PRESSURE FROM UNCLE SAM : A VIEWPOINT PAGE 7

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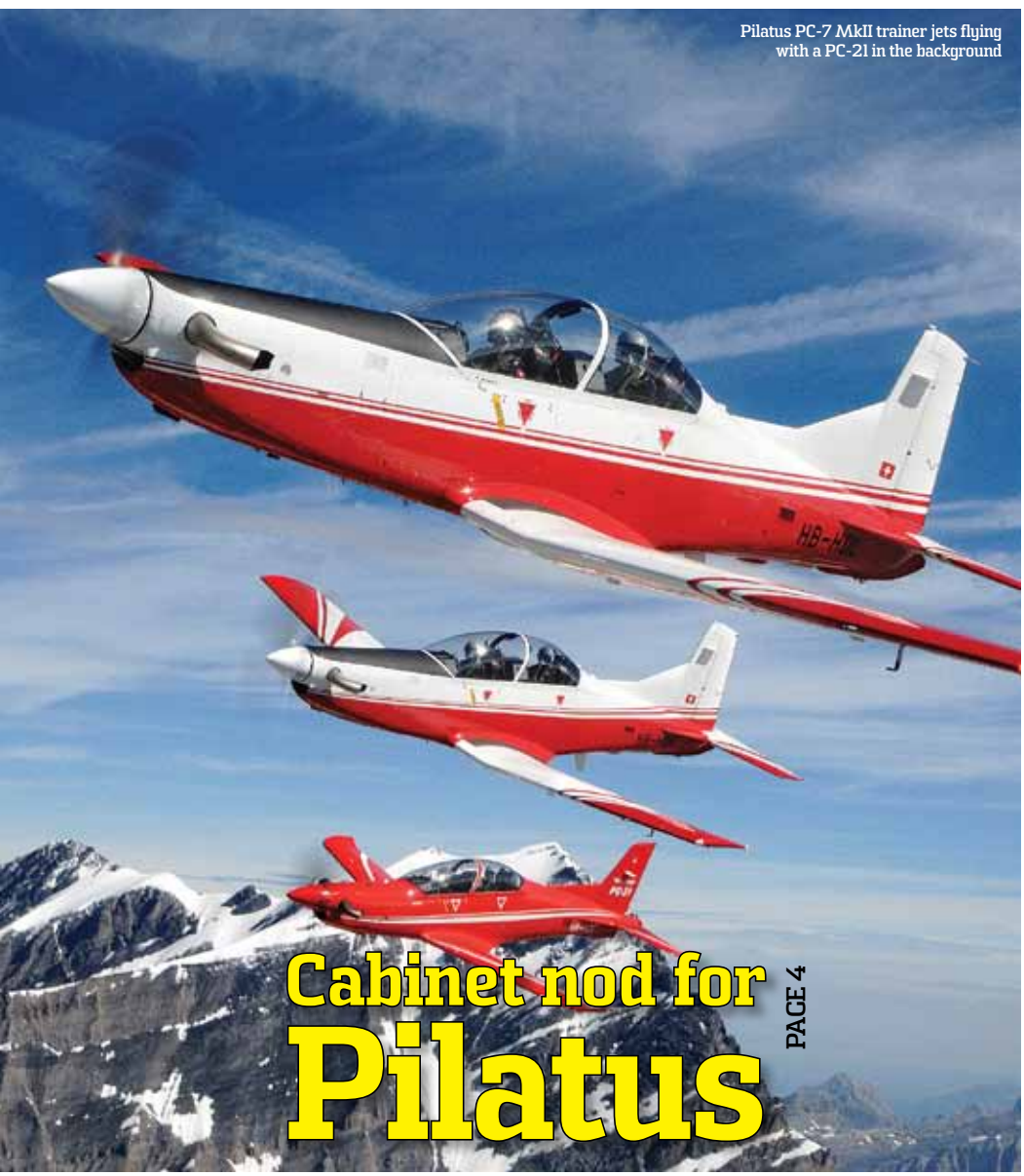

Pilatus PC-7 MkII trainer jets flying with a PC-21 in the background

Cabinet nod for Pilatus PAGE 4

MoD clears purchase of M777 howitzers PAGE 6

Manish Tewari, MP and Member of the Parliamentary Standing Committee on Defence, delivering his speech at the conference organised by SP's with ORF

Streamlining DPP: Seminar report PAGE 8

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INS Viraat completes 25 years

INS Viraat has completed 25 years in the Indian Navy. HMS Hermes became INS Viraat on May 12, 1987, under the command of Captain (later Vice Admiral) Vinod Pasricha. Commissioned in November 1959 as HMS Hermes, INS Viraat had then completed 28 years in the Royal Navy.

The commissioning signal from the Naval Headquarters then said: "Your commissioning today marks an important milestone in the development of our Navy's blue water capability. May your operational prowess match your gigantic name and good fortune attend on you wherever you may sail. I wish all officers and men a happy, challenging and rewarding commission".

Likewise, the message from the crew of the Hermes read: "Bringing forward HMS Hermes for handover to the Indian Navy and commissioning as

INS Viraat. It is with a mixture of sadness, pride and confidence that we today handover this magnificent ship to the Indian Navy; sadness in that we with our happy memories witness her passing from the Royal Navy, pride in the capabilities noting that she will be in good hands and confident that she will prove equal and worthy of all the aspirations the Indian Navy have for her as Viraat. The Captain, officers and ships company of HMS Hermes congratulate the Captain, officers and ships company on the majesty of INS Viraat and may good fortune attend all who sail in her quest to control the sea and be all powerful."

INS Viraat is one of the longest serving aircraft carriers in the history of naval operations anywhere in the world.

All major refits of Viraat have been undertaken by the Cochin Shipyard Limited. The extension of the ship's life far beyond initial expectations stands as a testimony to the high levels of workmanship and dedication of the yard staff at the Cochin Shipyard. SP

PHOTOGRAPH: Indian Navy

Cover:
The Cabinet Committee on Security (CCS) has accorded formal approval to a deal with Swiss firm Pilatus for 75 PC-7 MkII basic trainer aircraft for the Indian Air Force

Cover image: Pilatus

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NCTC should be above party politics

The recent meeting of Chief Ministers with the Central leadership on the controversial anti-terror body— National Counter Terrorism Centre (NCTC)— ended in a stalemate, not surprisingly though. Non-Congress Chief Ministers made it clear that they were not for the NCTC in the present form.

However hard the Home Minister P. Chidambaram tried to convince the Chief Ministers, he failed in doing so. In his concluding address he said he was 'leaving the meeting with an open mind' and the government would take a decision on the concerns expressed by the Chief Ministers. The Gujarat and the West Bengal Chief Ministers Narendra Modi and Mamata Banerjee were vocal in their demand that the NCTC be dropped.

The Home Minister was not one to give up. He said, "I firmly believe that we need a counter-terrorism body. Whether it is NCTC or some other body, whether it will have these powers or some other powers or functions is a matter that can be debated but certainly we need a counter-terrorism body." *SP's M.A.I.* endorses the views of Chidambaram considering that terrorist activities are on the rise and that it is taking different forms, leaving the security fabric of the nation vulnerable.

Whatever said and done, there are fears in political circles that NCTC would be misused, having potential for political vindictiveness. While there is an element of truth in it, it is for the government at the Centre to clear these misgivings.

Continuing on terror, Lt General (Retd) P.C. Katoch in his fortnightly column puts the ball in Uncle Sam's court. "The global war on terror (GWOT) launched by the US was never a global war but purely a US war on terror (USWOT) with Pakistan roped in superficially and most reluctantly under threat of 'being bombed into stone age'. The fact that India was already being subjected to terror attacks for past several years when GWOT was launched was ignored and organisation like the LeT was permitted to grow into as big and radical international level terrorist organisation as Al Qaeda."

The billions of dollars aid to Pakistan continued throughout and did not get checked despite clear evidence of Pakistan running with the hare and hunting with the hounds. The US, he points out, is fully aware of terrorist camps in PoK and how the anti-India terrorist infrastructure in Pakistan operates. He finds duplicity in the approach of US and urges India to make this clear to Uncle Sam.

Away from terrorism to training, we finally hear that the Cabinet Committee on Security (CCS) has accorded formal approval to a deal with Swiss firm Pilatus for 75 PC-7 MkII basic trainer aircraft for the Indian Air Force. The deal is expected to be signed in the next two months. As per IAF stipulations, deliveries of the brand new trainers will begin 15 months after contract signature, with 24 aircraft to be delivered to the IAF in 25 months.

It is hoped that the Indian armed forces get the requisite training aircraft and equipment in time for the forces to stay abreast of times.

Jayant Baranwal
Publisher and Editor-in-Chief

Naveen Jindal, Member of Parliament, industrialist and Member of the Consultative Committee, MoD, being welcomed by SP's Editor-in-Chief Jayant Baranwal

Our DPP needs to be streamlined so that our armed forces do not remain in a state of flux; Dealings remain transparent and clearer for overseas and domestic suppliers; Our men in uniform working 24x7 receive the best solutions to be equipped with, capable of handling any kind of challenges coming from any quarter; Offsets and alike elements should work as enablers rather than disablers; And decisions are taken on time so that situations do not go out of hand/out of control.

–Jayant Baranwal

Government clears **Pilatus basic trainer deal**

After a delay that made the Indian Air Force jittery, the Cabinet Committee on Security (CCS) has accorded formal approval to a deal with Swiss firm Pilatus for 75 PC-7 MkII basic trainer aircraft for the Indian Air Force (IAF). The PC-7 won out in a competition that has taken two years, defeating two rivals in the final round—the Korea Aerospace Industries (KAI) KT-1 and the American Hawker-Beechcraft T-6C Texan-II. Defence Minister A.K. Antony informed Parliament recently that a formal protest from runner-up KAI had been found to be "devoid of merit". A formal contract between the Indian Government and Pilatus Aircraft will be signed in the next two months. As per IAF stipulations, deliveries of the brand new trainers will begin 15 months after contract signature, with 24 aircraft to be delivered to the IAF in 25 months. The Pilatus PC-7 is a low wing tandem seat basic propeller trainer, 500 of which have been sold in two variants over the last three decades. India will be the 19th military operator of the aircraft type. SP

PC-7 MKII

IAF wants twin-dome simulator for Hawk AJT

The Indian Air Force is looking to procure a twin-dome simulator for conversion, continuity and mission training for aircrew on the Hawk Mk.132 advanced jet trainer (AJT) fleet. The IAF has stipulated that the simulator needs to be of a "twin-dome" variety, capable of training even *ab-initio* pilots on all aspects of basic fighter flying on the Hawk.

The system needs to have high-fidelity control laws incorporated for realistic simulation of all phases of flight, and networked with other assets for real time simulation. The system needs to broadly comprise a cockpit module, instructor's operating stations, visual display and computing systems and remote replay/debrief stations. It may be noted that the December 2011 flying course at the Air Force Academy was the first where trainee pilots used the Hawk AJTs, dispensing with MiG-21s for the first time in the IAF's modern training regimen.

The IAF needs its new simulator to be capable of providing training in mission preparation on ground, avionics systems operation, basic flying during all phases of flight, generic electronic warfare training, employment of different weapon systems with use of all models/sensors of naval attack systems, simulation of failures (such as bird hit or mechanical failure), air to ground firing, aircraft combat with enemy aircraft controlled by instructor, simulation of emergencies and failures of all kinds. Each of the two domes needs to hold a full-size replica of the Hawk cockpit in all respects and geometry. SP

Soon, an unmanned Hansa

The indigenous Hansa general purpose trainer aircraft could soon have an unmanned avatar. Maker of the all-composite aircraft, the Bangalore-based National Aerospace Lab (NAL) has tied up with private Indian player Kadet Defence Systems Ltd to spin off an optionally unmanned version of the Hansa. The aircraft, which first flew in 1993, and is now flown at six flying clubs across the country, has failed to make headway into India's armed forces as an ab initio trainer, one of its stated profiles. The proposition of an unmanned version throws up the possibility of military use, perhaps as a tactical surveillance drone or for special missions. The 7-metre long aircraft requires 413-metres for take-off, has a maximum climb rate of 198 metres per minute, a maximum cruise speed of 178 km/h and an endurance of about 4 hours. It is also suitable for night flight operations. NAL is also looking to develop a fully new tactical UAV with Kadet Defence, though it is not known if this will be on a ready-made platform. The company already has UAVs, including the flying wing Firebee, and has pitched its Javelin-X products to the Army for a pilotless target aircraft requirement. SP

PHOTOGRAPHS: Pilatus, SP's Special Correspondent, NAL

Exercise Shoorveer ends

The Indian Army and Air Force have just completed one of their most complex integrated theatre battle concept exercises in the deserts of Rajasthan, Exercise Shoorveer. With the elite 1 Strike Corps in the lead, supported by the Chetak Corps and all other relevant elements of South Western Army command, the formations tested brand new battle fighting concepts and doctrines with heavy-duty real time images of the battle zone beamed to a centralised command and control centre from platforms that included fighter jets, unmanned aerial vehicles (UAV) and attack helicopters, all coming together to wage war in network centric environment. The exercise included massed tank drills backed by long range artillery guns. More than 300 combat vehicles including main battle tank T-90, T-72, long-range 150mm artillery guns, multi barrel rockets and about 60,000 troops participated in Shoorveer.

A standout feature of the exercise was the integrated air-land war-fighting machinery and the synergy between the Indian Army and IAF, which fielded its Sukhoi-30 MKI, MiG-29, MiG-21 Bison, Cheetah, Chetak and Mi-25 attack helicopters. Tactical transports like the new C-130Js and upgraded AN-32s also took part in the exercise. The air doctrine being tested is based on the supposition that counter surface force operations are crucial to the overall success of the land operations. The IAF's Mi-17s engaged in special heliborne operations (SHBO). The combat support role involved airborne assault operations, where a large number of paratroopers were para-dropped into the operational area during the exercise.

This will be the final theatre concept exercise based on a transformational study of the Indian Army pioneered by Army chief General V.K. Singh. It will be the final exercise he witnesses before retiring at the end of May. The concepts introduced in his study were based on organisational structures and absorption of new age technologies, particularly in the fields of precision munitions, advanced surveillance system, space and network centricity. SP

T-90 and T-72 tanks during Exercise Shoorveer

Armoured Assault using T-90 during the exercise

Hercules C-130J aircraft practicing low level tactical formation over desert of Rajasthan

Mi -35 attack helicopter seen in action

Mi-17 helicopter carrying troops in Exercise Shoorveer

Mi-17 helicopter in Exercise Shoorveer

PHOTOGRAPHS: DPR, SP Guide Pubns

Mirage 2000 fleet resumes interim flying operations

The Indian Air Force's (IAF) fleet of Mirage 2000T/TH multi-role fighter aircraft have begun interim flying operations after nearly two months on the ground following two crashes in February and March. Both aircraft crashed after their pilots experienced engine flame-out at high altitude, forcing planned ejections in both cases.

In the first crash, one of the pilots was Air Marshal Anil Chopra, Air Officer (personnel) at Vayu Bhawan and Commodore Commandant of 1 Squadron (Tigers), the first Mirage unit in the country. In Parliament on April 26, Defence

Minister A.K. Antony said, "Following the accidents of Mirage 2000 aircraft of the IAF on February 24, 2012 and March 5, 2012, all routine training flying on the Mirage 2000 fleet has been temporarily stopped as a precautionary measure. Based on the results of the initial investigations of the accidents, certain checks have been instituted by the IAF. Commencement of flying of the Mirage 2000 fleet is being undertaken in stages post completion of checks.

During the last two years (2010-11 and 2011-12) and current financial year 2012-13 (up to April 19, 2012), two Mirage 2000 aircrafts have crashed. Technical defect was the cause of both accidents." Two Mirages are currently in France for the upgrade programme. Sources reveal that the Mirage fleet is likely to resume full flying ops towards the end of May. SP

MoD clears purchase of M777 howitzers

India is now tantalisingly close to making its first purchase of field artillery in over a quarter century. The Defence Acquisition Council (DAC) has cleared the purchase of 145 US-made M777 ultra-light howitzers for the Indian Army. The guns, built by BAE Systems, will be part of a foreign military sales (FMS) contract between the two governments and will have an offset obligation of 30 per cent.

The deal will need to be vetted first by the Finance Ministry and then the apex Cabinet Committee on Security before the agreement is signed. BAE Systems brought back a M777 gun to Defexpo this year. Concerns were raised a year ago when anonymous complaints threatened to derail the evaluation process, though it is understood from the DAC's clearance of the deal that the Army and Defence Ministry have been able to work through any concerns.

The Indian Army is in the process of acquiring several different kinds of guns, including towed, wheeled and tracked guns of different calibres. The M777, which can be transported by heavy-lift helicopters and large transport aircraft of the kind India is procuring, will be deployed with mountain regiments both in Jammu & Kashmir and the Northeast. Last month, Defence Minister A.K. Antony had said in the Parliament, "The artillery equipment procured/upgraded in the past two decades includes Pinaka rocket system; Smerch rocket system; BrahMos missile system and upgradation of 130mm gun to 155mm/45 calibre. Procurement of new generation artillery is in consonance with Artillery Profile 2027. This profile has a mix of 155mm/39 calibre, 155mm/45 calibre and 155mm/52 calibre gun system." SP

MDL calls for early decision on Project 75 India

With the Indian Navy likely to issue RFPs for the long awaited follow-on Project 75 India submarine build effort, pressure is building for a quick decision on two counts. On the one hand, the Indian Navy's submarine strength is on a downslide, and operational availability continues to be a concern. On the other, there is a conscious effort to ensure that the redundancy encountered following the HDW episode in the 1990s is not repeated again. In fact, providing testimony to the Parliamentary Standing Committee on Defence recently, Mazagon Dock Ltd (MDL) Chairman Vice Admiral (Retd) H.S. Malhi said, "Our Hull shops, particularly for the submarine construction, we will start oiling after we finish these six (Scorpenes). So, it will help us if we get the repeat order. So, our request as CMD would be that if that is ordered early on us, we will be able to retain the expertise because it takes a long time to build up expertise on submarine construction. We have already suffered in the past when there was a gap between the SSK and Scorpene. So, we would not like that to repeat. That is a request. That is all from my side." The first of the six Scorpene submarines being constructed at MDL is to be delivered by June 2015 and the final one by September 2018. MDL is concurrently building all six submarines. According to figures supplied to Parliament, the present status of work completed on the six submarines ranges from 2.45 per cent to 54.84 per cent. SP

Improved Nag carriers to face off for Army order

In July, two new versions of the Nag missile carrier (NAMICA) will be up for user trials in the Thar Desert. The NAMICA, which was tested by the Army between 2007 and 2010, was found to have certain deficiencies during operations in high ambient temperatures, following which the Army demanded a list of improvements. Two companies—Bharat Electronics Ltd (BEL) and L&T—have both worked on improved NAMICA vehicles, and both will be put through comparitive and then user trials. The Army, which has already ordered seven of the original NAMICA, is looking to order at least 200 of the improved versions. The NAMICA carries the Nag's lock-on before launch version. The changes that have been brought into effect on the tracked carrier vehicle include reduction of all-up weight to 15 tonnes, improved reliability of missile launcher platform drive mechanisms, provision of higher-resolution target acquisition sight for the gunner, enhanced user-friendliness in acquisition of target through reduced offset between sight and missile seeker-acquired target scene image, improved amphibious performance, and provision of a target surveillance and acquisition sight for the crew commander. It may be noted that the more advanced lock-on after launch variant of the Nag, HELINA, was tested from a Dhruv helicopter earlier this year successfully. SP

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PHOTOGRAPH: US Air Force, SP's Special Correspondent

LT GENERAL (RETD)
P.C. KATOCH

Pressure from Uncle Sam

Post-bombing of the Israeli Embassy car in New Delhi there was much talk of US pressure on India to boycott Iran and that India is walking the tight rope in balancing the act between US-Israel and Iran. Why this commotion makes little sense. Where is the pressure, the tight rope and the need to go looking for a response?

Look at it this way. The global war on terror (GWOT) launched by the US was never a global war but purely a US war on terror (USWOT) with Pakistan roped in superficially and most reluctantly under threat of 'being bombed into stone age'. The fact that India was already being subjected to terror attacks for past several years when GWOT was launched was ignored and organisation like the LeT was permitted to grow into as big and radical international level terrorist organisation as Al Qaeda.

On top of this the US wanted India to provide troops in Afghanistan under the ISAF. The US started worrying about the LeT, raised and nurtured by the ISI-Military combine of Pakistan for jihad against India, when LeT started propagating global jihad and their cadres started filling up voids in Al Qaeda courtesy US-NATO strikes. India repeatedly pointed out that Pakistan is playing a double game but was ignored by the US as was Chinese assistance in nuclear-rising Pakistan.

The billions of dollars aid to Pakistan continued throughout and did not get checked despite clear evidence of Pakistan running with the hare and hunting with the hounds—establishing major Taliban terrorist training camps under pretext of sheltering Afghan refugees and using them to hit NATO supply lines along the international highway, using Pakistani Taliban and the Haqqani network to target Indians, US and NATO in Afghanistan and the Osama bin Laden episode.

More significantly, there has been clear evidence of financial aid being provided under GWOT diverted by Pakistan for other/converse purpose. Despite $20 billion aid to Pakistan since 9/11, the Obama administration has already proposed military aid over civilian aid to Pakistan to the tune of $2.4 billion in 2013. Under the rubric of counter-terrorism US has even given Pakistan eight P-3C Orion maritime patrol aircraft, six C-130 cargo planes, over 5,000 anti-armour missiles, 100 Harpoon anti-ship missiles, one Oliver Hazzard Perry-class missile frigate and now 18 new F-16 combat jets capable of nuclear payload are rolling in—all of which will be used against India.

Complete US withdrawal from Afghanistan by 2014 appears more an election gimmick of Obama as indications on ground are different—improved/expanded airbases and new bases/facilities being added. The pronouncement that withdrawal may even be by 2013 was scoffed at by Mitt Romney. More importantly, US-Pakistan strategic partnership will likely continue to outweigh US-India equation because of US national interests in Afghanistan and Central Asia. That is why the US wants talks with Taliban knowing they will gain control of majority Afghanistan (if not all) post US thinning by 2014 and Pakistani efforts to push India out of Afghanistan.

Significantly, US shares terror related intelligence with India selectively and in delayed time frame whenever the finger points to Pakistan. As for technology, US never really offered state-of-the-art technologies to India. The US is fully aware of terrorist camps in POK and that the anti-India terrorist infrastructure in Pakistan is very much intact. Despite all this, US advises India to exercise restraint and talk peace with Pakistan. India should therefore simply follow suit; weighing its strategic and economic relations with Iran and tell Uncle Sam to have peace talks with Iran. SP

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

US-Pakistan strategic partnership will likely continue to outweigh US-India equation because of US national interests in Afghanistan and Central Asia

ILLUSTRATION: Anoop Kamath

Streamline DPP

A day-long conference on the Defence Procurement Procedure organised by SP Guide Publications in collaboration with ORF in New Delhi on May 2 emphasised on the need to streamline our defence procurement system to get the best equipment for our soldiers and reap maximum benefit in the future

Manish Tewari, MP and Member of the Parliamentary Standing Committee on Defence, delivering his speech at the conference (left); Naveen Jindal, Member of Parliament, industrialist and Member of the Consultative Committee, MoD, addressing the audience (right)

[By **Sucheta Das Mohapatra**]

Since its introduction in 2002 and followed by several amendments till date, the Defence Procurement Procedure (DPP) of India has been a subject of deliberation amongst defence experts, original equipment manufacturers, public and private sector enterprises, etc. Despite being a progressive version, DPP 2011, has been a subject of much debate, with demands for streamlining the procurement procedure coming from all quarters. Keeping this in view, SP Guide Publications, in collaboration with the Observer Research Foundation (ORF), organised a workshop on DPP in New Delhi, on May 2.

The day-long conference saw industrialists, diplomats, bureaucrats, policy makers, defence personnel, politicians, and others talking about "Streamlining the Defence Procurement System". The conference began with Lt General (Retd) Nirbhay Sharma, Distinguished Fellow, ORF, emphasising on the need for transparency in the defence procurement system. In his welcome remarks, Sunjoy Joshi, Director, ORF, questioned, "Should DPP remain aloof from strategic parameters?"

Manish Tewari speaks...

This particular workshop is happening at a very opportune moment of time when across the country for reasons other than the national debate, there has been a significant amount of focus on the question of defence preparedness and other allied/related issues. It is also coming right after the standing committee had the opportunity to scrutinise the demands for grants of the Ministry of Defence and report back to the Parliament.

What I have been given to understand is that since this morning there have been deliberations and an attempt to see how we can fix the whole procurement system. That fundamentally assumes that the procurement system as it stands today is perhaps broken. I do not subscribe to that point of view and the reason why I say is because in the standing committee on defence we heard perspectives from the services, the government and outside experts also, which led us to conclude and that part of it gets reflected in the report also, that there are institutional issues which possibly require a paradigm shift in the manner that we look at the question of equipping ourselves towards preparedness.

26 per cent FDI has also not brought in the players from the international spectrum primarily because of copyright and other issues which essentially as I have heard is their perspective which is holding them back.

It's my personal view that the entire sector possibly needs to be classified into possibly a couple of lists, those areas that are non-critical, possibly we can invite 100 per cent foreign investment; in other areas which are possibly not in the non-critical areas we can look at 49-50 per cent and those areas that are extremely crucial to our national security where we do not want any outside participation, we shall keep it absolutely closed and say that these are areas that are exclusively reserved for not even the Indian private sector but for the public sector.

There is a feeling that it would require a considerable amount of political conviction to be able to usher in the sort of reforms in this sector. SP

PHOTOGRAPHS: SP Guide Pubns

(Top: L-R) A.K. Chopra, Financial Advisor (Defence Services), Ministry of Defence; Dr Vivek Lal, President and CEO, Reliance New Ventures; Jayant Patil, Executive Vice President and Member of the Board of Heavy Engineering, L&T; (Above: L-R) Amit Cowshish, Financial Advisor (Acquisition) and Additional Secretary, Department of Defence Finance, Ministry of Defence; Ravindra Pal Singh, Defence Analyst and former Project Leader on Arms Procurement, SIPRI; Major General (Retd) Mrinal Suman, former Technical Manager (Land Systems) and Consultant, CII

Ravindra Gupta, former Secretary, Defence Production and Chairman Task Force on Defence Modernisation and Self-Reliance, said the mandate of the Task Force set up by the National Security Council pertained to defence modernisation as well as self-reliance, leveraging both the public and private sector. He, however, held that there is diffidence at all levels of government to move smoothly and the self-reliance index has only moved slightly. "We have indulged in purchase and not acquisition," he said and added that unfortunately the Offset clause has so far not been exploited well. A.K. Chopra, Financial Advisor (Defence Services), Ministry of Defence, admitted that there are conflicting interests and a balance has to be struck. Deficiencies exist both in the services and the bureaucracy, calling for substantial delegation of power and collegial decision-making.

Session I

The first session of the conference was on "Evaluating Defence Procurement Procedure", which was chaired by Vinod Dhall, former Secretary, Ministry of Corporate Affairs and former Chairman, Competition Commission. He said that though the procurement system has evolved over the years, no statistical record of procurement is available. There was need for a dedicated department within the ministry and a public procurement portal. He spoke on the silent reforms taking place in the public procurement domain and the Public Procurement Bill which has been approved by the Cabinet.

Speaking on "Broader Context of Arms Procurement Reforms", Ravindra Pal Singh, Defence Analyst and former Project Leader on Arms Procurement, SIPRI, said that there is no consistency in the national security policy-making in India. The procurement process is not moving fast enough in India as compared to other democracies.

Jayant Patil, Executive Vice President and Member of the Board of Heavy Engineering, Larsen & Toubro, expressed dissatisfaction at no commensurate increase in offset stipulation. "Taxation of offset is a big issue," he said and added, "At 26 per cent foreign direct investment (FDI), no genuine technology would come to India."

Dr Vivek Lal, President and CEO, Reliance New Ventures, in his address on "Private Sector Perspective on DPP" said that DPP involves both aspects—procurement and industrialisation. "Offset is a catalyst across the globe and the really successful ones have been discontinued after it met its objectives. There is a cost to offsets and hence it is important to be clear as to what we want to achieve."

Amit Cowshish, Financial Advisor (Acquisition) and Additional Secretary, Department of Defence Finance, Ministry of Defence, speaking on "DPP: Addressing Key Areas and Looking Ahead" emphasised on the need to create a permanent professional body to choose vendors. Cowshish informed that the DPP is now being reviewed by the government in light of the issues raised by the industry and indicated that the new DPP would look at broadening the scope of offsets and bringing ToT under its ambit.

Session II

Manish Tewari, Member, Parliamentary Standing Committee on Defence, spoke on different aspects of defence procurement, demonstrating government's interest in bringing constructive changes in the defence procurement process.

The second session was on "Defence Procurement—Core Concerns" which was chaired by Vinod K. Mishra, former Secretary, Department of Defence Finance and Distinguished Fellow, IDSA who expressed dissatisfaction at the lengthy evaluation timeframes in India. Major General Mrinal Suman, former Technical Manager (Land Systems) and Consultant, Confederation of Indian Industry (CII), speaking on "Defence Offset" said that the policy has no spelt out objective or aim and that is its 'weakness'.

(Top: L-R) Naveen Jindal with SP's Editor-in-Chief Jayant Baranwal; Vice Admiral Satish Soni, Deputy Chief of Naval Staff, Vice Admiral S.P.S. Cheema, Deputy Chief of the Integrated Defence Staff (DOT) with Jayant Baranwal; Manish Tewari with Jayant Baranwal. (middle: L-R) Lt General (Retd) P.C. Katoch, Jayant Baranwal and Subimal Bhattacharjee, Country Head, General Dynamics; Roger Rose, Chief Executive, Lockheed Martin India, with Jayant Baranwal; Sunil Bhatia, WASS Finmeccanica, Col Anil Joshi, Manager, Land Systems Finmeccanica and Jayant Baranwal. (above: L-R) M.K. Mishra, HAL Deputy General Manager and Wg Cdr B.S. Singh Deo, Managing Director, Bell Helicopter India; Mats Wigselius, Col (Navy) Defence Attaché, Swedish Armed Forces and Dean McCumiskey, MD & CEO, BAE Systems India; Rishi Malhotra, General Manager, India, Bell Helicopter and Todd Hattaway, Regional Sales Director, Hawker Beechcraft

"The level of FDI has nothing to do with the level of transfer of technology (ToT)," emphasised G. Balachandran, Visiting Fellow, Institute for Defence Studies and Analyses, while speaking on "Translating ToT Into Real Dividends". "Indian research and development is very narrow and unless it increases, ToT has no value," he held.

To a question by Jayant Baranwal, Editor-in-Chief, SP Guide Publications, about the concerns of OEMs on technology transfer at low cost, Suman said that it is indeed a concern for the OEMs. "In India, we have not permitted trade in offset. While the Defence Offset Facilitation Agency (DOFA) is understaffed, the Acquisition Wing is overloaded with work. The country must have a single window to listen and thereafter make changes."

Delivering the valedictory address Naveen Jindal, Member of Parliament and Member, Consultative Committee, MoD said that it is necessary to equip our forces with the latest and the greatest equipment. He said that the use of equipment is also important other than acquisition. "Are we training our people on how to use the equipment?" "If we can make it indigenously its fine, or else we should acquire it." Jindal admired SP Guide Publications for organising the workshop and expressed his liking for the informative magazines published by SP's.

The day ended with vote of thanks by Jayant Baranwal, Editor-in-Chief, SP Guide Publications. He said it is necessary that DPP be streamlined so that our armed forces do not remain in a state of flux and dealings remain transparent. "Our men in uniform should receive the best solutions to be equipped with and are thereby capable to handle any kind of challenge. Offsets and alike elements of DPP should work as enablers and not disablers." He reiterated that decisions need to be taken on time and added that "we need not always have to reinvent the wheel, which may take longer than acquiring it. We must optimise our key resources". SP

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Indian Ocean security a concern: Defence Minister

Describing the emerging security matrix in the Indian Ocean Region (IOR) as "really complex", with "some political developments" and worrisome factors, the Defence Minister A.K. Antony recently called upon the top brass of the Indian Navy to maintain high levels of preparedness at all times.

Addressing the Naval Commanders Conference, Antony said, "We have a well-established material and training assistance programme with Indian Ocean Region countries for their capacity-building and enhancement.

"Today, the security situation in our immediate neighbourhood has become really complex. Considering the challenges in the Indian Ocean Region, it is essential to maintain high levels of operational preparedness at all times. On the one hand, there are some political developments, and on the other hand, a number of other factors are a cause for worry and need to be factored into our preparations, both in the short-term and long-term," he said.

"The security of maritime activity through the sea-lanes in Indian Ocean is of crucial importance for the economic prosperity of our nation and that of the world. The free movement of trade and energy supplies and various economic activities such as fishing and extraction of mineral resources is equally crucial for economic security," he added.

Commending the Navy's modernisation programme Antony said the induction of the nuclear-powered submarine INS Chakra has ushered in a new era of submarine operations. "It has placed us in a select group of Navies that operate such a platform. We must ensure that 'Chakra' is utilised effectively to harness its real potential and also evolve operational concepts for future platforms," he said.

Antony said the Navy is on course to acquire potent platforms to add to its blue water capability. "The induction of Vikramaditya in the near future, the potent MiG-29 Ks, as well as P81 long-range maritime reconnaissance aircraft would strengthen the Navy further. Recently, the Light Combat Aircraft (LCA-Navy) made its successful maiden flight," he said.

The Defence Minister said the Navy's commitment to indigenisation is a source of satisfaction. "This is amply borne by the fact that 44 out of 48 ships and submarines, presently on order, are being constructed in India. The Navy has also maintained close liaison with DRDO and participated actively in R&D projects. However, this must not give rise to complacence. The public sector shipyards must speed up construction of warships and submarines and further modernise the infrastructure and technology of ship-production." SP

Raytheon fires Excalibur from G6 self-propelled howitzer

Raytheon has fired four Excalibur 155mm precision-guided artillery projectiles from the Denel-manufactured G6 self-propelled howitzer as part of a field trial demonstration.

Multiple rounds of the combat-proven Excalibur successfully fired from the G6 155mm wheeled howitzer out to a range of 38 kilometres (23.6 statute miles), with all rounds landing within 5 metres (16.4 feet) of the target.

"These trials demonstrated Excalibur can give a true precision capability to G6 howitzers that can enhance the warfighter's defensive posture," said Kevin Matthies, Excalibur Programme Director for Raytheon Missile Systems. "Excalibur improves tactical war fighting capability by providing precision that is essential to close-combat operations."

The US Army has demonstrated Excalibur in scenarios designed to defeat specific point targets while avoiding damage to structures, non-combatants and friendly forces. This targeting capability provides flexibility to engage at the tactical level, avoiding unintended consequences. Significantly fewer Excalibur rounds are required to defeat a target, lessening the burden of logistics. SP

US Navy's third littoral combat ship completes acceptance trials

United State's third littoral combat ship, USS Fort Worth (LCS 3) has completed its US Navy acceptance trials and will be delivered to the Navy this summer.

Fort Worth is the second surface combatant designed and built by a Lockheed Martin-led industry team. The trials, conducted in Lake Michigan from April 30 to May 4, included a four-hour full-power run and both surface and air detect-to-engage demonstrations of the ship's combat management system. Major systems and features were demonstrated, including aviation support, small boat launch handling and recovery, and ride control.

"Fort Worth performed extremely well during its trials," said LCS Programme Manager Captain John Neagley. "The ship's level of completion coupled with Marinette Marine's excellent craftsmanship resulted in relatively few material deficiencies." SP

PHOTOGRAPHS: PIB, Lockheed Martin

ITT Exelis bags enhanced night vision goggles Contract

The US Army has qualified an ITT Exelis goggle that allows soldiers to detect and identify potential threats while maintaining a secure position in various environmental conditions during nighttime missions.

This contract award is valued at approximately $49.5 million for over 3,800 units, which features the company's latest sensor fused night vision technology that fuses thermal and light amplification into an unprecedented "own the night" capability.

The US Army awarded Exelis the first of two production options for the spiral enhanced night vision goggle (SENVG), designated AN/PSQ-20A. A capability that provides our soldiers the ability to detect and identify potential threats, regardless of the weather or environmental conditions, helping to ensure they complete their missions and come home safely.

"We have proved our sensor fused capability in the field, and we are ready to deliver the next round of enhanced night vision goggles to the US Army," said Nick Bobay, Vice President and General Manager of ITT Exelis night vision business area. "The night vision team leveraged our design and manufacturing experience to create a sensor fused goggle that provides the soldier with greater situational awareness and improves command execution and rapid decision-making on the battlefield. For soldiers in the field, this is a game-changing technology that increases mission effectiveness – day or night." SP

PHOTOGRAPHS: Goodrich, www.armybase.us, ITT Exelis

Goodrich delivers first composite sail cusp for Virginia class submarine

Goodrich Corporation recently delivered its first composite sail cusp to Newport News Shipbuilding (NNS), a division of Huntington Ingalls Industries (HII). Goodrich is under contract to manufacture lightweight, composite sail cusps for the next eight Virginia class nuclear fast attack submarines, collectively referred to as Block III. Fabrication of all eight sail cusps will occur at Goodrich's Engineered Polymer Products (EPP) facility in Jacksonville, Florida.

The sail cusp is a single-piece composite fairing attached to the hull and lower leading edge of the submarine sail (the vertical fin on top of the hull). The complex double curvature shape of this lightweight structure allows for smooth laminar flow of water over its surface, thereby improving hydrodynamic performance of the submarine.

"This delivery represents the first production composite sail cusp that is a lightweight, low maintenance alternative to steel that helps reduce the acquisition cost for Virginia class submarines," said Marc Duvall, President, Goodrich Aerostructures.

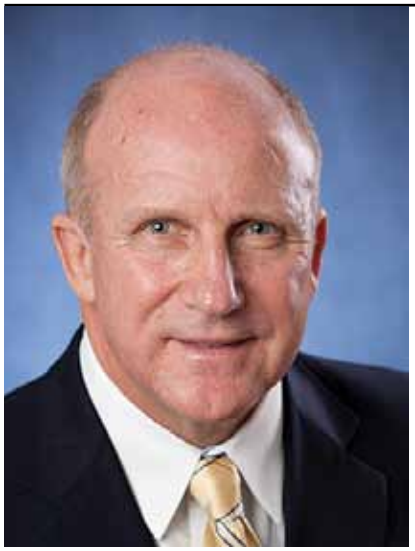
The Virginia class submarine is the US Navy's newest nuclear fast-attack submarine class. It was designed from the keel up for the full range of mission requirements in the post-Cold War era, including anti-submarine and surface ship warfare; delivering special operation forces; strike; intelligence, surveillance and reconnaissance; irregular warfare; and mine warfare. SP

ATK gets small calibre ammunition orders

ATK has received orders totalling more than $266 million for small calibre ammunition under an indefinite delivery/indefinite quantity (IDIQ) contract with the US Army Contracting Command, Rock Island.

This order includes a mix of 5.56mm, 7.62mm and .50-calibre military ammunition to be produced at the Lake City Army Ammunition Plant in Independence, Missouri. ATK has operated the Lake City plant since April 2000.

"ATK is honored to be the Army's industrial partner at the Lake City Army Ammunition Plant, collaborating in the operation and maintenance of the nation's largest ammunition production facility," said ATK Small Caliber Systems Vice President and General Manager Kent Holiday. SP



'India will be near the top of the world's strongest economies in 10 to 20 years'

*In an interaction with **SP's M.A.I., Mike Alvis, Vice President of International Business Development, ITT Exelis**, said that export controls by the US Government are expected to ease in the next five to ten years, making more high-tech goods exportable. India's desire to become an exporter also provides opportunities for partnership, which did not exist before.*

SP's MAI (SP's): **Can you indicate on your immediate plans towards India and the cooperation with Indian armed forces?**
Mike Alvis (Alvis): As the Indian defence market continues to grow, it will be critical for companies to demonstrate their ability to deliver affordable, mission-critical solutions to this region. In India, we are positioned to provide products and services that are fully integrated and networked, enabling our Indian customers to protect their borders, enhance their military forces and have access to the full spectrum of information needed to meet any mission.

SP's: What all capabilities did you showcase during Defexpo 2012 held recently?
Alvis: Our focus at Defexpo 2012 was on highlighting our broad array of night vision technology, intelligence, surveillance and reconnaissance (ISR) and spectrum solutions as well as tactical communications (networking, waveform development and high capacity data solutions).

We showcased a wide range of technologies that reflect our strong portfolio in C4ISR, including our commitment to providing the battle management system (BMS) for India. The BMS solutions highlighted at Defexpo included SpearNet and high capacity data radio (HCDR). Image intensification night vision goggles were also on display at the show.

SpearNet is an innovative communications system, bringing voice, situational awareness and networking access that leverages our extensive waveform development expertise and surpasses traditional point-to-point communication system limitations on range and data rate. HCDR delivers the flexibility of a mobile network. This means the data network is always available—even on the move at high speeds.

HCDR is the only radio of its kind, creating a communications backbone for messaging, Internet and situation awareness, supporting mission-critical on the move operations. This battle-proven radio provides high-speed data information between maritime, ground forces and air support.

Exelis has the ability to provide the militaries with premier vision-enhancing solutions. As the world's leading manufacturer of Generation (Gen) 3 image intensifier (I2) technology, Exelis continues to work with customers to expand night vision and vision enhancing capabilities, technologies, and resources. At Defexpo India, we displayed our latest i-Aware Tactical goggle. i-Aware Tactical has the ability to transmit and receive real-time video, photos, mapping information and other important battlefield information. The benefit of i-Aware Tactical is enhanced situational awareness, rapid decision making and improved mission effectiveness.

SP's: Any important milestone/event you may like to refer to that will project your company's interest in India strongly?
Alvis: In March of 2012, we announced a strategic partnership with Tata Advanced Systems to assemble night vision Gen 3 goggles in India. Under a memorandum of understanding, Exelis and Tata will partner to supply manufacturing capabilities in India and maintenance and life-cycle support for Gen 3 night vision products. To start with, Exelis will provide Tata 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. We are looking for other strategic partnerships in India and believe that such partnerships enable us to deliver the best possible product to the Indian Government.

SP's: How would you rate the potential in India versus other Asian countries?
Alvis: India has a million-person Army and Asia is the second fastest growing economy in the world. Today, India is empowered with significant buying power. India also has internal threats and challenges on their borders that require high-end solutions.

SP's: What kind of future do you foresee with India in next 10 to 20 years?
Alvis: India will be near the top of the world's strongest economies and most modern militaries within the next 10 to 20 years. Their strategy of non-alignment provides a more level-playing field for US companies and their ambition for high-technology solutions also favours US companies. Export controls by the US Government are expected to ease in the next five to ten years, making more high-tech goods exportable. India's desire to become an exporter also provides opportunities for partnership, which did not exist before. SP

Airbus Military A400M receives initial type certificate from EASA

Airbus Military has received the initial type certification for the A400M new generation airlifter, marking a key milestone on the road to first delivery around the turn of the year. This first approval, known as restricted type certificate (RTC), was presented by the European Aviation Safety Agency (EASA) Executive Director Patrick Goudou.

The RTC is a critical step towards the award of full civil type certification which is expected in mid-2012 following the completion of 300 hours of function and reliability (F&R) flight tests, and towards military initial operating clearance later in the year.

The fleet of five A400M development aircraft continues to make good progress in the intense flight-test campaign in order to ensure delivery of a reliable aircraft to our customer and has now completed more than 3,100 hours in the air, despite continued engine challenges.

Cedric Gautier, Airbus Military Head of A400M programme, said: "Achieving civil and military certification of the A400M as foreseen in the programme is an immensely challenging task, but the process of working on both simultaneously provides important benefits for our customers in the future. It is deeply satisfying to receive this initial certification, confirming the good progress that has been made towards the delivery of the first aircraft."

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

Australia buys 10 C-27J

The Royal Australian Air Force will buy ten C-27J transport aircraft to replace the DHC Caribous it retired in 2009. Deliveries of C-27J will begin in 2015.

The Austalian Minister for Defence Stephen Smith and Minister for Defence Materiel, Jason Clare announced that the Government had agreed to purchase 10 Alenia C-27J Spartan Battlefield Airlift aircraft at a cost of $1.4 billion.

The C-27J will replace the Caribou aircraft which was retired from service in 2009 after a career spanning more than four decades. The C-27J complements the capabilities of the C-130 and C-17 aircraft and uses common infrastructure and aircraft systems such as engines, avionics and the cargo handling systems.

The acquisition of the C-27J will significantly improve the ADF's ability to move troops, equipment and supplies. The C-27J has the capacity to carry significant load and still access small, soft, narrow runways that are too short for the C-130J or runways which are unable to sustain repeated use of larger aircraft. SP

Boeing KC-46 tanker programme completes prelim design review

The Boeing KC-46 tanker programme has completed a preliminary design review (PDR) with the US Air Force, a key milestone in the development of the next-generation aerial refuelling tanker.

The review demonstrated that the preliminary design of the KC-46A tanker meets system requirements and establishes the basis for proceeding with detailed design. Boeing remains on plan to deliver 18 combat-ready KC-46A tankers by 2017.

"I'm happy with Boeing's performance. They're maintaining a very tight focus on meeting commitments and staying on or ahead of schedule. The program remains on a good path," said Air Force Major General Chris Bogdan, KC-46 Program Executive Officer. "This is important news for the nation's warfighters, because it reaffirms our commitment to delivering the KC-46A tanker on schedule."

The programme's next major milestone is a critical design review (CDR) that will take place in the summer of 2013. The CDR will determine that the design of the KC-46A is mature and ready to proceed to the manufacturing phase. SP

PHOTOGRAPHS: Airbus Military, Alenia Aermacchi, Boeing

Goodrich products on Embraer's KC-390 military transport aircraft

Goodrich Corporation has been selected to provide the air data system, ice detector, windshield ice protection controller, and the fuel quantity gauging and control system for the new Embraer KC-390 military transport aircraft. Initial hardware deliveries are expected to begin in 2013. The systems will be provided by Goodrich's Sensors and Integrated Systems teams in Minnesota and Vermont.

The air data system includes multifunction SmartProbe products and total air temperature sensors. The advanced SmartProbe air data system provides all critical air data parameters to the aircraft's flight control system, pilot displays and other air data dependent systems. SmartProbe air data sensing technology integrates multifunction sensing probes, pressure sensors and air data computer processing. Elimination of pneumatic lines reduces system cost, weight and complexity. Full integration improves system reliability, maintainability and performance.

The ice detectors advise flight crews of ice build-up for activation of the aircraft's ice protection system. The internally-mounted windshield ice protection controllers ensure the windshield and cockpit windows remain free of condensation and ice, and help conserve power by regulating and distributing only the level of power required for the existing conditions.

The fuel quantity gauging and control system provides critical data on the fuel quantity on-board the aircraft. The system is optimised for flight deck control of both on-ground and in-flight fueling and defuelling. Built-in test and fault detection capabilities are integrated into the system.

"Goodrich continues to expand its partnership with Embraer by providing advanced, low-risk solutions for the new aircraft like the KC-390 transport," said Chris Cojocar, Business Development Director, Goodrich Sensors and Integrated Systems. SP

Turkey's first modernised T38M prototype delivered

The first prototype of TAI-modernised T38 jet trainer aircraft was delivered to Turkish Air Force (TurAF) recently at TAI's facilities.

Turkish Aerospace Industries, Inc. (TAI), as a prime contractor, was awarded a contract by the Under-Secretariat for Defence Industries (SSM) to design, develop and implement an avionics upgrade for the TurAF under the T-38 Avionics Modernisation (ARI) Programme.

A total of 55 TurAF T-38A aircraft are to be upgraded. The upgrade process of five aircraft is ongoing at TAI's facilities whereas the remaining 50 production aircraft will be modified at TurAF 1st Air Supply and Maintenance Center with technical support of TAI. The avionics upgrade of the first prototype of T38 trainer aircraft was successfully completed by TAI and delivered to TurAF.

Following the prototype deliveries in 2012, the last aircraft modification is planned to be completed in 2014. SP

Pratt & Whitney delivers 50th F135 engine for F-35

Pratt & Whitney has delivered the 50th production F135 engine – powering Lockheed Martin's fifth-generation F-35 Lightning II – to the US Department of Defence.

The 50th engine is scheduled to be installed in an F-35C Carrier Variant (CV) for the United States Navy. The F-35C aircraft will be delivered to Eglin Air Force Base this summer for Navy pilot training.

"Delivery of the 50th production F135 engine is a significant milestone for the programme," said Chris Flynn, Vice President, F135/F119 Engine Programs, Pratt & Whitney.

The F-35 programme includes three variants to meet the unique needs of the US armed forces and the international participants in the programme: the CV, the CTOL and the short takeoff and vertical landing (STOVL). To date, the F135 propulsion system has powered more than 330 vertical landings, 2,000 test flights producing more than 3,000 flight hours. Pratt & Whitney has delivered 30 CTOL/CV and 20 STOVL engines and related propulsion system hardware. The success of the F135 engine programme validates the reliability, safety and performance of the engine. SP

PHOTOGRAPHS: Embraer, US Navy

Lockheed Martin F-35Bs ferried to Eglin, marking 25th DoD delivery

Two Lockheed Martin F-35B short takeoff/vertical landing (STOVL) production aircraft were ferried to Eglin Air Force Base, Florida, recently, marking the 24th and 25th F-35 deliveries to the Department of Defense. The fifth generation multirole fighter jets were delivered to the United States Marine Corps and are now assigned to the 2nd Marine Aircraft Wing's Marine Fighter/Attack Squadron 501 residing with the host 33d Fighter Wing.

One additional STOVL production jet, BF-11, will join the fleet at Eglin in the coming days. All three jets were formally accepted by the U.S. Defense Contract Management Agency (DCMA) on behalf of the Marine Corps with the signing of Department of Defense Form 250 (DD-250). SP

Successful flight of Rustom-I

Indigenously designed and developed Rustom-1 made 14th successful flight recently at Kolar with attainment of about 11,500 ft AGL (above ground level) and speed of above 140 kmph during 2 hrs 10 minutes of cruise.

The unmanned aerial vehicle (UAV), developed by Aeronautical Development Establishment (ADE), a DRDO lab at Bangalore, had its maiden flight in November 2009. P.S. Krishnan, Director of ADE, stated that the flight was successful. All the parameters were achieved by the UAV which weighs around 690 kg and the total performance was satisfactory.

The UAV has the potential for military missions like reconnaissance and surveillance, target acquisition, target designation, communications relay, battle damage assessment and signal intelligence. The UAV can attain a maximum altitude of 22,000 ft and endurance of 12-15 hours with an operating range of 250 km when fully developed. SP

K-MAX deployment extended

Lockheed Martin has announced that two unmanned K-MAX helicopters will remain in theatre in Afghanistan until September on a deployment extension. Between them, the aircraft have delivered more than one million pounds in less than four months in support of US Marine Corps (USMC) operations.

Developed in a joint effort by Lockheed Martin and Kaman Aerospace, K-MAX is the first unmanned helicopter to deliver cargo and resupply troops in a combat zone. According to Lockheed Martin, they have been keeping a steady pace of six missions per day, with record load deliveries ranging from a single 4,200-pound sling load to 28,800 pounds lifted in a single day. During operations in Afghanistan, previously scheduled to end in June, the aircraft has 'met or exceeded all expectations with less than one maintenance man-hour per flight hour.' As a result, the USMC has extended the K-MAX deployment through the end of September. SP

BAE prepares to test long-endurance drone

BAE Systems has taken a step closer to removing pilots from fighter jets by launching the first major test flights for a new generation of intelligent drone aircraft.

The defence group is assessing software for unmanned aircraft that will operate with an unprecedented level of independence. Defence experts believe pilotless planes are the next progression from manned fighters such as the Typhoon jet, made by BAE.

The project, named Astraea, differs from the current drone models in use in Afghanistan, which are flown remotely by pilots on the ground. Instead the prototypes will follow a set of programmed instructions, with the aim that they could fly difficult missions autonomously for days at a time. SP

Brazil's Falcão's first flight before July

Brazilian firm Avibras is concluding final assembly of the prototype of the 'Falcão' [Falcon] unmanned aerial vehicle (UAV), the first domestic aircraft in the 800-kilo class, used for surveillance, reconnaissance, patrol, and sensor tasks, among other missions. The Falcão UAV will have its inaugural flight before July.

The Falcão's frame is made of carbon fibre, guaranteeing a lighter vehicle and increasing the space in which it can carry fuel and sensors. With an autonomous flight capability of over 15 hours, this UAV is configured to carry a package of electro-optical equipment, a ground mobile target detection radar, and a satellite communications link. The aircraft will have an operational range of up to 1,500 kilometres. SP

Boeing provides tactical cross-domain capabilities for Predator/Reaper RPV

Boeing has completed the first delivery of its tactical cross-domain technology, eXMeritusHardwareWall, to General Atomics Aeronautical Systems Inc. (GA-ASI) for integration into the ground control station (GCS) of the Predator/reaper remotely piloted vehicle (RPV).

The delivery is part of a contract from GA-ASI that includes additional deliveries of HardwareWall and associated information assurance and engineering support. eXMeritusHardwareWall improves the ability of intelligence analysts and warfighters to securely access videos and imagery from the MQ-1Predator and MQ-9 Reaper. SP

PHOTOGRAPHS: DRDO, Lockheed Martin, Avibras

Camcopter S-100 completes Italian Navy flight

Schiebel's Camcopter S-100 has taken a further step in consolidating its strong maritime position by being the first UAS (unmanned air system) to ever fly from an Italian Navy ship. The S-100 was flown from the ITSBersagliere, a Soldati class frigate and successfully carried out a number of missions for observers from the Italian Navy.

From the Italian Navy Base of La Spezia a number of scenarios were flown and the Camcopter S-100 performed flawlessly in sea states three to four and with windspeeds of up to 25 kts. The payload of choice was a Wescam MX-10 camera, transmitting high definition images in real-time to the control station during the 4,5 hours of flight time. SP

Finland selects Orbiter 2

Finland's defence ministry has selected Aeronautics Defense Systems' Orbiter 2 unmanned air system (UAS) for its operational needs. A €23 million ($30 million) contract is in the final approval phase and is expected to be signed soon. Finland will acquire a system from the Orbiter family of air vehicles.

The deal will include 55 mini UAS, with the acquisition aimed at giving the nation's armed forces a new surveillance, target acquisition and reconnaissance capability.

The selected design has a 3 metre (9.8 ft) wing span, 1 metre-long fuselage, and a 3.5 hour endurance up to an altitude of 18,000 ft. Maximum take-off weight is 9.5 kg (20.9 lb), with the air vehicle carrying an electro-optical/infrared sensor payload. SP

Shadow Hawk munition launched from Shadow UAS

Lockheed Martin successfully conducted the first launch of a Shadow Hawk precision-guided weapon recently from a Shadow 200 unmanned Air system (UAS), achieving a direct hit on the target.

Shadow Hawk is an 11-pound class, 2.75-inch diameter, 27-inch long drop-glide weapon. It is terminally guided by a semi-active laser seeker, providing better than one metre precision. Shadow Hawk also provides an essential off-axis capability, enabling engagement of designated targets off the aircraft's wing.

"As the mission of the Shadow UAS continues to evolve, it will need capability that can immediately neutralise threats detected and designated by the Shadow's sensor package, with minimum impact to the aircraft's endurance," said Glenn Kuller, Director of Advanced Programmes in Lockheed Martin's Missiles and Fire Control business. "With precision strike accuracy, the Shadow Hawk is an ideal solution in urban environments where low collateral damage is essential." SP

UAV market to grow mostly in Europe, Asia

Unmanned aerial vehicles (UAVs), or drones, have repeatedly proved their worth in recent conflicts. Drones have certain inherent advantages over manned platforms, motivating the interest of military forces and driving the market for military drones. Despite projections for a substantial increase in spending on UAVs, reduced military expenditure by the United States is causing uncertainty among industry stakeholders.

New analysis from Frost & Sullivan, military unmanned aerial systems market assessment, finds that total market revenue is likely to be $61.37 billion across the forecast period 2011-20. It is estimated that the global military unmanned aerial systems (UAS) market generated $4.55 billion in revenues in 2010, a figure that is set to rise to $7.31 billion in 2020.

MQ-9 Reaper

"The United States will reduce its spending on UAS as it is adequately equipped to meet its needs," notes Frost & Sullivan Senior Research Analyst, Mahendran Arjunraja. "Although the country has plans to increase its inventory by more than 35 per cent over the next ten years, market revenues are expected to decline at least till 2020; the US military UAS space is undergoing a transition from procurements to sustainment with most future procurements likely to be limited to upgrades."

At the same time, Europe is facing intense competition in the medium-altitude, long-endurance (MALE) UAV segment, as more domestic companies are collaborating to develop indigenous equipment. Existing high altitude, long-endurance (HALE) UAVs are too expensive for many nations, even while MALE equipment has limited capability. Hence, an opportunity exists for equipment with capabilities between MALE and HALE.

As the operations in Afghanistan are expected to reach an end soon, governments are unlikely to show keen interest in renewing lease agreements. This will have an immediate impact on UAV leasing companies. However, this restraint is set to become a driver in the long-term, as cash-strapped countries would be able to allocate resources for equipment procurement.

"Reduction in spending by the United States is expected to slow down the UAS market," cautions Arjunraja. "Fortuitously for market participants, this slowdown will be partly off-set by the growth in the European and Asian markets."

The military UAV market in Europe and Asia will witness significant growth in the next ten years. This is the opportune time for UAV manufacturers and suppliers, therefore, to explore opportunities in these emerging markets. SP

PHOTOGRAPHS: Schiebel, Aeronautics Defense Systems, USAF

NCTC discussions to continue

The meeting of the Chief Ministers of all States on National Counter Terrorism Centre (NCTC) concluded in Delhi with the States highlighting various concerns on the issue and offered different suggestions to strengthen the counter-terrorism apparatus in the country.

The Union Home Minister P. Chidambaram said, "I came to this meeting with an open mind and I continue to keep an open mind and I assure you that all your suggestions will be carefully considered before a decision is taken by the Government. Ultimately, however, Government would have to take a decision.

"I think it is broadly agreed that there are two separate issues, one the need for NCTC or a similar organisation. The other is what should be the powers and functions of such an organisation, should one be created. I think this distinction was brought out in every intervention and I am grateful that all Chief Ministers maintained the distinction as far as support or opposition to the proposal is concerned and I think it will be fair to say that a number of speakers expressed strong support, a number gave qualified support and a few outrightly rejected the proposal. We will give serious attention to both those who strongly supported the proposal and those who suggested that it should be rejected outright.

"The third aspect is about the role of agency designed to do counter terrorism, in a sense this is new to our system. We have intelligence agencies, we have investigative agencies. Between intelligence agencies and investigative agencies under the traditional system of administration of law and order, we have the police but my experience in this job for the last three and a half years tells me that what we need is not simply a police organisation; what we need is a counter-terrorism organisation. I think one of the Hon'ble Chief Ministers brought out borrowing the language of the NCTC in the US, what we need is a counter-terrorism organisation that mobilises all elements of national power – diplomatic, financial, investigative, judicial, police. So we need to move beyond looking upon counter-terrorism as a police operation and enlarge our scope to make it a truly counter-terrorism organisation that will mobilise all elements of national power.

In the last two and a half years, there have been significant successes and failures in our counter-terrorism operations. "Why did we fail? We failed mainly because of lack of capacity; sometimes we failed because of a lack of timely decision. Each case has been documented; each case has been examined carefully. We document each case of success, we also documented each case of failure. Each case of failure contains within it the potential of another terrorist attack. Therefore, we cannot afford to fail. The adversary can fail ninety nine out of hundred times but the state, the Governments, cannot afford to fail even once out of hundred times."

The fourth point is the misgivings about operations of the NCTC. It is not the NCTC which is being given certain powers, it is the operations wing of the NCTC which is being given powers. Normal operations will be done by the ATS and the state police. Suppose in a given situation only an officer of a central agency has the opportunity to interdict the terrorist, what should we do? Suppose that action has to be taken within hours or within minutes, what should we do? Suppose there is no real time between gathering intelligence or interdicting a terrorist what should we do? It is in exceptional circumstances that we have said that the operational wing may act, as far as possible by giving advance intimation and certainly by immediately providing information. But I recognise that a number of speakers are not still satisfied and they want more safeguards on this and those who gave qualified support are not satisfied with the safeguards that are built in. So this requires greater reflection.

And on the point of its location in IB, Home Minister Chidambaram said since there is opposition to it, it would be re-examined. SP

Lockheed Martin to assist DoD in dealing with cyber crime

Lockheed Martin (LMT) will team with the Department of Defense Cyber Crime Center (DC3) to thwart another type of enemy – cyber criminals. The company has been selected to deliver a full range of technical, functional, and managerial support to the DC3, which provides vital assistance in the investigation of criminal, counter-intelligence and counterterrorism matters, as well as cyber security support to Defense Industrial Base partners.

The work will be conducted through a task order awarded by the General Services Administration's Federal Systems Integration and Management Center under the General Services Administration Alliant Contract. The task order has a ceiling value of $454 million if all options are exercised. SP

Cassidian CyberSecurity to be set up

EADS Cassidian are to create a new dedicated business, Cassidian CyberSecurity, entirely devoted to addressing the fast-growing cyber security market across Europe and Middle East, with an initial focus on Germany, the United Kingdom and France. By gathering together all of the cyber security expertise existing within the EADS Group, Cassidian CyberSecurity intends to establish itself as a key dedicated player in this market with substantial critical mass.

In order to provide appropriate responses to the specific demands of the French, British and German sovereignty, the business of Cassidian CyberSecurity will initially be entrusted to three dedicated national companies under the umbrella of a global cyber security organisation. These dynamic and agile structures will retain their strong national character and will enable the development of a circle of trusted partners in Europe in order to better serve governments, national agencies, strategic industries, and critical infrastructures, and to make the most of synergies between the countries.

Cassidian CyberSecurity's portfolio of products and services is built upon three pillars:

Cyber Defence & Professional Services, aimed at providing high-level professional services (such as attack analysis and response, risk management, audits of security infrastructure architectures) and implementing operation centres dedicated to security supervision of Scada and IT systems. These security operation centres, enabling the provision of remote-operated cyber security services, will be based [initially] in the three launch countries of France, Germany and the United Kingdom.

Trusted Infrastructure, for implementing national and European high-security trusted solutions and developing technologies (e.g. cryptography, digital identity management) in accordance with regulatory and national sovereignty requirements.

Secure mobility, to provide next generation security products and services for industry and governments in the form of mobile equipment (voice, data, applications) and deployable communication nodes.

Stefan Zoller, CEO of Cassidian, commented: "The creation of Cassidian CyberSecurity reinforces Cassidian's strategy in security, in which it already has strong dedicated capabilities. This market segment is very dynamic and we expect significant growth."

The cyber security sector is experiencing a dramatic rise in the number and level of sophistication of threats, covering attacks from nation states, through to terrorist groups, "hacktivists", criminal gangs and more conventional hackers. In 2010, this market was estimated at €50 billion. SP

PHOTOGRAPHS: Cassidian, DoD

US, China should work together on cyber: Panetta

Because the United States and China have developed technological capabilities in the cyber arena, the nations must work together to avoid misperception that could lead to a crisis, the Defense Secretary Leon E. Panetta has said.

In a recent meeting between Panetta and Liang—the first US visit in nine years by a Chinese defense minister—the two discussed expanding cooperation in areas such as peacekeeping, humanitarian assistance and disaster relief, and counterpiracy. They also spoke about maritime areas, nuclear proliferation, missile defence and cyberspace.

"It's extremely important that we work together to develop ways to avoid any miscalculation or misperception that could lead to crisis in this area," Panetta said. A fiscal 2011 report to Congress outlined some of the history between the United States and China in the fledgling military area of cyber defence.

The report, "Military and Security Developments Involving the People's Republic of China 2011," said that many computer systems around the world, including those owned by the US Government, were the target of intrusions, some of which appeared to have originated in China. The intrusions, it said, focused on exfiltrating information, or stealthily removing information from computer networks.

"Both the United States and China have developed advanced technology with regard to the cyber arena," the Secretary said. "And it's true, as the general pointed out, that we agreed that there are other countries, there are hackers, there are others involved in some of the attacks that both of our countries receive." SP

Rafael invests in a Brazilian aerospace company

The Israeli defence company Rafael Advanced Defense Systems announced the acquisition of a 40 per cent stake in the Brazilian aerospace company GESPI Aeronautics, deepening its position in the growing Brazilian homeland security and defence market.

The two companies formally announced the acquisition recently at the LAAD Security 2012 event in Rio de Janeiro, Brazil. "The acquisition of GESPI will allow us to implement the strategic policy of the Brazilian Government for the transfer of advanced technology and expertise to projects of the Ministry of Defence of Brazil and various security agencies of production site, providing employment opportunities and export to other countries," Lova Drori, Senior Vice President of Marketing at Rafael said. SP

Saab expands ties with AEL Sistemas S/A of Brazil

In connection with Saab's Gripen NG proposal to Brazil the Defence and Security Company, has expanded its planned co-operation with Aeroeletronica Ltda (AEL) of Brazil and now also includes development, production and long term logistics of the Gripen NG avionics package.

In 2009, Saab and AEL Sistemas signed a memorandum of understanding (MoU) identifying potential areas of cooperation under the Brazilian F-X2 programme. Since then, AEL experienced a significant growth and capabilities evolution, which has opened new opportunities for cooperation between the companies. The existing MoU between Saab and AEL Sistemas has now been revised and further expanded and identifies projects relating areas of the development, production and long-term logistics support of the Gripen NG avionics package.

Saab's approach to industrial co-operation covers a broad range of long term sustainable business activities focused not only on the product, delivering investment, job creation, technology transfer, manufacturing, technical support, training and scientific cooperation beneficial to Brazilian industry and the Brazilian nation.

"We are convinced that our offer is the best alternative for Brazil. Saab offers Brazilian industry a very competitive industrial cooperation package that exceeds the requirement of 100 per cent of the order value", says Saab's Dan Jangblad, Senior Vice President and Chief Strategy Officer. "The industrial collaboration would create an even broader opportunity for Swedish and Brazilian cooperation". SP

Sikorsky, Terma to explore additional potential collaborations

Sikorsky Aircraft and Terma have announced that the memorandum of understanding (MoU) signed in February 2010 is to be extended and broadened to explore additional potential helicopter programme collaborations. Both the original and new MoUs are conditioned on the Danish Government's decision to procure Sikorsky MH-60R Seahawk helicopters under a foreign military sale (FMS) with the US Government, which is currently under consideration.

Denmark is considering the MH-60R Seahawk helicopters, which are already in service with the US Navy. The Defence Security Cooperation Agency (DSCA) notified US Congress of the possible FMS of 12 MH-60R aircraft to the Danish Government in November 2010.

The multi-mission MH-60R helicopter combines sensors, such as surface radar and forward looking infrared camera, with tactical data links that enable the host ship to see what the aircraft sees even when over the horizon. SP

Kratos to acquire Composite Engineering

Kratos Defense & Security Solutions, a leading national security solutions provider in US, announced that it has entered into a definitive agreement to acquire 100 per cent of the stock of Composite Engineering, Inc., a vertically integrated manufacturer and developer of unmanned aerial target systems and composite structures used for national security programmes.

Kratos currently provides electronics and avionics that are on board CEI aircraft and Kratos also provides ground flight control stations and electronics for the command and control of CEI aerial systems. CEI aircraft are made from composite materials in a secure, state-of-the-art manufacturing facility and as a result have industry leading flight and representation characteristics. SP

Tom Herring is now CEO at AeroVironment

AeroVironment has announced a realignment of its senior management team to support its growth plans. The company promoted Senior Vice President and UAS General Manager Tom Herring to the newly established position of Chief Operating Officer. Herring will focus on the planning and execution of the company's annual operating plan and on operational excellence.

The company also promoted Roy Minson from Vice President and Deputy General Manager, UAS to Senior Vice President and General Manager of the UAS business segment.

"Tom will focus his attention on the effective execution of our annual operating plan and the efficient expansion of our capabilities to support the growth we anticipate. Both Roy Minson and Wahid Nawabi, General Manager of our Efficient Energy Systems business segment, will now report to Tom," said Tim Conver, AeroVironment Chairman, Chief Executive Officer and President. SP

PHOTOGRAPH: UTC Aero

DARPA seeks technology
to see through clouds for warfighter support

Warfighters who encounter enemy forces on the ground benefit from overhead aircraft support. Some capabilities are lost, however, when cloud-cover obscures the view. Typically, airborne weapon systems that use electro-optic (EO) sensors during support missions can't "see" through clouds. DARPA's video synthetic aperture radar (ViSAR) programme seeks to develop and demonstrate an extremely high frequency (EHF) targeting sensor which operates through clouds as effectively as today's infrared (IR) sensors operate in clear weather.

"The goal is a synthetic aperture radar (SAR) that provides high-resolution, full-motion video to engage manoeuvring ground targets through clouds or in the clear, without having to change tactics, techniques and procedures," said Bruce Wallace, DARPA programme manager. "Ultimately, we intend to demonstrate a cloud-penetrating EHF sensor in a moveable gimbal that could be mounted on a variety of aerial platforms."

DARPA seeks technology proposals in flight-worthy electronics, including power amplifiers and integrated receiver and exciters that are small enough to fit easily aboard aircraft. Another key proposal area is the development of new algorithms which could exploit the features of this sensor technology.

"We're looking for proposers with advanced expertise in scene simulation software to simulate realistic synthetic EHF radar data sets," Wallace said. "We anticipate that the system developer will use these raw data sets to test image formation, autofocus, detection and geolocation algorithms."

The ViSAR system expects to create SAR images of the background at frame rates greater than currently available. In addition, the system should have ground moving target indicator (GMTI) capability to detect moving targets and reposition their returns in the correct location within the scene. The GMTI processing is done in parallel with SAR processing. SP

PHOTOGRAPH: DARPA

UK develops virtual training concept

The Defence Science and Technology Laboratory (Dstl) of the United Kingdom has developed a new virtual training concept that will enable the Ministry of Defence (MoD) to train its armed forces to combat ready proficiency. At the same time it will reduce the capability, cost and environmental impact of using valuable equipment, which would otherwise be deployed on military operations.

Over the last 12 years, a Dstl team has been developing a series of ground breaking wargaming simulations for MoD training needs. This work has subsequently evolved into the Defence Operational Training Capability – Air (DOTC(A)) research programme, sponsored by capability theatre airspace.

Ebb Smith, from Dstl, says: "The aim of DOTC(A) is to provide the air element of a pan-defence training capability for MoD by developing a simulation and synthetic training environment, which is both efficient and cost-effective."

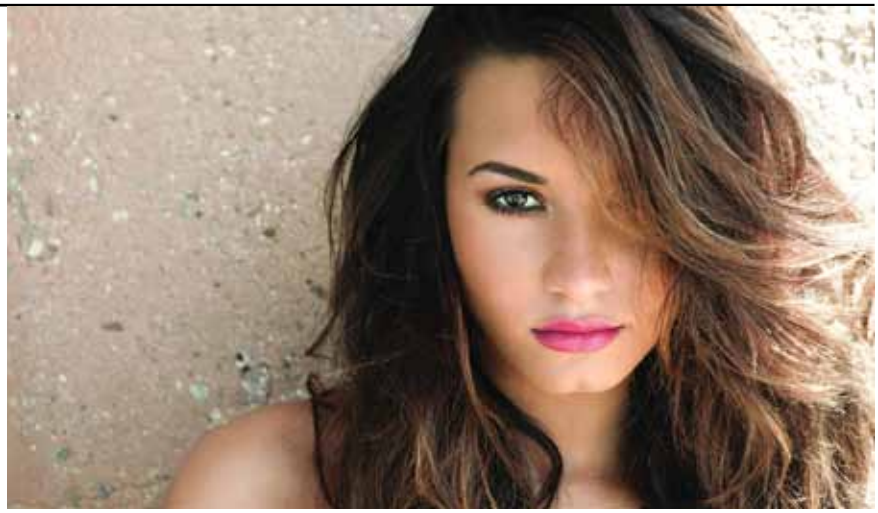
The research programme is currently focused on the investigation of live, virtual and constructive (LVC) training. Live training means real people in real-world platforms; virtual training means real people in virtual platforms (eg simulator, role-player station etc); and constructive training means computer generated forces, either fully autonomous or under the control of a role-player.

The UK's first fully assessed LVC exercises, LiveWIRE and Phantom Race, were carried out during February and November last year. During exercise LiveWIRE, RAF pilots flew two pairs of Typhoons; one pair live over the North Sea ranges and the second pair virtually from cockpit trainers at the Air Battlespace Training Centre (ABTC) at RAF Waddington. The Typhoons were supported by a virtual airborne warning and control system (AWACS) and pitted against virtual hostile aircraft flown by role-players on desktop trainers to re-enact a realistic combat situation.

Ebb Smith says: "The main objectives of the exercises were to assess the training potential of the LVC and identify any particular technical issues. While technical challenges, such as network connections, commercial constraints and limited range times may be overcome quite simply, there is no point in pursuing new capabilities if they do not offer tangible benefits to the trainees."

The participation of the Typhoon pilots and virtual operators provided valuable and positive feedback to the Dstl team in assessing the LVC for its training and capability potential.

With initial trials completed and user buy-in secured, future work in this area will see virtual air assets from the ABTC plugging into live exercises in other areas such as land and maritime. Not only will these pioneering exercises be used by Dstl to identify requirements and benefits to other domains, but also with NATO partners to pave the way to introduce this new training capability to all front line operators. SP



Demi Lovato's hair yanked

Not even a strong presence of bodyguards could protect Demi Lovato's luscious locks from overzealous fans in Venezuela recently. The tweeny-bopper superstar tweeted, "17 freaking bodyguards yesterday and I STILL got my hair pulled!!! Hahahahaha Venezuela you are INSANE!!! I love you guys."

Demi didn't let this hair-pulling incident spoil her South American voyage. She later tweeted about the country's beauty. SP

Security failure emerges at Ben-Gurion Airport

In 2011, an Israeli Air Force officer was detained at Budapest Airport after a gun was found in his baggage, casting doubts on security procedures at Ben-Gurion Airport where he boarded a plane to the United States, via Hungary. The officer had a pistol, clip and bullets in his bags and was waiting to board an American Airlines flight to the US.

The weapon should have been found during routine X-ray checks by security officers at Ben-Gurion Airport but was only discovered after the initial flight by officials in Budapest.

When questioned about the gun, the officer—who has not been named—denied any connection to the pistol and could not explain its presence in his baggage. He later acknowledged, however, that it belonged to a relative who forgot it in the bags which the officer had used during travel. SP

Over 5,000 computer security lapses in NASA

NASA had 5,408 computer security lapses in 2010 and 2011, including the March 2011 loss of a laptop computer that contained algorithms used to command and control the International Space Station (ISS), the agency's Inspector General recently told the US Congress.

An attack by Chinese hackers on NASA's Jet Propulsion Laboratory (JPL), in Pasadena, California, was also mentioned.

"These incidents spanned a wide continuum, from individuals testing their skill to break into NASA systems, to well-organised criminal enterprises hacking for profit, to intrusions that may have been sponsored by foreign intelligence services seeking to further their countries' objectives," Inspector General Paul Martin said in written testimony before the House Science, Space and Technology Committee investigations panel. SP

Sophisticated' underwear bomb uncovered

A new, "more sophisticated" underwear bomb style has been discovered by the US Central Intelligence Agency (CIA) in Yemen in April 2012. A new, upgraded version of Umar Farouk Abdulmutallab's Christmas Day, 2009 underwear bomb was reportedly found confiscated by intelligence officials.

According to media reports, the 'sophisticated' underwear bomb could potentially pass through airport scanners undetected. It is unclear whether the briefs were to be used by any would-be terrorist, although authorities stressed that at no time was there any danger or the apparent existence of an active plot. The underwear to be used in the new plot, if there was a plot yet formulated, is currently being analysed by the FBI.

The bomb making material and technique has reportedly been traced to Saudi bomb maker Ibrahim Hassan al-Asiri who is believed to be currently residing in Yemen. Al-Asiri is credited for constructing the first underwear bomb and other bombs reportedly built into printer cartridges shipped to the US on cargo planes in 2010. SP

PHOTOGRAPHS: www.fanpop.com, Wikipedia, infowars.com

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