variants of the MiG-21 would also retire from service with Bison continuing for more than a decade or so. SP

Innovative firefighting system approved for the C-27J Spartan

One of the Romanian Air Force's C-27Js will be the first aircraft in Europe to use an innovative firefighting system. In the several past weeks, Alenia Aermacchi conducted intense operating and training tests on the aircraft, which included the new firefighting system onboard.

Alenia Aermacchi recently completed an experimental campaign in a Romanian mountain range with a C-27J that operates with the Fortele Aeriene Române —the Romanian Air Force. The objective of the campaign was to test the innovative firefighting system called Caylym Guardian. The system allows C-27Js to drop up to six large cardboard containers on bushfires; each container has a capacity of 1,000 litres water or extinguishing liquid.

The system allows for a quick, accurate and innovative way to fight bushfires. Using the C27J's system of in-flight drop, the Guardian guarantees extreme precision of the drop and creates a retardant liquid cloud well focused on the target. Containers are biodegradable but they can also be recovered by ground firefighters. SP

Boeing and Saab to jointly develop T-X family of systems training solution

Boeing and Saab AB have signed a joint development agreement (JDA) to jointly develop and build a new advanced, cost-efficient T-X family of systems training solution for the upcoming competition to replace the US Air Force's aging T-38 aircrew training system. The JDA, with Boeing as the prime contractor and Saab AB as primary partner, covers areas including design, development, production, support, sales and marketing.

"Teaming with Saab will bring together our companies' formidable technical expertise, global presence, and willingness to present an adaptable and affordable advanced pilot training solution," said Boeing Military Aircraft President Chris Chadwick. "Boeing and Saab form the foundation for what will be the strongest, most cost-effective industry team. Our comprehensive Family of Systems approach provides a new, purpose-built T-X aircraft supported by innovative training and logistics support to offer total life-cycle cost benefits to the US Air Force and taxpayers."

"Saab is proud to join with Boeing for the T-X competition, thus creating a highly capable team to deliver unprecedented value to the customer. We are sure this is the best way to supply affordable first-class trainers to the US Air Force," said Saab President and CEO Håkan Buskhe.

Boeing and Saab look forward to the upcoming acquisition process, which will lead to the customer awarding the contract. The US Air Force T-X programme will include aircraft and training that will prepare warfighters for the next 40 years. The Air Force plans to replace the T-38 with a new Advanced Pilot Training Family of Systems and about 350 aircraft, plus associated ground-based training systems and logistics and sustainment support. SP

Brazilian Air Force takes delivery of 400th GRIFO radar

Selex ES, a Finmeccanica company, celebrated the delivery of the 400th GRIFO radar, which is to be used by the Brazilian Air Force. The company, based out of the Lombard Aerospace District, marked the occasion with a ceremony at the Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci, in Milan, Italy.

The GRIFO avionic combat radar, was the very first to be wholly designed, developed and produced at the Selex ES site in Nerviano (near Milan). Up until the end of the Eighties the company, at that time known as FIAR, had produced only radars under licence.

The GRIFO radar represents an important commercial success for Selex ES at international level: 450 GRIFO radar systems have been so far sold, with the radar being chosen by five different air forces around the world and it is in operation in seven different types of aircraft. SP

PHOTOGRAPHS: PIB, Alenia Aermacchi

UN launches unmanned surveillance

Selex ES Falco tactical unmanned aerial System (UAS) took to the air to begin its role supporting the United Nation (UN) peacekeeping operations in the Democratic Republic of Congo (DRC).

Selex ES was awarded a three-year contract for the Falco UAS to provide information gathering and surveillance capability to the UN operations along the Rwandan and Ugandan borders.

The Falco is an unarmed mission-proven medium altitude, medium endurance UAV capable of operating from semi-prepared airstrips with fully automated take-off, landing and mission execution capability.

The vehicles for the UN peacekeeping missions were transported from Italy with the support of the Italian Air Force on-board a C-130J aircraft operated by the Pisa-based 46th Aerobrigade. The flight took off on November 13 from Pisa airport and stopped in Luxur, Egypt, and Nairobi, Kenya for platform maintenance. The C-130J arrived and unloaded the Falco at Goma Airport in Congo on November 15.

The platform was selected for the UN peacekeeping mission in the DRC because of its proven ability to perform long endurance

surveillance missions, its outstanding availability, ease of deployment and excellent track record in service operations. They have a range of 250-km from their base in Goma with the possibility of a greater surveillance range with the addition of further bases that can easily be set up. SP

Northrop Grumman begins production of first NATO Global Hawk

Northrop Grumman Corporation's (NOC) Unmanned Systems Center started production of the first NATO alliance ground surveillance (AGS) Block 40 Global Hawk aircraft, enhanced to meet NATO operational requirements.

NATO representatives, state dignitaries, community leaders and Northrop Grumman employees gathered to celebrate the start of production for the first of five aircraft. The system will provide NATO with unprecedented near real-time terrestrial and maritime situational awareness information throughout the full range of NATO military and civil-military missions, including peacekeeping and humanitarian relief operations. The NATO AGS system will be a major contribution to NATO's joint intelligence, surveillance and reconnaissance (ISR) capability.

"The variety of sensors and ability to support a wide range of missions will revolutionise how NATO collects ISR," said Jim Edge, General Manager, NATO AGS Management Agency. "It was an honour to witness the start of production for the first NATO aircraft, and I'm excited at being one step closer to delivering the AGS system."

The NATO AGS system will be equipped with the multimode multi-platform radar technology insertion (MP-RTIP) airborne ground surveillance radar sensor to provide all-weather, day or night intelligence to the NATO Alliance. The system also includes an extensive suite of network-centric enabled line-of-sight and beyond-line-of-sight long-range, wide-band data links.

"With the ability to fly up to 60,000 feet and for more than 30 hours, the NATO AGS system is uniquely suited to support NATO missions worldwide," said Jim Culmo, Vice President, High-Altitude, Long Endurance Enterprise, Northrop Grumman Aerospace Systems. SP

PHOTOGRAPHS: Selex ES, Northrop Grumman

Australia extends Heron mission in Afghanistan

The Australian Government has extended the Heron remotely piloted aircraft (RPA) deployment to Afghanistan providing high resolution intelligence, surveillance and reconnaissance (ISR) support until July 2014.

The Heron RPA has been operating in the Middle East since January 2010, providing ISR support to missions in Uruzgan province and southern Afghanistan. With the end of Australia's presence in Uruzgan approaching, the Heron detachment will shift focus to support coalition operations in Regional Command South during the final period of transition of security responsibility to Afghan National Security Forces and the Afghan elections scheduled for April 5 next year.

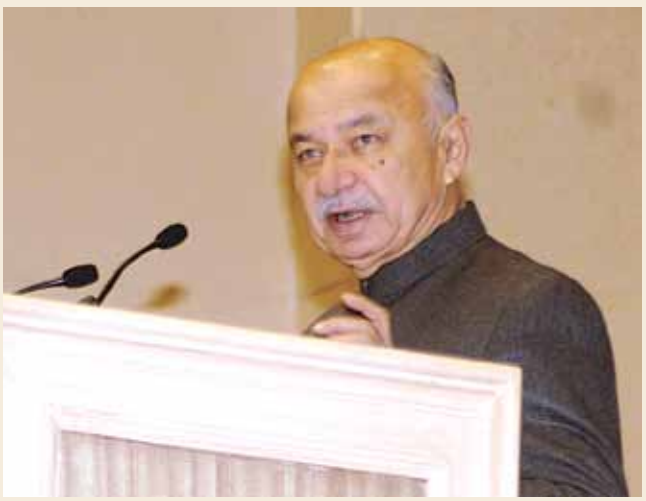
"The decision to extend the Heron RPA and its associated systems reflects Australia's ongoing commitment to Afghanistan and the International Security Assistance Force (ISAF) through 2014. It is in line with the previously announced training and specialist contributions the ADF and the Australian Government will make in Afghanistan as our mission moves from Uruzgan to the wider Afghan nation," Minister for Defence, Senator David Johnston said.

"Based at Kandahar Air Field, the Heron will provide ISAF's Regional Command South with a highly capable system over the coming months and continue to enhance the ADF's unmanned aerial system capability, which has grown significantly during the deployment to Afghanistan of ScanEagle, Shadow 200 and the Heron platforms."

The Heron RPA is capable of medium altitude long endurance flights, using multiple sensors simultaneously to provide high resolution ISR capabilities. SP

NIA filing charge sheet against 10 persons on illegal transfer of funds: Home Minister

The Union Home Minister Sushilkumar Shinde has said that the National Investigation Agency (NIA) has been given sanction for filing charge sheet against 10 persons accused in the crime relating to systematically and illegally transfer of funding by Hizb-ul-Mujahideen from across the border through Hawala channel in the garb of Jammu Kashmir Affectees Relief Trust (JKART) and distributing the same for fostering terrorist activities and also to the orphans and widows of killed Hizb-ul-Mujahideen terrorists. The funding was also being used to boost their morale and attract fresh recruits.



Modernisation of police forces

Out of the total allocation of ₹1,847 crore for 2013-14 for the scheme for Modernisation of State Police Forces, an amount of ₹193.14 crore was released during November 2013 to Ordinance Factory Boards (₹2.52 crore) for supply of arms and ammunitions and to eight different state governments (₹190.62 crore) for construction activities and purchasing vehicles/communication equipments, etc.

On November 13, 2013 the Meitei Extremist organisations consisting of Peoples' Liberation Army (PLA) and its political wing, the Revolutionary Peoples' Front (RPF), the United National Liberation Front (UNLF), the Peoples' Revolutionary Party of Kngleipak (PREPAK) and its armed wing, the "Red Army", the Kangleipak Communist Party (KCP) and its armed wing, also called the " Red Army", the Kanglei Yaol Kanba Lup (KYKL), CorCom (conglomerate of six valley-based UD outfits) and the Manipur Peoples' Liberation Front (MPLF) along with all their factions, wings and front organisations were declared as 'Unlawful Associations' under Unlawful Activities (Prevention) Act, 1967.

The law and order situation in Andhra Pradesh, in the context of Telangana agitation was reviewed and the deployment of 95 Companies of CAPFs (RAF-04, CRPF-50, BSF-33 & CISF-08) additionally deployed for law and order was extended up to December 31, 2013, for maintaining law and order in the state. SP

India, Maldives discuss internal security

The Union Home Minister Sushilkumar Shinde met Mohamed Nazim, the Minister of Defence and Internal Security of Maldives, in New Delhi and discussed the bilateral security matters of mutual interest.

Both the sides discussed further cooperation in the areas of disaster management issues, training and capacity building for the security officers, visa and immigration matters in addition to the modernisation of police forces and training of police personnel. SP

Additional charge as Director of NPA

T.K. Vinod Kumar, Joint Director in the National Police Academy (NPA), Hyderabad, hold the additional charge of Director, NPA with immediate effect and till an incumbent to the post is appointed on regular basis, or till further orders. SP

India-Pakistan nuclear war will lead to large-scale famine: Study

A recent study by Physicians for Social Responsibility (PSR) has stated that an India-Pakistan nuclear war may see the use of about 100 Hiroshima-size bombs – about half of India and Pakistan's nuclear arsenals.

A new study says that a nuclear exchange on such a scale would "probably cause the end (of) modern industrial civilisation as we know it" by subjecting about two billion people to the risk of starvation, and causing massive economic and social disruptions far away from the theatre of war. Among the consequences of a nuclear exchange: Chinese winter wheat production could decline by 50 per cent during the first year and by more than 30 per cent over ten years; there would be a 21 per cent decline in Chinese middle-season rice production during the first four years and an average 10 per cent decline in the following six years; corn and soybean production in the United States would decline by 10 per cent on average for ten years.

The 2012 study by PSR predicted that an India-Pakistan nuclear war could put more than one billion people at risk of starvation. The more recent study, released last month, adjusts this figure and calculates that an India-Pakistan nuclear war would put more than two billion people at risk. The updated analysis includes a study that shows that Chinese winter wheat production could decline by 50 per cent during the first year and by more than 30 per cent over ten years. Increasing crop prices due to a reduction of supply would worsen food shortages.

"Significant, sustained agricultural shortfalls over an extended period would almost certainly lead to panic and hoarding on an international scale as food exporting nations suspended exports in order to assure adequate food supplies for their own populations," the report says. "This turmoil in the agricultural markets would further reduce accessible food."

The chain of events which would lead to the catastrophe described in the report begins with firestorms caused by nuclear detonations. These detonations would send more than six million tonnes of soot into the atmosphere, shutting out sunlight and creating a global cooling effect scientists call "nuclear winter." SP

PHOTOGRAPH: PIB

10 cyber security issues in 2014

Palo Alto Networks has released predictions for cyber security, the threat landscape, firewall and mobile security for 2014. They include:

1. Securing the mobile device will be inextricably linked to securing the network

Megatrends like BYOD and the rise of the mobile workforce are providing fertile ground for cyber criminals and nation states looking to capitalise on devices operating over unprotected networks. In 2014, threat intelligence gained within the enterprise network will offer new defence capabilities for mobile devices operating outside protected networks. Intelligence gained by mobile devices will offer new signature capabilities to further strengthen enterprise networks.

2. Cloud will get a security makeover

Innovations in network virtualisation are enabling automation and transparent network insertion of next-generation security services into the cloud. Security has remained one of the greatest barriers preventing cloud computing from reaching its full potential. In 2014 next-generation network security and network virtualisation will come together to form a new paradigm for cloud security.

3. Detection times will decrease

Enterprise security has undergone a massive transformation since the introduction of the Next-Generation Firewall (NGFW). This has long since moved from an emerging technology to one that's universally deployed. Newer, advanced security services are letting enterprises gain new advantages in detecting unknown threats and gather that information into a threat intelligence cloud that's developing an impressively high IQ. The net result will be a measurable reduction in the time it takes to detect a breach.

4. There will be a heightened need for better intelligence

The new era of network security is based on automated processes and building as much intelligence as possible into network security software. This is especially important in industries such as government, education and health care, in which there are staffing shortages. Limited staff need maximum resources including security tools that give them the most visibility into their network traffic and don't sacrifice business productivity.

5. Security will meet reliability as attacks target control systems

Companies may be able to apply tight network security to data centres and the information they manage. But if they're not doing the same for certain data centre support systems such as HVAC, cooling and other automated systems that help power, clean and maintain a data centre, they're leaving the whole data centre vulnerable. These types of attacks, in which smart hackers target the weakest parts of a data centre support infrastructure, will continue.

6. Demand for cyber security and incident response skills will increase

As more advanced threats have become commonplace, the demands on existing IR teams have begun to outstrip capacity, especially in enterprises and government entities. A recent survey by the Ponemon Institute found that only 26 per cent of security professionals felt they had the security expertise needed to keep up with advanced threats. Computer science programmes will continue to adapt to this trend with more focused training in cyber security disciplines.

7. Advanced attackers will move to mobile devices

A wave of crime ware and fraud has already begun to target mobile devices, which are ripe targets for new malware and a logical place for new threat vectors. Mobile platforms will be uniquely leveraged by advanced persistent threats (APTs) thanks to the ability to use GPS location to pinpoint individual targets and use cellular connectivity to keep command and control away from enterprise security measures.

8. Financially motivated malware will make a comeback

The focus of enterprise security will again be on the attacks where money changes hands. Banking and fraud botnets will continue to be some of the most common types of malware. To do so, they will attempt to imitate, contract with or even infiltrate criminally-focused hacking organisations to provide cover for their operations.

9. Organisations will exert more control over remote access tools

The revelations of how commonly remote access tools such as RDP, SSH and TeamViewer are used to attack networks will force organisations to exert greater control over these tools. Browser plugins such as Remote Desktop and uProxy for Google Chrome will make these tools more accessible and increase the challenge of controlling their use on the corporate network. User privacy is critically important, but users also need to understand that these applications can jeopardise the business.The challenge will be how organisations can best implement controls without limiting productivity.

10. Cyber lockers and cloud-based file sharing will continue to grow, despite the risks

As of this year, Palo Alto Networks is tracking more than 100 variants, and according to its research an average of 13 of these applications are found on networks it analyses. In many cases, there is no business use case for this many variants. While there is business value for some of these applications they do present business and security risks if they're used too casually. SP

EADS outlines plan for defence and space restructuring

EADS has presented a restructuring plan for its future Airbus Defence and Space Division (Airbus DS) to the European Works Council. This presentation follows a decision by the EADS Board of Directors in July this year to consolidate the defence and space businesses of the Group into one new Division and to rebrand EADS into "Airbus Group".

"We need to improve our competitiveness in defence and space – and we need to do it now," said Tom Enders, Chief Executive Officer of EADS. "With our traditional markets down, we urgently need to improve access to international customers, to growth markets. For that to work, we need to cut costs, eliminate product and resource overlaps, create synergies in our operations and product portfolio and better focus our research and development efforts. That's what the restructuring and integration plan for our defence and space business is all about."

Overall, EADS plans to reduce (headcount) 5,800 positions at Airbus DS and in corporate/headquarters functions until the end of 2016. Timing and sizing of a one-off charge related to this plan is under evaluation. SP

Exelis to spin off military and government services company

Exelis plans to spin off its military and government services business, currently called Exelis Mission Systems, into an independent public company. This business is currently part of the company's Information and Technical Services segment.

"We are repositioning our businesses to enhance our focus on the long-term growth drivers that will enable us to remain well-positioned in an evolving global market environment," said David F. Melcher, Chief Executive Officer and President of Exelis.

Following completion of the spin off, Exelis will retain a portfolio of mission critical, affordable and platform agnostic products and services for managing global threats, conflicts and complexities. The business will focus future investments on strengthening its four strategic growth platforms of Critical Networks; intelligence, surveillance and reconnaissance and analytics; electronic warfare; and aero-structures. These growth platforms, which have been strategically aligned with future customer requirements, are supported by the company's most differentiated and enduring C4ISR capabilities such as global intelligence, surveillance and reconnaissance systems, networked communications, integrated electronic warfare, and engineering and professional services.

Following completion of the spin off, Exelis Mission Systems will be renamed and rebranded as a new, independent company that provides industry-leading facilities management, logistics and network communications services. As a pure-play services provider, the new company will capitalise on more than 50 years of experience delivering service solutions to a wide range of customers. SP

Thales Alenia Space: New industrial site opens in L'Aquila

Thales Alenia Space recently inaugurated the new industrial complex in L'Aquila, completely rebuilt after the company's historic establishment was declared unfit for occupancy due to the serious damage suffered during the earthquake of April 6, 2009.

With this inauguration, Thales Alenia Space honored its commitment: less than two years after the laying of the first stone in December 2011, and with an investment of 42 million euros, the new plant is now ready and operational, providing an innovative, state-of-the-art facility centred on technological and engineering excellence that strengthens and confirms the company's industrial presence in the region.

The new plant covers 16,080 square metres, divided into production areas, service areas/utilities (energy centre), office areas and other areas (reception desk, lobby, infirmary). The production block, the largest part of the facility (10,215 square metres), is located on the ground floor, while the offices are located on two floors (for a total of 4,070 square metres). The reconstructed building meets the strictest seismic criteria required by the new seismic regulations.

The production areas were designed according to Lean Design criteria with the goal of obtaining continuous, optimised work flows with a high degree of reconfigurability in order to meet requirements related to changes in production volume and technology. SP

Thales Alenia Space share Brazil contracts

Thales Alenia Space has signed a contract with Visiona (a joint venture between Embraer and Telebras) for the geostationary defence and strategic communications satellite (SGDC) programme. This contract is a key to space development plans by the Brazilian Space Agency, and to meeting the Ministry of Defense's strategic requirements. It satisfies two primary objectives for the country: the deployment of a secure satellite communications system for the Brazilian Government and armed forces; and the deployment of the National broadband plan (PNBL), coordinated by the operator Telebras, to reduce the digital divide in the country. The SGDC programme is an integral part of Brazil's strategy to reinforce its independence and sovereignty.

Based on the Spacebus 4000 platform, the SGDC satellite will carry two payloads, one with 50 Ka-band transponders offering throughput of up to 80 Gbps, and the other with seven X-band transponders. The satellite will weigh about 5.8 tonnes at liftoff, and will offer more than 11 kW of power. Delivered on the ground in 31 months, it will be positioned in orbit at 75 degrees West.

The contract also includes a complete ground segment for satellite and mission control, along with orbital positioning, acceptance testing in orbit and operational support, preceded by a complete training programme for Brazilian operators. Furthermore, on request from the customer, Brazilian engineers will join the project team and take an active role at Thales Alenia Space's plants in Toulouse and Cannes.

"This contract is very important for our company," said Jean Loïc Galle, President and CEO of Thales Alenia Space. "Our people are now mobilised to make sure we meet all our commitments, and to ensure the smooth integration of Brazilian companies in this major project. I would also like to thank French and Italian Government agencies for their support in successfully concluding this new international collaboration."

The European leader in satellite systems and a major player in orbital infrastructures, Thales Alenia Space is a joint venture between Thales (67 per cent) and Finmeccanica (33 per cent). Thales Alenia Space and Telespazio embody the two groups' "Space Alliance". With consolidated revenues of 2.1 billion euros in 2012, Thales Alenia Space has 7,500 employees in France, Italy, Spain, Germany, Belgium and the United States. SP

Radio Gateway connects US and Allied troops to a common mobile network

Multinational forces, US Government agencies and US troops operating together in forward-deployed locations generally have problems communicating—and not just due to language differences. Technical incompatibility between communications systems can hinder information sharing and timely command and control decisions. The Defense Advanced Research Projects Agency's (DARPA) Mobile Ad hoc Interoperability Network Gateway (MAINGATE) programme is helping overcome this technology barrier. The programme is nearing completion and plans to transfer the latest version of the system to Army warfighters still engaged in Afghanistan, but who are now focused more on Force Protection as US forces draw down. The MAINGATE system is providing insights into tactical networking of the future, where systems will need more adaptability and capability. The system is packaged in a way that provides real-world capabilities like no other existing system.

The MAINGATE system combines two advanced technologies to provide a reliable, interoperable network for connecting current and future forces from the tactical edge. The first technology is MAINGATE's high capacity Wireless IP Network (WIPN) radio, which provides a terrestrial "Everything over IP" backbone with ample capacity to support multiple channels of voice, video and data. The second technology is MAINGATE's Interoperability Gateway, which provides interconnectivity for users with incompatible communications equipment. The MAINGATE system provides a tactical mid-tier communications capability between front-line troops and organisations, and the higher-level systems like the Army's Warfighter Information Network – Tactical (WIN-T) infrastructure.

"MAINGATE is designed to be a potent communications force multiplier for joint and combined forces," said Keith Gremban, DARPA Program Manager. "From a radio perspective, MAINGATE allows coalition forces to plug in their own radio systems and MAINGATE takes the necessary steps so everyone can communicate in real time."

DARPA has been developing MAINGATE since 2008, and various elements of the technology have already made their way into existing US Army systems. Army brigade-level exercises have tested a number of MAINGATE units, as have operational trials with US and coalition forces in Afghanistan. The system has already proven its worth; during a recent operational deployment in Afghanistan, MAINGATE enabled sharing of data between different coalition partners' systems so a commander in the base defence operations center could view a video feed of an attempted base intrusion as it occurred. That sort of real-time coordination wasn't possible before.

A key feature of MAINGATE is that it is designed to be upgradeable to future technologies, so the system stays current with the latest commercial IP-based communications tech refresh. This design flexibility allows advances in military and commercial systems to quickly integrate state-of-the-art capabilities to the front-line troops, something that is tremendously challenging for current tactical systems.

Beyond supporting US and coalition forces, MAINGATE has the potential to support civilian first responders in crisis situations where multiple agencies and organisations converge with often incompatible communications systems. With MAINGATE, they could all plug in and communicate on a common network.

"We're transitioning a proven capability that can be kept up to date with the latest IP technology standards," Gremban said. "Just as a smartphone offers the capability to do more than make phone calls, MAINGATE is much more than a radio—it's a backbone architecture enabling video, data and voice sharing among a diversity of networks and devices." SP

Sikorsky wins DARPA X-Plane contract

Sikorsky Innovations, the technology development organisation of Sikorsky Aircraft Corp., has won a contract for Phase 1 of the vertical take-off and landing experimental aircraft (VTOL X-Plane) programme by the US Defense Advanced Research Projects Agency (DARPA). The proposed effort is valued at $15 million to develop the preliminary design for the VTOL X-Plane, a high-speed vertical take-off-and-landing aircraft with the hover capability of a helicopter.

Sikorsky Innovations is teamed with Lockheed Martin's Skunk Works® for the VTOL X-Plane development of its unmanned rotor blown wing concept. The rotor blown wing represents a unique integration of fixed wing aerodynamics and advanced rotor control to provide a low complexity configuration capable of meeting the challenging DARPA programme goals. The contract duration is 22 months. The programme goal is to build and fly a demonstrator aircraft with first flight anticipated in the fourth quarter of 2017.

Sikorsky Innovations plans to lead the programme from its Fort Worth office, leveraging talent from both Stratford, Connecticut, and West Palm Beach, Florida, engineering centres.

The overall VTOL X-Plane programme is a 52-month, $130 million effort to fly an experimental aircraft capable of exceeding 300 kt., with a hover efficiency of 75 per cent or better and a cruise lift-to-drag ratio of 10 or more. During Phase 1, Sikorsky Innovations and Lockheed Martin's Skunk Works will conduct trade studies and develop the initial design.

"Sikorsky has a solid legacy of developing game-changing advances, and the DARPA X-Plane programe is exactly the kind of project that Sikorsky Innovations was created to execute," said Chris VanBuiten, Vice President of Sikorsky Innovations. "We are an agile, networked team dedicated to demonstrating innovative solutions to the toughest challenges in vertical flight. This programme explores a generation of innovation that has yet to be introduced, and we have the opportunity to develop our novel design of the X-Plane concept with our partner at Skunk Works. It is an exciting project, and we are thrilled to be among the contract winners." SP

PHOTOGRAPH: Darpa

Fake interpreter for Obama

Allowing a mental-health patient with violent tendencies to stand next to the President of the United States Barack Obama at Nelson Mandela's memorial service has been termed as a "major security lapse".

The sign-language interpreter for Obama and other world leaders at Nelson Mandela's memorial service, Thamsanqa Jantjie, said in interviews published that he frequently has been violent and was hospitalised in a mental health facility for over a year. He said he is officially classified as disabled by the government because of his schizophrenia. Jantjie, who has been accused of using fake signs that amounted to gibberish, said he suffered a schizophrenic episode while on stage in which he had visions of angels.

The South African Government reportedly was investigating whether the interpreter had been vetted before the memorial service. SP

Survey reveals cyber security breaches across Irish hotels

The survey, conducted among 10 hotels in Dublin and throughout Ireland, showed that security flaws in their guest Wi-Fi service put users at their premises at risk. IT security firm Smarttech.ie carried out the tests between October 22 and November 27 at 10 randomly selected hotels from 3- to 5-star, and found that even a novice hacker would be able to collect everything from credit card details to e-mail logins.

All of the tests conducted revealed serious vulnerabilities and risks for the users, the company said. Ronan Murphy, chief executive of Smarttech.ie said: "Consumers need to be aware that if you are accessing public Wi-Fi there are serious security challenges. "The tests we carried out prove that these risks affect anyone using public Wi-Fi. However there are steps that hotels and restaurants can take to secure their Wi-Fi service and therefore protect their customers". SP

90,000 patients affected by UW Medicine security breach

University of Washington School of Medicine (UW Medicine) officials are alerting roughly 90,000 patients that their personal data was compromised in an October security breach. Early last month, a UW Medicine employee opened an e-mail attachment that contained malicious software. The malware took control of the computer, which happened to be storing personal information from approximately 90,000 UW Medicine and Harborview Medical Center patients, according to a UW Medicine news release.

The compromised patient data included names, phone numbers, addresses, medical record numbers and social security numbers, among other information. UW Medicine is now reaching out to the affected patients and has also set up a call centre to work with victims.

Recently, Susan Phillips received a letter informing her of the data breach. She was a patient 10 years ago, but her last interaction with the hospital was in 2008. "I opened it up and I read this and I just got furious," she said. "I don't have a word for it right now."

UW Medicine apologised for the breach and announced plans to implement a new "review, training and outreach effort. UW Medicine is committed to providing quality care and protecting patients' personal information, and sincerely apologises for the inconvenience and concern this may be for affected patients," the statement reads.

UW officials referred the matter to the Federal Bureau of Investigation, which is now investigating. SP

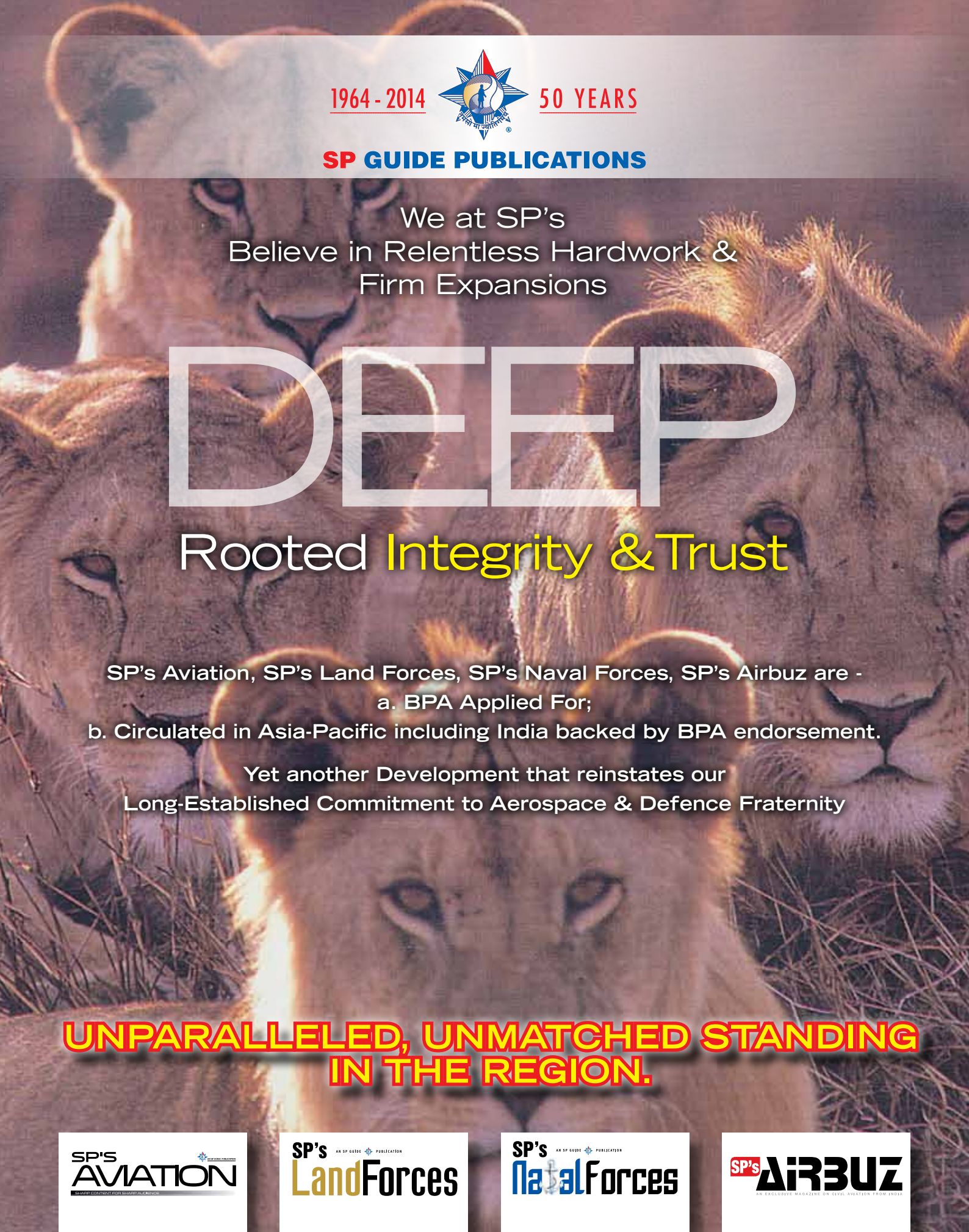
Rugby team complains about breach of team-room

All Blacks head coach Steve Hansen has admitted that his team had "given themselves an uppercut" with the security lapse that allowed a journalist to publish highly sensitive team-room revelations before its confrontation with England at Twickenham.

Furious at the disclosures, including a whiteboard message that declared: "We are the most dominant team in the history of the world," Hansen said. "When there's a breach like this it is disappointing. We have given ourselves an uppercut. It was our problem letting someone in there. Ultimately, we shouldn't have done that. But we can't change it."

Hansen also indicated that he would be reviewing New Zealand's security protocols after the incident at their base at Kensington's Royal Garden Hotel, where they had mistakenly left the double door to the Lancaster Suite wide open before a meeting, exposing their motivational mantras. SP

PHOTOGRAPH: msnbc.com



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