VIRTUAL MISSION PLANNING – TABLE TOP : A VIEWPOINT PAGE 4

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MILITARY
AEROSPACE
INTERNAL SECURITY

Admiral R.K. Dhowan
India's New Navy Chief

PAGE 9

LCA Navy goes supersonic PAGE 11

Dassault's UCAV in formation PAGE 17

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Opportunities for retired Air Warriors

Monster India, a leading online career and recruitment solutions provider and the Indian Air Force Placement Cell (IAFPC) collaborated to provide a platform to assist the retired and shortly retiring Air warriors – Commissioned Officers and Warranted Officer/Senior Non-Commissioned Officer (SNCO), who seek a suitable second career opportunity in the civil world.

"Indian Air Force Placement Cell is dedicated to provide possibilities and opportunities for Air Warriors to showcase their aptitude in other fields after a prestigious career with the Indian Air Force. Our alliance with Monster India will definitely prove to be one of the most significant benefits to all retired/shortly retiring Air Warriors for seeking career opportunities. Monster India is one of the most credible experts in the career and recruitment

PHOTOGRAPH: PRO Defence

solutions industry. We are hopeful that our association with them will help retiring Air Warriors find the most suitable opportunity to share their expertise and add value to various organisations. We wish them the best of luck in their new career path after retiring from an illustrious phase of serving the Indian Air Force," said Air Marshal H.B. Rajaram, Air Officer-in-charge Administration.

An MoU between the two was signed at the Directorate of Air Veterans (DAV) in Subroto Park. Speaking on the occasion, the Principal Director DAV, Air Commodore A.K. Patra VSM said that owing to the steep pyramidical structure of the defence forces there is a continuous supply of a large number of skilled, trained, disciplined and self-motivated ex-servicemen. The platform will enable matching the aspiration of the job seekers with that of the industry requirement. The customised services extended by Monster India will fulfil their aspirations and help make a smooth transition to post retirement caree. SP

Cover:
Admiral Rabinder Kumar Dhowan, Vice Chief of Naval Staff and the officiating CNS until April 16, 2014, was appointed by the Government of India as the 22nd Chief of the Naval Staff.

Cover images: Indian Navy, HAL, Dassault Aviation

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Onerous tasks before the new Navy Chief

While congratulating the new Indian Navy Chief Admiral R.K. Dhowan, we believe that he has urgent tasks cut out for him – ensuring safety and security of men and machines. His appointment comes in the backdrop of a spate of accidents in the Indian Navy which took toll of a few brave mariners, leading to the resignation of Admiral D.K. Joshi as the Chief of the Naval Staff. In the last ten months, the Navy has suffered 14 mishaps including two involving submarines.

Obviously, the first task before him is to give safety the topmost priority, along with modernisation. On assuming charge he has assured 'We have effective safety audits and strict procedures in place to ensure that accidents don't happen. And the way to do that is to follow standard operating procedures (SOPs) that are laid down and we don't take any shortcuts that lead to these accidents."

It is not a secret that the Indian Navy is 'managing' with equipment that need to be replaced and the process of equipment induction has been slow. While the Navy is going to follow SOPs, the government and the political leadership have to take bold decisions on equipment induction and not procrastinate. All the three Chiefs of the armed forces have been putting this point across, but the political bosses have their own agenda. Delayed decisions are no decisions and we hope that the new Chief will emphatically send this message across to the people at the helm.

Indigenisation is fine, but we cannot be risking lives, waiting for indigenisation to happen. Though the Navy Chief has said the future of Indian Navy is based on self-reliance and indigenisation, one certainly needs to look at some of the urgencies. He has also said, "It will be my endeavour to ensure to pull on the oars together and keeping my hands on the tiller to ensure that we run an efficient, taut and a happy Navy."

We wish the Navy Chief all the best in his endeavour to make the Indian Navy a potent force among seafaring nations. We respect and hold in esteem the Indian Navy for its role in securing the nation and wish to see it in all its glory.

In his fortnightly viewpoint, Lt. General (Retd) P.C. Katoch talks about virtual mission board which allows warfighters to gather around a table, and plan their operations. This was seen during the Osama bin Laden operation where the US President and others gathered around a table to witness the operation. The Indian Army is developing the Tac C3I System in pursuit of the same capability.

Meanwhile on the internal security front, the Maoist attacks are disturbing the fabric of the nation. In a major post-poll attack, 15 people, including six personnel of Central Reserve Police Force (CRPF), were killed. The government has to firmly deal with the Maoists before they spread to larger geographic areas.

We look forward to your feedback as to improve our coverage.

Happy reading!

Jayant Baranwal
Publisher & Editor-in-Chief

LT GENERAL (RETD)
P.C. KATOCH

Virtual mission planning

Table top

The world awoke to the exploit of US SEAL Team 6 pulling off a spectacular raid to kill Osama bin Laden and sprint his body away, Pakistan oblivious to happening despite an Inter-Services Intelligence (ISI) desk manned to monitor Osama, as has been recently disclosed. Picture of Obama and his staff monitoring the operation live back home was flashed all over; gains of advancement in technology and NCW. Capacity building in NCW is progressing in the Indian military albeit at slow pace.

The Army is developing the Tac C3I System in pursuit of the same capability. What is yet to be looked at and introduced is the Virtual Mission Board (VMB), a deployable multi-touch display table that enhances operations and training by improving mission planning and training through visual representation of the operating environment. Similar to a smart phone or tablet, it provides a multi-touch interface that enables the manipulation of 2D and 3D terrain models including cities and towns. The highly customised table touch-screen display provides situational awareness through full visualisation of the event and enables centralised mission control for military operations as well as security.

PHOTOGRAPH: White House

VMB also is useful in corporate security, its advantages being improved visualisation; 3D terrain environment of the environment; building interior and x-ray views enhances situational awareness

Enhanced visualization capabilities of the VMB permits dispensing of paper maps, overlays and elaborate models that often require an entire operations centre with many displays. Unlike these, the VMB allows users to virtually navigate the terrain from several perspectives including fly through and walk through that give the actual feel of the operational/training area before the warfighters go into the operational area.

In addition, the VMB synchronises the display of integrated live, virtual, and constructive environments to augment the operations and training process from planning and rehearsing to execution and evaluation. Capabilities of the VMB include: first, multi-touch interface – providing intuitive navigation of terrain model; second, extensive map imagery – display of up to 15-metre map imagery. Users can apply graphics to the terrain model as well as display location and distance information through single touch; third, multiple navigation modes – includes fly through, walk through and drag. Each navigation mode provides its own perspective (on foot or flight) along with line of sight tool that allows users to see when their line of sight is clear or obstructed; fourth, external interfaces – supports an integrated Testing Environment through COTS products like SE Core, OneSAF, VB2 etc, as well as any programme of record (LVCG).

VMB also has a Level 9 Technology Readiness Level; fifth, customisation – enables advanced customisation features such as 3D terrain model of the operational environment or building interior and integration into an Immersive training Environment with video and audio feeds and RFID tracking; and, sixth, self contained and secure—provides a fully self-contained system that is adaptable for secure environments with the capability for external projection.

Simply put, VMB is an innovative solution for operations and training that facilitates planning, rehearsals, execution and assessment, latter both pre and post the mission or training. With the VMB, it is easy to develop and save pultiple mission plans. Conduct of split-screen operations for multiple users and viewing is possible. Monitoring of operations and training can be done effortlessly and significant events can be tagged for after action review. Additionally, incorporation and recording of audio, video, and personnel and vehicle tracking data is possible. Tailor made advantages in planning military operations and training comprises: plan and rehearse with virtual representation of chosen terrain; 3D terrain model and 2D map of the operational environment; user defined graphics tailored to each mission; synchronised display of integrated live, virtual and constructive environments; quality training centre facility at home station; synchronised playback of tracking data, video and audio via timelines with events tagged; and, immediate feedback following execution.

VMB also is useful in corporate security, its advantages being improved visualisation; 3D terrain environment of the environment; building interior and x-ray views enhances situational awareness; and, it is possible to integrate with existing security capabilities like personnel and vehicle location data, video, etc for holistic situational awareness. Considering that here is a solution that allows warfighters to gather around a table, and plan their operations, weapon fire and training, it would be useful for the military to examine the VMB for possible induction into service. SP

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

Naval Chief lays emphasis on indigenisation

Admiral R.K. Dhowan *who has been appointed as the Chief of Naval Staff in an interview given to* ***SP Guide Publications*** *when he was the Vice Chief of the Naval Staff had said that efforts are on to provide further impetus to the indigenisation process across the entire canvas of acquisition.*

PHOTOGRAPH: Indian Navy

SP's M.A.I. **(SP's): Indian Navy for decades has pursued a visionary approach for technology-intensive maritime force planning and development. What mechanism is adopted to create and sustain a three-dimensional, technology-enabled and networked-force to deal with the dynamics of evolving challenges?**

Vice Admiral R.K. Dhowan: India is essentially a maritime nation with a natural outflow towards the seas. The responsibility of protecting and safeguarding our vast and widely dispersed maritime assets and interests falls squarely on the shoulders of 'men in white uniform'. Sequentially thus, it behoves upon the Indian Navy to ensure that our maritime interests which have vital linkages and relationship with the nation's economic growth are allowed to develop unhindered both in peace and war. To safeguard our maritime interests, the Indian Navy operates a balanced force comprising an aircraft carrier, multi-role destroyers and frigates, fleet tankers, amphibious ships and a multitude of other aviation and sub-surface combatants. As a highly balanced maritime force, the Indian Navy is capable of blue-water operations in the Indian Ocean region (IOR) and beyond, in pursuit of national interests. The present force levels of the Indian Navy are being further augmented to encompass future tasks, as also confronting emergent challenges of piracy and sea-borne terrorism in the IOR and shouldering the responsibility of coastal security. In terms of force accretions in the immediate future, we are acquiring ships, submarines and aircraft in accordance with our long-term plans. Force structure planning for the future is a complex process. A large number of factors, future scenarios, trends and indicators are analysed in-depth to formulate the guidelines for our acquisition process. The maritime capabil-

ity perspective plan (MCPP), prepared by the Indian Navy, aims at building the force structure necessary to respond to a vast spectrum of requirements. The MCPP has been suitably enmeshed into the long-term integrated perspective plan (LTIPP) of the armed forces. The blueprint of the future Indian Navy has been charted on self-reliance and indigenisation, and our preferred choice of inducting ships and submarines has been through the indigenous route. Currently, of the 45 ships and submarines under construction, 42 are from Indian shipyards. The acquisition programme is continuing apace and over the next few years we expect to induct a wide variety of ships, submarines and aviation assets.

SP's: What has been the experience on allocation of requisite resources to ensure planned growth?

Dhowan: It has been our endeavour to optimally utilise the funds allocated to the Indian Navy by stretching each rupee to the maximum and achieving much more with much less. The requirement of cutting-edge high technology equipment of the Navy makes it a capital-intensive service and hence capital expenditure, which represents modernisation and asset building capability, determines the future capabilities of the Indian Navy. Acquisition of ships and submarines because of their complexity and size have protracted development and construction periods and therefore, require long-term commitment of funds. Further, capital procurements are complex in nature, and are divided into various phases that include identification of areas requiring capability enhancement, analysis of effectiveness of costs and schedules and preparation of realistic estimates and timely projections. Further, some of the overriding factors which dictate naval fund requirements for the future are addressing capability gaps which exist in the Navy, and attaining the correct mix of force levels that would provide the Navy with a credible combat capability.

INS Shivalik

SP's: While indigenisation of systems and equipment remain the cornerstone of Indian Navy's thrust, what is your assessment of our defence manufacturing capabilities?

Dhowan: The Indian Navy has wholeheartedly supported indigenisation programmes in consonance with our overall national vision of sustained growth and self-reliance. It is a matter of significant achievement that the modernisation programme of the Navy is focused towards indigenous warship construction and is largely driven by Indian shipyards and industry. Consequently, we are one of the few countries in the world having the capability to produce a wide variety of warships, ranging from an aircraft carrier to fast attack craft and submarines. The recently inducted indigenously built Shivalik class stealth frigates have demonstrated the capability of defence shipyards to deliver quality ships. Our quest for indigenisation has resulted in public sector shipyards devoting their capability and capacity towards warship and submarine construction.

However, we still have some way to go in matching up to the global standards in respect of "build periods". Our shipyards need to adopt modern methods of ship construction such as 'modular construction' and 'integrated construction' to shorten build periods. Shipyards also need to further enhance their design capabilities in order to be more competitive and capable.

SP's: What is your perspective on dealing with induction of technologies from diverse sources adding new dimension and challenges to the existing equipment policy?

Dhowan: The Indian Navy is evolving into a versatile and potent force, capable of a variety of operations ranging from coastal security to blue-water operations. To meet the requirements of these roles, a quantum jump in induction of technologies associated with stealth design of platforms, more capable sensors and well-networked combat management systems is inescapable. There is no 'one-stop' solution for the plethora of technology that the Navy would need to imbibe and absorb. The leveraging of new technologies also poses challenges in terms of maintenance and upkeep. Towards this, the skills of our workforce needs to be constantly honed, including subject specific, and vertical specialised training. With the induction of emerging technologies, the support infrastructure is also set to grow by leaps and bounds. Further, induction of new technologies also provides adequate opportunities to the Indian industry to augment the Navy's capability in niche areas.

SP's: On capacity augmentation and infrastructure development front what are the plans for the Indian Navy?

Dhowan: Primarily, our focus has been to augment capability through induction of modern platforms and weapons and sensors. For instance, airborne maritime surveillance and enhancement of air defence capability are issues that are going to receive definite impetus. Additionally, efforts to induct assets and develop suitable infrastructure to augment forces available for low intensity maritime operations (LIMO) and protection of off-shore assets and coastal security tasks will also receive close attention. Focus is also being given to progress induction of platforms in order to achieve a balanced 'force mix' for roles, missions and objectives in our primary areas of interest and facilitate 'out of area' operations. Significant attention is also being paid to augment and build technical and support infrastructure for maintenance of new induction platforms and undertake repairs of state-of-the-art equipment being inducted in the service. Amongst the other objectives, the impetus required to attract and retain first-rate personnel while working towards rationalisation of manning policies is another focus area.

On the infrastructure front, the last few years have witnessed a sustained focus on enhancing our operational, technical and administrative infrastructure. Phase-I of the naval base at Karwar, under Project Seabird, has been completed. We are now pursuing the next phase of the project, which caters to the infrastructure to accommodate additional ships, submarines, and support craft planned to be based there. Special focus is also being accorded to develop our infrastructure and facilities in the Andaman and Nicobar and Lakshadweep and Minicoy Islands, which act as extended arms of India in the Bay of Bengal and the Arabian Sea.

The seas around us are gaining new-found importance as each day goes by and there is no doubt that the current century is the 'century of the seas'. It is therefore, imperative for the Indian Navy to have multi-dimensional forces capable of operating across the spectrum of operations in the maritime domain. SP

PHOTOGRAPH: Indian Navy

LT GENERAL (RETD)
P.C. KATOCH

30 years since Siachen

Since late 1990s, Pakistan's ISI has been nurturing Shia terrorist organisations with an eye on Ladakh and Zanskar Range south of it. Infiltration into Ladakh and initiation of terrorism will have reverberations through the Zanskar Range right down to Kulu-Manali requiring deployment of perhaps another two corps to control the area.

Map not to scale

INFOGRAPHIC: Anoop Kamath

April 2014 marks 30 years from when India first set foot on the Saltoro Range, April 13, 1984, to be precise. It was a major strategic initiative that has kept Ladakh safe from Pakistani all these years. It is no secret that the massive Kargil intrusions by Pakistan in 1999 aimed to cut off the Srinagar-Leh lifeline to Ladakh, with a view to subsequently dislodge India from the Siachen area.

The Siachen Glacier emanates from the Greater Karakoram Range, which has some of the highest peaks in the world including K2, the second highest peak in the world. Siachen (meaning the place of roses in local language) Glacier in the East Karakoram – 76.4-km-long and 8-km at its widest is the third largest glacier outside the Polar region. On the west lies the West Karakoram (now under Pakistani control) and towards the east is the Shyok basin, forming the border with China. The northern slopes of the Indira Ridge lead to the Shaksgam Valley under Chinese occupation.

On April 13, 1984, the Indian Army made a "pre-emptive" move into the glacier to defend the territory and the peaks and passes around it when it launched Operation Meghdoot as Pakistani Army was already camped to the west in a bid to move up to capture the Saltoro Ridge. Within days, Pakistani forces moved in to oppose them, but our forces

have been able to hold on to the tactical advantage along the higher grounds on the Saltoro Ridge. General Pervez Musharraf admits in his autobiography *In the Line of Fire* that Pakistan wanted to seize the strategic advantage but was pre-empted by India. All reports and analysis in the media refer to the Siachen Glacier.

The position on the ground is that Siachen Glacier is not the area of confrontation and has always been under our control. Confrontation between our troops deployed on the Saltoro Ridge, which is well to the west of Siachen Glacier and Pakistani positions are further west of Saltoro Ridge on lower ground. Since 1984, India continues to occupy the entire Saltoro Ridge Line. Barring a few posts opposite our own Gyong La complex, Pakistan does not have any presence on the Saltoro Ridge. Subsequent to our launching of Operation Meghdoot, Pakistan has unsuccessfully attempted in various sectors to dislodge our troops from their positions.

All these attempts have been repulsed by our troops from time to time. Besides these serious clashes, sporadic exchange of fire including artillery had continued over the years till the ceasefire in 2004. Post a massive avalanche that killed over 100 Pakistani soldiers, Pakistan started whining for withdrawal from Siachen area. Significantly, despite no actual presence on Siachen, Pakistan continues to claim otherwise. In the same year, a 22-member India-Pakistan Track II team headed by a former Chief of the Air Staff on the Indian side having met in Bangkok, Dubai, US and finally in Lahore (September 23-25, 2012) to discuss CBMs.

A Cheetah helicopter landing at high altitude in the Siachen Glacier

PHOTOGRAPH: Indian Air Force

Demonstrating total lack of strategic thought, the Indian side went ahead to agree to withdraw from Siachen despite severe reservations of many members. Significantly, these deliberations were initiated and held under the aegis of the Atlantic Council of Ottawa, latter with charter in synch with NATO interests and closely associated with many Pakistani think tanks. Though it found favour with the PMO (Prime Minister Manmohan Singh's famous 'Mountain of Peace' statement was made shortly after these recommendations were made public) it was rubbished by all other organisations. Post the details of the 'Agreement' having been put up on the Internet by the Atlantic Council of Ottawa, followed by surprise and disgust shown by scores of Indians on the web, the Track II team in a presentation at the India International Centre on October 3, 2012, chaired by former Ambassador K.C. Singh, tried to pass off the 'Agreement' as a historic way forward. They were immediately challenged and lambasted by a host of public in the audience including former Chief of Army Staff General N.C. Vij and other military veterans.

Not only had Pakistan ceding the Shaksgam Valley (5,160 sq km) to China in 1963 heightened the China-Pakistan collusive threat, Chinese entry into Gilgit-Baltistan (GB) in large numbers (some 11,000 were reported to have entered PoK/Pakistan in 2012) has heightened the strategic importance of the Saltoro Range held by India. Withdrawal to pre-1971 positions (as proposed by Pakistan) would be suicidal. Chinese presence in GB area also must take into account some 22 tunnels being dug by the Chinese and possible deployment of missiles with locals prohibited to enter the area.

The fact that Pakistan is contemplating or already has leased GB area to China for 50 years (as reported in Pakistani and US media) makes it more significant. This presence needs to be viewed in conjunction Chinese intrusions and forays beyond Aksai Chin and claims to Depsang and Chumar areas, plus multiple indications that China has nibbled away some 400 sq km Indian Territory in Ladakh alone (beyond the 38,000 sq km she illegally holds in Aksai Chin) though denied by our political hierarchy in under shadow of claim lines not being in public domain. There have been reports in the media that in 1992 an agreement had been reached for mutual withdrawal but the fact is that this was just the individual view of P.V. Narasimha Rao, then Prime Minister and Foreign Minister without reference to even the Ministry of External Affairs, leave aside the Ministry of Defence or military.

The situation on ground has changed drastically since then, as discussed above; Chinese activities in GB area and eastern Ladakh. Any withdrawal from Siachen will seriously threaten defence of Ladakh. Such a withdrawal would imply gifting away Sub Sector North (east of Siachen Glacier) to China, as positions there will become untenable. With the next defence line south of the Shyok River, not only will India require deployment of minimum two Divisions (instead of the one Brigade on the Saltoro Ridge) at mammoth expenditure that it can ill afford, Leh will come within enemy artillery range. China, through Aksai Chin will be able to link up with Pakistan in GB area, magnifying the collusive threat further. What also needs to be taken into consideration is the prime occupation of Pakistani military in spawning terrorism.

Withdrawal from Siachen area will open avenues of infiltration and terrorism into Ladakh. Since late 1990s, Pakistan's Inter-Services Intelligence (ISI) has been nurturing Shia terrorist organisations including Tehreek-e-Jaferia (TJP) and its many subgroups with an eye on Ladakh and Zanskar Range south of it. Infiltration into Ladakh and initiation of terrorism will have reverberations through the Zanskar Range right down to Kulu-Manali in Himachal Pradesh, requiring deployment of perhaps another two corps to control the area. Siachen Glacier also happens to be one of the largest freshwater reserves of India which is vital for our precarious water situation. And finally, how can one trust Pakistan amongst her lies, ambiguity, deceit and double crossing. It will be well neigh impossible to retake the Saltoro Ridge, if necessary if the stupidity of withdrawal is undertaken.

Lack of strategic forethought and political unilateralism has been typical to India ever since Independence. More significantly, ambiguity and deceit have been the hallmarks of China and Pakistan. Ask yourself have they ever bothered about world opinion? Will their expanding nexus and US pullout from Afghanistan, not make Pakistan more uppity?

To say that Pakistan will be in no position to re-occupy Siachen is foolish. Even while the Indian troops were deployed at Saltoro, the Kargil intrusions were never visualised on plea that terrain was not negotiable. Additionally, in 1984, when both India and Pakistan rushed for Gyong La, an agreement was reached following a flag meeting for both parties to withdraw. Indians did, but the Pakistanis re-enacted their back-stabbing legacy and occupied the pass in clear violation of the agreement made hours ago. Pakistan is at great strategic disadvantage in Siachen area and this equation must not change. SP

Admiral R.K. Dhowan is the 22nd Indian Navy Chief

Admiral Rabinder Kumar Dhowan, Vice Chief of Naval Staff and the officiating CNS until April 16, 2014, was approved by the Government of India to be the 22nd Chief of the Naval Staff. He has become the 20th Indian to be at the helm of the Indian Navy.

He is an alumnus of the National Defence Academy, Khadakwasla and the Defence Services Staff College, Wellington. In his long and distinguished service spanning over 39 years, he has served in a variety of Command, Staff and Instructional appointments.

His Sea Commands include guided missile corvette INS Khukri, Kashin class guided missile destroyer INS Ranjit and indigenous guided missile destroyer INS Delhi.

He is a graduate of Naval War College, Rhode Island, USA. He was the Naval Adviser at the High Commission of India, London.

His important staff appointments at Naval Headquarters include, Deputy Director, Naval Operations, Joint Director, Naval Plans and Assistant Chief of Naval Staff (Policy and Plans).

He has commanded the Eastern Fleet, one of the operational fleets of the Indian Navy. He has also served as the Senior Instructor at the Defence Services Staff College, Wellington.

His other important appointments include, Chief Staff Officer (Operations), Headquarters Western Naval Command, Chief of Staff at Headquarters Eastern Naval Command the Commandant National Defence Academy, Khadakwasla and the Vice Chief of Naval Staff.

He is recipient of PVSM, AVSM, YSM and ADC.

Appointment of Admiral Robin Dhowan comes at a very crucial juncture when the Indian Navy was rendered headless for over 50 days, owing to the untimely resignation by his predecessor, Admiral D.K. Joshi on the sterling grounds of taking moral responsibility for a series of mishaps on board ships and submarines of the Indian Navy.

To compound to the extraordinary situation was the indecent and indiscreet hurry shown by the Government of India in accepting the resignation by Admiral D.K. Joshi, in a matter of few hours without any care or concern for the Indian Navy which had in the recent decades successfully created a niche for itself by demonstrating outstanding professionalism and operational capabilities. This hasty decision dealt a telling blow on the morale among the rank and file of the Indian Navy, besides adversely affecting the day to day management of affairs. In the world view the Indian Navy was relegated to suspended animation.

Admiral Dhowan, a through professional to the core, will have little over two years to shoulder the daunting task of not just restoring, even furthering the prestige of Indian Navy to its rightful pedestal. With a wide array of appointments he has held and the unenviable experience gained thus far, undoubtedly Admiral Robin Dhowan is best suited for the challenges that stare the Indian Navy today.

At this crucial juncture what the new Navy Chief requires in addition to the goodwill and all good wishes is the support in substantive terms. There are several pressing issues relating to modernisation and acquisition of vital assets for the Indian Navy, which have been placed on the back-burner for inexplicable reasons. Indian Navy is highly equipment oriented service and constantly requires technology upgrades in true sense. This vital tenet cannot be overlooked. For sustained growth and development of the Indian Navy it requires efficient and timely decisions, if the precious resources of our country were not to be frittered away due to indifferent and casual attention to the vital needs of the Indian Navy. There is no denying the fact that the Indian Navy ought to be a powerful three-dimensional maritime reckonable force capable of protecting India's strategic interests from the Persian Gulf to Malacca Strait and beyond. This can only be achieved through efficient and timely steering of the indigenous ships and submarine building programmes, as also the aviation assets to be acquired on priority. SP

–Rear Admiral (Retd) Sushil Ramsay

Harris Corporation bags orders for Falcon III radios

Harris Corporation (HRS), an international communications and information technology company, has received $82 million in orders from an international customer for radio communication systems that enable enhanced command and control and real-time situational awareness.

The nation's armed forces are acquiring Falcon III RF-7800H wideband high-frequency (HF) and RF-7800V very-high-frequency (VHF) radios in handheld, man-portable, vehicular and tactical base station configurations. These systems provide wideband tactical networking to the edge of the battlefield, as well as interoperable line-of-sight and beyond-line-of-sight voice and data communications. The systems allow forces to communicate securely and more immediately with their command structure, enabling more informed decisions.

"Our secure tactical communication products and system solutions enable armed forces to deploy quickly and manage missions in real time," said Brendan O'Connell, President, International business, Harris RF Communications. "The Harris solution allows headquarters staff to monitor and coordinate forward operating units, dismounted troops, vehicles and airborne assets. These systems have applications in a wide variety of scenarios, including corps-sized manoeuvres, border control and disaster relief."

The Falcon III RF-7800H is transforming HF tactical communications. The radio is the first to enable users to send images and other battle management data over high-frequency beyond-line-of-sight environments faster than they could through satellite communications. The RF-7800H is 20 per cent smaller and up to 10 times faster than legacy HF radios and is fully compatible with widely deployed Harris Falcon II HF radios and accessories.

The RF-7800V family delivers performance and flexibility unmatched by any other VHF combat net radio platform. Highly portable and easy-to-use, the RF-7800V allows forces to operate effortlessly across the network-centric battlefield. SP

PHOTOGRAPH: Indian Navy

Oto Melara tests Dart/Strales ammunition

The first lot of Dart/Strales 76mm guided ammunition, produced by Oto Melara, was successfully tested at the end of March. The firing trials were conducted on board one of the Italian Navy's ships equipped with Strales 76mm SR and Selex NA25 fire control system.

The firing trials were conducted with quick bursts of fire against fast, manoeuvring and non-manoeuvring, radio controlled targets at low and very low altitude and at a range of more than 5,000 metres.

The customers who attended the firing trials, which included the cooperation of other Navy's air-sea craft, were fully satisfied with the trials'results which confirm the quality, reliability and effectiveness of this revolutionary defence system.

The company's top management commented on the videos saying that they are a clear evidence of the system's effectiveness.

The Strales 76mm system with Dart guided ammunition is the only weapon system in the world which can ensure high level performance (at a lower cost than dedicated anti-missile systems) in the engagement of manouevring supersonic missiles with high lateral g force. The system is very effective also in the engagement of fast manoeuvring little boats.

The Dart projectiles are guided by a radio beam that follows the target by means of homing system. The projectile is fitted with a proximity fuze, but there were many hits during the firing trials.

The 76mm naval gun with Strales kit has the same characteristics of ballistic ammunition when it is used to engage air, naval and surface targets; with Vulcano ammunition it will ensure high precision target engagement, with a fire range two times higher than conventional ammunition.

The Strales system can be installed on the 76mm naval guns which are already in service.

Oto Melara is planning the production of Strales kits and new ammunition lots to guarantee quick delivery to new customers who will ask for this innovative system.

At present 12 Strales 76mm systems are in service, 15 are going to be delivered, and orders for 30 systems are foreseen in the next five years. SP

Boeing Phantom Badger certified for V-22 transport

After a series of successful tests, the US Navy has certified that the Boeing Phantom Badger combat support vehicle can be transported inside a V-22 Osprey tiltrotor aircraft. That is another step towards providing warfighters with more options to deploy the versatile vehicle.

The tests included form-fit checks, pressure tests and structural evaluations exceeding four G-forces.

"This certification validates Phantom Badger's versatile design while offering the warfighter increased battlefield access and deployment options," said John Chicoli, Program Manager for Boeing's internally transportable vehicle programme. "Phantom Badger is designed to easily fit in the compact space of the V-22 and it is also compatible with many larger aircraft."

Ten Phantom Badgers fit in a C-17 transport aircraft and two fit in a C-130 aircraft or CH-47 Chinook helicopter. Phantom Badger has completed more than 8,000 kilometres of rugged terrain durability testing and successful airdrop tests from a C-17.

Developed by Boeing Phantom Works, Phantom Badger supports a wide range of missions not possible with existing combat support vehicles. Its rear section is modular and can be quickly changed for missions including reconnaissance, combat search and rescue, casualty transport, direct action with weapons mounts or explosive ordnance disposal. This combination of modularity, transportability and proven all-terrain performance provides increased mission flexibility and enhanced survivability. SP

Japan buys Thales Bushmasters

The Japanese Ministry of Defence has ordered four Bushmaster vehicles for deployment with the Japan Ground Self-Defence Force (JGSDF). The vehicles, all troop carrier variants, will be manufactured at the company's facility in Bendigo, Victoria in Australia, for delivery in late 2014.

Thales Australia CEO Chris Jenkins said: "This new export order demonstrates the ongoing significance and versatility of the Bushmaster vehicle. With effective operational deployment across Afghanistan and Iraq, the Bushmaster has proven its effectiveness across urban landscapes as well as mountainous regions, making it uniquely suited to Japan's geographic and urban environments.

"This is the first time that Thales is providing platforms to Japan. Our aim is to be customer focused and to offer Thales Group's seamless and convenient services and technologies to our customers in Japan. We look forward to working closely with the Japanese Ground Self-Defence Force as these vehicles enter service."

The Thales Bushmaster is a true success story with over 1,000 vehicles already sold in Australia, the Netherlands and Jamaica. SP

PHOTOGRAPHS: Boeing, Wikipedia

LCA Navy goes supersonic

Just days before the second anniversary of its maiden flight, the naval variant of the light combat aircraft (LCA) Navy (NP-1) has successfully completed its first supersonic flight, signaling that the aircraft is now able to fly faster than the speed of sound. The Bengaluru-based Aeronautical Development Agency (ADA) the nodal agency for the development of the LCA said that this feat was achieved in the month of March.

The NP-1 during the flight is said to have crossed the Mach 1 barrier. This milestone is considered significant as the LCA Navy programme since it made its maiden flight on April 27, 2012, had made little progress. In next one year after its first flight the NP-1 made just four test sorties.

The aircraft to prove that it is fit for carrier-borne operations it would be subjected to ski-jump launch and arresting recovery tests at the naval air station in Goa.

The LCA will replace the depleting Sea Harrier squadron and operate along the MiG-29K's by 2014 from the indigenous air craft carrier which is being constructed at Kochi. The Government has already sanctioned limited series production of the LCA Navy under which eight aircraft would be developed. SP

Textron AirLand's Scorpion achieves Mach 0.72

Textron AirLand, LLC, a joint venture between Textron Inc. and AirLand Enterprises, LLC, recently announced that the Scorpion has completed 50 hours of flight time since the start of flight testing in December 2013.

The objective of recent flights has been to gather data about the aircraft's performance at various speeds, altitudes and climb rates, as well as to assess the responsiveness of Scorpion's avionics, flight controls and landing system.

"The aircraft systems have performed well within the expected parameters, with very few issues," said Scorpion's Chief Engineer, Dale Tutt. "This is a significant benefit of using mature, non-developmental systems: in addition to reducing the overall development time of the prototype aircraft, the systems have proven to be very reliable."

Test pilot Dan Hinson added, "The flight control systems are powered by dual hydraulic systems based on the Citation X business jet, and have performed flawlessly. In the event of a loss of both hydraulic systems, the airplane can be flown in manual reversion."

The Scorpion testing programme remains on pace to complete 300-400 test hours this year, which will require about 150 flights. This is expected to include a number of international flights, pending the standard approvals. SP

Antonov tests An-70

Antonov Company has completed state joint tests of the An-70 wide-body STOL military transport. In the process of ground and flight tests on the modernised aircraft correspondence of the checked parameters and modes to the requirements of the customer was achieved in – unactioning of modernised systems and equipment; parameters of the STOL; precision parameters during fulfillment of navigational tasks; strength and service life parameters, etc.

Flight crew and engineering staff of the state scientific and test centre (SSTC) of the armed forces of Ukraine jointly with the specialists of Antonov Company carried out the state joint tests of the aircraft.

After modernisation, which was completed in September 2012 and till March 31, 2014, the airplane performed 122 flights and flew 220 hours. In total it carried out 753 flights with total flight duration of 930 hours 48 minutes. SP

Boeing updates timing of C-17 production

Boeing has adjusted slightly the timing for ending C-17 Globemaster III production and closing its Long Beach, California, C-17 final assembly facility after a successful two-decade production run of the world's premier airlifter.

Based on current market trends and the timing of expected orders, Boeing anticipates completing C-17 production in mid-2015, an adjustment of approximately three months from an initial estimate of late 2015. The company announced plans to end C-17 production in September 2013.

Boeing expects inventory–related charge of approximately $50 million, which will be recorded in the first quarter, as a result of this announcement. SP

PHOTOGRAPHS: HAL, SP Guide Pubns, Antonov, Textron

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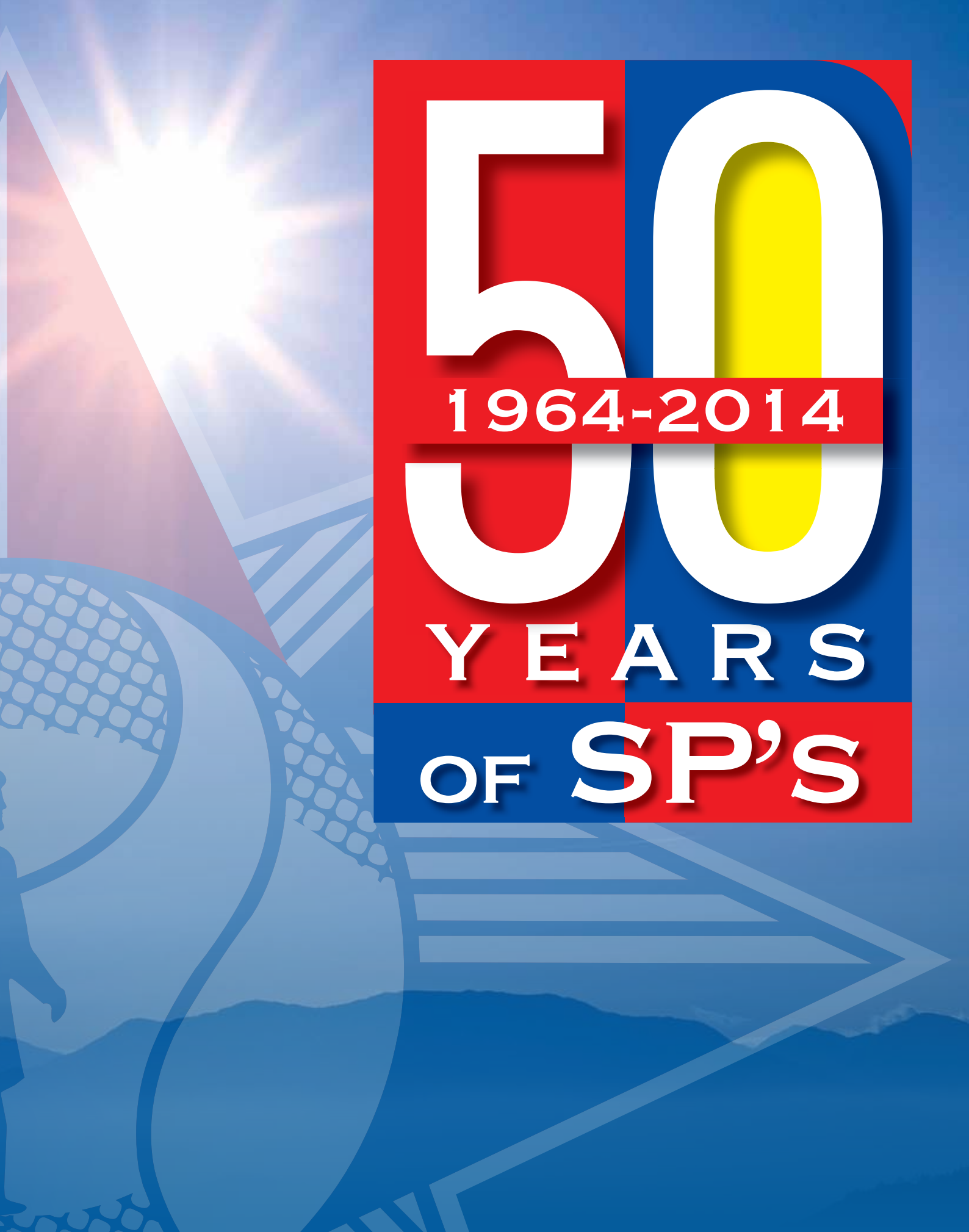
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First C-130J Super Hercules 'Shimshon' arrives in Israel

Israel's first Lockheed Martin C-130J Super Hercules airlifter arrived at Nevatim Air Base recently. Israel ordered its C-130Js through a foreign military sale (FMS) contract with the US Government. This is the first ferry of the C-130Js currently on order for the IAF, which has operated legacy C-130s since 1971.

In non-combat – but equally harsh environments – C-130Js are often the first to support humanitarian missions such as search and rescue, aerial firefighting in the US, and delivering relief supplies after earthquakes, hurricanes, typhoons and tsunamis around the world.

This C-130J Super Hercules was first delivered to the Israeli Air Force in June 2013 in Marietta, Georgia, at the Lockheed Martin facility where it was manufactured. The aircraft remained in the US to receive Israeli-specific, post-production modifications. SP

US Coast Guard receives C-27s

The US Coast Guard Commandant Adm. Robert J. Papp said he was "delighted" to receive 14 of the 21 brand-new C-27J Spartan medium-range aircraft that were consigned to the boneyard by Air Force budget cuts. "It saves us about a half a billion dollars in acquisition costs, and we're off and running the programme now," the Admiral said.

US Special Operations Command will receive the remaining seven aircraft soon. Papp said he expects the Coast Guard to be fully using the aircraft in fiscal year 2016, noting that the delay is due to the need to qualify instructors and thoroughly train the pilot and maintenance forces.

In competition, the C-27J originally lost out to the HC-144 Ocean Sentry due to higher lifecycle costs, the admiral said. The Coast Guard has purchased 18 HC-144s, he said, noting that he expects to end the programme at 18 aircraft. SP

Airbus A400M to Turkish Air Force

Airbus Defence and Space has handed over the first of ten A400M new generation airlifters ordered by the Turkish Air Force. The Turkish Air Force formally accepted the aircraft from Airbus Defence and Space at the A400M Final Assembly Line in Seville, Spain. A further ceremony will take place in Turkey at a later date.

Following the contractual transfer of title, the aircraft, which is the third production A400M, will be flown to Kayseri air base in central Turkey where it will initially be used for training. In Turkish Air Force service the A400M will replace the C-160 Transall offering a dramatic increase in air transport capability to the armed forces. SP

Apache flies 50,000 hours in Afghanistan

The British Army's Apache attack helicopters, operated by the Army Air Corps, flew their 50,000th hour on operation in Afghanistan recently. This represents a third of all UK Apache flying, a huge proportion of the total. Apache helicopters have been conducting operations in Afghanistan since 2006, deploying initially with 16 Air Assault Brigade, shortly after being introduced into service with the British Army. Since then the aircraft have been constantly deployed on Operation Herrick, the UK's name for operations in Afghanistan, where they provide support to ground forces, tactical strike, reconnaissance, and armed escort to other helicopters.

To maintain Apache's high tempo of operations, the aircraft are fully supported by air and ground crews from the Army Air Corps (AAC), and technicians from the Royal Electrical and Mechanical Engineers (REME). All these soldiers perform a vital function, keeping the aircraft serviceable and airborne.

The current detachment, 664 Squadron AAC, part of 4 Regiment AAC, is commanded by Major Simon Wilsey, who actually flew the 50,000th hour. Major Wilsey said: "The operational tempo we have maintained over the last 8 years has been challenging, but the resilience of our soldiers, and especially that of their families supporting them, is outstanding. I am proud and lucky to command such high calibre, professional soldiers and such an amazing capability as the Apache."

The Apache will continue to play a key role with 16 Air Assault Brigade once operations in Afghanistan draw to a close and the brigade starts to focus on readiness for contingency operations.

Commander of the Joint Aviation Group, Colonel Jaimie Roylance of the Royal Marines, said: "This immaculately versatile machine has, for nearly 8 years, been the most clinically precise and effective attack helicopter when it has needed to be. But, equally, and sometimes at the same time, it has been the most wonderfully effective keeper of the peace, and protector of the vulnerable in its escort and deterrent roles.

"There is a vital role for the Apache now, but I am just as sure that there will be an essential role for this exceptional helicopter, and for the force which flies and maintains her, in the years to come after Afghanistan." SP

PHOTOGRAPHS: Lockheed Martin, MoD UK

HAL proposes single agency to deal with foreign OEMs

The Indian Air Force (IAF) and the Hindustan Aeronautics Limited (HAL) have decided to work on joint plans on various fronts for better understanding of issues so that both contribute effectively in India's defence preparedness. The entire board of HAL and senior officials flew down from Bengaluru to interact with the top commanders of IAF at the conference held at the Air Headquarters (Vayu Bhavan) in New Delhi.

"Hand-holding is important considering the challenges involved in manufacturing and operational fronts", said the Chief of the Air Staff Air Chief Marshal Arup Raha. On his part, HAL Chairman, Dr R.K. Tyagi, mooted the idea of putting up single group or team to deal with foreign original equipment manufacturers (OEMs) on all matters as these OEMs work with Air Force, Army, Navy and other multiple government agencies. "Normally these OEMs work with two or more agencies. There is greater cohesion, understanding and mutual benefits when these OEMs are dealt from one platform", he said.

Senior IAF, MoD and HAL officials took part in the performance review with focus on challenges related to several fleets

MiG-27 in action

such as MiG-21, -27, -29, Su-30MKI, Mirage, Jaguar, Hawk, Kiran, Pilatus, Avro, Dornier, Chetak/Cheetah and Cheetal, ALH, RPA, Lakshya, etc. HAL supports 80 per cent of the IAF inventory.

The discussions also focused on indigenisation, quality and delivery timelines that are often demanding due to factors related to supply chain, transfer of technology and shortage of skilled manpower in the aviation/aerospace sector. SP

Oman Air Force continues F-16 legacy

The Sultanate of Oman accepted the first of its second order of Lockheed Martin F-16 Fighting Falcons in a ceremony April 3 at Lockheed Martin's Fort Worth facility. The fighter aircraft will ferry to Oman later this year. The newest Royal Oman Air Force F-16, built by Lockheed Martin, during pre-acceptance flight tests. The Royal Oman Air Force accepted the F-16 during a ceremony April 3.

In 2002, the Sultanate of Oman became the 23rd member of the F-16 family and now joins the 15 other countries which have ordered additional F-16 jets for their air defence. The new F-16s will add to the Oman Air Force's existing fleet of F-16s used to defend Oman's borders.

"Our partnership with Oman is a proud one," said Orlando Carvalho, Executive Vice President of Lockheed Martin Aeronautics. "Working together, we are not only producing new F-16s, but also upgrading their existing F-16 fleet to provide the Royal Air Force of Oman with a common advanced F-16 capability configuration." SP

PHOTOGRAPHS: IAF, Lockheed Martin

Airbus Defence and Space delivers 17th HC-144A aircraft to US Coast Guard

Airbus Defence and Space, Inc. has delivered the 17th HC-144A Ocean Sentry maritime patrol aircraft to the US Coast Guard. The Ocean Sentry is based on the Airbus CN235 tactical airlifter with more than 235 currently in operation by 29 countries. This is the second of three HC-144As planned for delivery this year.

The latest aircraft will join a fleet of 16 Ocean Sentries operating from Coast Guard Air Stations in Cape Cod, Massachusetts, Mobile, Alabama, and Miami. The Coast Guard is planning to stand up the fourth HC-144A air station in Corpus Christi, Texas, later this year.

The Department of Homeland Security recently recognised the Coast Guard's HC-144A programme as its 2013 DHS Project of the Year. Airbus Defence and Space has worked to deliver the Coast Guard this capability consistently on schedule and on cost. The HC-144A achieved initial operational capability with the Coast Guard in 2008. SP

Northrop Grumman flies first production Smart Node Pod

Northrop Grumman Corporation has completed a series of flight tests demonstrating the first production Smart Node Pod for the US Air Force.

Smart Node Pod is an aircraft-mounted airborne communications system that allows real-time information to be exchanged among many disparate military and commercial radios and different data links, extends the network to the forward edge of the battlefield and relays full-motion video.

Northrop Grumman conducted five flights to certify performance characteristics in February in Virginia Beach. During the flights, the Smart Node Pod demonstrated the ability to transmit full-motion video, imagery, voice and digital messages between warfighters both in the air and on the ground via various waveforms and data links and its interoperability with the proprietary and open source forward tactical handheld devices.

The company is under contract to produce Smart Node Pod systems for the Air Force, with deliveries scheduled through mid-summer of this year. Two different pod designs – a single-pod and a multi-pod architecture – are in production.

Smart Node Pod is based on BACN technology Northrop Grumman developed for the Air Force. SP

F-35 fleet surpasses 15,000 flying hours

The Lockheed Martin F-35 Lightning II fleet recently surpassed 15,000 flight hours, marking a major milestone for the programme.

"Flying 15,000 hours itself demonstrates that the programme is maturing, but what I think is even more impressive is the fact that operational F-35s accounted for more than half of those flight hours," said J.D. McFarlan, Lockheed Martin's Vice President for F-35 Test & Verification. "While the fleet continues to train, we are actively flight testing the software and mission systems that will enable the Marine Corps to declare Initial Operational Capability (IOC) next year as planned."

As of April 7, operational F-35s had flown 8,050 hours while System Development and Demonstration aircraft had accumulated 7,123 flight hours. In 2014, F-35A test aircraft have flown 328 hours; F-35B test aircraft have accumulated 191 hours; and F-35C test aircraft have flown 91 hours. In comparison, operational F-35As have flown 963 hours, while their F-35B and F-35C counterparts have accumulated 1,012 and 98 hours respectively for the year.

"Following successful AIM-120 AMRAAM Weapons Delivery Accuracy (WDA) tests in February and March, we're looking forward to executing additional WDAs in the second quarter," said McFarlan. "In another clear sign of programme maturation, reliability metrics are trending upward as the operations tempo picks up – recently 60 F-35 sorties were flown in one day."

The US Marine Corps plans to declare IOC in 2015, while the US Air Force and Navy intend to declare IOC in 2016 and 2018, respectively.

The F-35 Lightning II, a fifth-generation fighter, combines advanced low observable stealth technology with fighter speed and agility, fully fused sensor information, network-enabled operations and advanced sustainment. Three distinct variants of the F-35 will replace the A-10 and F-16 for the US Air Force, the F/A-18 for the US Navy, the F/A-18 and AV-8B Harrier for the US Marine Corps, and a variety of fighters for at least 10 other countries. SP

Kaman flies first New Zealand Super Seasprite

Kaman Aerospace announced recently that the first New Zealand Government NZ SH-2G(I) Super Seasprite helicopter began production flight testing at Kaman's Bloomfield, Connecticut facility. After production flight tests, this aircraft will be used for maintenance and aircrew training. The programme is on track with deliveries of all 10 aircraft scheduled to be complete in mid-2015.

"This milestone is significant for the programme and our continued commitment to the New Zealand Maritime Helicopter Capability project," said Drake Klotzman, Kaman's Director, AVMRO Programmes.

Peter Lowen, New Zealand Defence Force Project Manager, stated, "This flight of a NZ SH-2G(I) with a 'Kiwi' roundel represents a major milestone. The effort invested by the Ministry of Defence and the New Zealand Defence Force in cooperation with Kaman is now paying off." SP

PHOTOGRAPHS: Lockheed Martin, US Navy

Russian Air Force to receive 16 new MiG-29 SMT fighters

The Russian Defense Ministry has signed a $470 million contract with the MiG Corporation for the delivery of 16 advanced MiG-29 SMT fighters, the ministry said recently.

The company had earlier confirmed the deal in an interview with RIA Novosti, but did not specify its value.

"The value of the contract, including the ground support and test equipment, is more than 17 billion rubles. The contract is a strategic measure for maintaining the combat readiness of the lightweight fighter fleet," the Defense Ministry said in the statement.

As of last year, the Russian Air Force had 28 of the fighters, a single-seat upgraded version of the MiG-29 SM fighter capable of using smart air-to-surface weapons.

The MiG-29 SMT, developed in the first half of the 2000s, features add-on fuselage fuel tanks for extended range, special radar-absorbing paint, and can be outfitted with supersonic and anti-ship missiles. The plane can perform 'blind' bombing runs at night, as well as reconnaissance missions.

The Defense Ministry also plans to sign a contract for the delivery of fourth-generation plus MiG-35S fighters after 2016, with about 100 to be built in the near future, a spokesman for the ministry told reporters.

The move will help optimise the ratio of light and heavy fighters in the Russian Air Force, the ministry said. SP

Japan Police Agency orders another AW139

AgustaWestland and Mitsui Bussan Aerospace announced that the Japan National Police Agency (JNPA) has ordered another AW139 intermediate twin helicopter which will be operated in the Kagoshima Prefecture. The AW139 helicopter will replace an ageing Bell 412 model and will enter service in 2015.

The helicopter has been ordered with a law enforcement configuration that includes rescue hoist, search light, auxiliary tank and dedicated avionic systems such as an Enhanced Ground Proximity Warning System and Enhanced Vision System.

The Kagoshima order increases the number of AgustaWestland helicopters performing law enforcement operations throughout Japanese prefectures to over 40, which represents 40 per cent of the law enforcement market. The AgustaWestland products providing this capability include the AW109, GrandNew, AW139 and the AW101. SP

UCAV: A world first for Dassault Aviation

Dassault Aviation organised a formation flight of the nEURON unmanned combat air vehicle (UCAV) with a Rafale fighter and a Falcon 7X business jet. This was the first time in the world that a combat drone flew in formation with other aircraft. The entire operation lasted one hour and 50 minutes and took the patrol out over the Mediterranean to a range of several hundred kilometres.

According to Eric Trappier, Chairman and CEO of Dassault Aviation, "This achievement clearly reflects our expertise in state-of-the-art technologies. Our skills in both military and civil aviation mutually enrich each other, enabling us to design exceptional airplanes suited for both the armed forces and Falcon business jet operators."

Organising a formation flight like this was a daunting challenge: for each manoeuvre in the planned sequence, aircraft from different holding points and with very different characteristics had to fly alongside each other in a confined space.

An additional challenge was being able to control a pilotless aircraft flying near four other aircraft, all manned (Rafale, Falcon 7X and two chase aircraft for photography). Engineers had to plan ahead to take into account the risk of interference, including aerodynamic turbulence between the aircraft, not to mention electromagnetic interference (EMI) with communications between the nEURON drone and its ground control station.

nEURON is a European programme for an unmanned combat air vehicle technology demonstrator, conducted by Dassault Aviation as prime contractor under the authority of French defence procurement agency DGA. It heralds tomorrow's defence programmes, since it federates expertise from across Europe (France, Italy, Sweden, Spain, Greece and Switzerland). SP

Global Hawk expands satellite communications capability

The US Air Force RQ-4 Global Hawk unmanned aircraft system (UAS) has completed a series of ground and air demonstrations at Beale Air Force Base, California, expanding the adaptability of the Global Hawk system to use an additional Satellite Communications (SATCOM) link to improve the transfer of mission data.

At the request of the US Air Force Air Combat Command, Northrop Grumman worked with Air Force partners to demonstrate that Global Hawk is compatible with different SATCOM architectures with no changes to the aircraft's hardware, software or payload. Taking place from January 13-15, the demonstration highlighted a unique split link capability for Global Hawk that allows it to send mission data through a satellite link that is independent of the link used for command and control.

"This powerful demonstration illustrates Global Hawk's unique versatility," said Alfredo Ramirez, Director and Chief Architect of Northrop Grumman's HALE Enterprise. "We're ecstatic with Global Hawk's ability to provide intelligence, surveillance and reconnaissance products to operational end-users via multiple paths." SP

Northrop Grumman to build five more MQ-8C Fire Scouts for US Navy

Northrop Grumman Corporation will build five additional US Navy MQ-8C Fire Scout unmanned helicopters, which allow ship commanders to extend their intelligence-gathering capabilities far beyond the horizon.

Final assembly of the aircraft will take place at the company's Unmanned Systems Center in Moss Point, Miss. The MQ-8C is based on a larger helicopter airframe that provides greater range, endurance and payload capacity over the currently fielded MQ-8B Fire Scout variant.

"Land-based flight tests of the system are progressing well and we're working with the Navy to conduct our first ship-based flights this summer," said George Vardoulakis, Vice President, medium range tactical systems, Northrop Grumman. "We expect the MQ-8C Fire Scout will be ready for operations by year end."

The MQ-8C can remain on station for more than eight hours and supporting long-duration missions, thus requiring less aircraft to sustain operations. A total of 19 aircraft are under contract with the Navy.

Fire Scout uses on-board sensors to capture full-motion video, identify targets and distribute information in real time to various users. This allows ship-based commanders to maintain awareness of a specified area or keep an eye on a target of interest for long periods of time. SP

X-47B completes night flights

The unmanned X-47B conducted its first night flight on April 10 over Naval Air Station Patuxent River, Maryland. Night flights are the next incremental step in developing the operations concept for more routine UAS flight activity.

The Navy will continue to execute X-47B test events to mature standard operating procedures for cooperative use of the airspace with manned aircraft. SP

PHOTOGRAPHS: Dassault Aviation, NAVAIR

Six CRPF men among 15 killed in twin Maoist attacks in Chhattisgarh

In a major post-poll attack, 15 people, including six personnel of the Central Reserve Police Force (CRPF) and nine civilians, were killed on April 12 when Maoists blew up an ambulance and a bus in two separate incidents in tribal Bastar region of Chhattisgarh.

Maoist guerrillas first triggered a powerful blast, targeting a bus when a polling party was returning, at village Kutulnar between Kutru and Gudma in Naxalite-affected Bijapur district. Seven members of the polling party were killed in the blast and subsequent firing, while five others were injured.

Within an hour, rebels struck again and blew up an ambulance, killing six CRPF personnel, a medical attendant and a driver on the spot in Darba on Jagdalpur-Sukma National Highway 30. The incident took place at Kamanar region in Darbha area.

Additional Director General of Police (Naxalite Operations) RK Vij said, "Six polling personnel died on the spot after the landmine blast while another person died on way to the hospital. Other injured were admitted to hospital at Bijapur and those critically injured were airlifted to Raipur."

The CRPF personnel, who belonged to 80th Battalion, have been identified as Inspector M.K. Rai, Assistant Sub-Inspector Kanti Bai, Head Constable Sitaram and Umesh, Constable Dinesh and a civilian Vasu Sethiya.

Changing their guerrilla attack tactics this time, Maoist rebels have targeted poll party while they were returning after polls. Earlier, they would attack polling parties and security forces before polls or on polling day in an effort to disrupt elections. However, Maoists could not succeed in their designs during both the November polls and during April 10 polling for Lok Sabha constituency in Bastar because of successful area domination by security forces.

Chhattisgarh Chief Minister Raman Singh strongly condemned the killings describing it as an act of cowardice. A group of BJP and its youth wing members took out demonstrations and burnt effigies of Naxalism at different places protesting against killing of innocent people. SP

Director General of BSF

Devendra Kumar Pathak, IPS, presently working as Special DG, BSF is appointed to the post of Director General, Border Security Force (BSF) with immediate effect and till the date of his superannuation on February 29, 2016, or until further orders, whichever event takes place earlier. SP

Affordable terrorism risk insurance

In the wake of the terrorist attacks of September 11, 2001, terrorism risk insurance in the United States became prohibitive. Subsequently, the US Congress passed the Terrorism Risk Insurance Act, which provides an assurance of government support after a catastrophic attack, thus making terrorism risk insurance affordable for businesses.

The programme is to lapse by the end of 2014 and the US Congress is considering the appropriate government role in terrorism insurance markets.

A RAND Corporation study has indicated that in a terrorist attack with losses up to $50 billion, the federal government would spend more helping to cover losses than if it had continued to support a national terrorism risk insurance programme.

A RAND release reports that in the wake of the terrorist attacks of September 11, 2001, terrorism risk insurance quickly became either unavailable or very expensive. The US Congress reacted by passing the Terrorism Risk Insurance Act, which provides an assurance of government support after a catastrophic attack. This has helped keep terrorism risk insurance affordable for businesses.

The programme will expire at the end of this year and the US Congress is considering the appropriate government role in terrorism. SP

TSA further ensures safety and security of employees and travellers

The Transportation Security Administration (TSA) of United States of America has released a report, which concludes a comprehensive review of policies, procedures and operations following the November 1, 2013, incident at Los Angeles International Airport (LAX), which took the life of TSA Officer Gerardo I. Hernandez and injured two other officers and a traveller.

Since the incident, TSA has taken extensive steps to enhance the safety and security of its employees at airports nationwide, increasing protection for TSA employees and the travelling public. The recent announcement builds on the steps already taken to protect the nation's transportation network and those responsible for its enforcement.

"Following the incident at LAX last year, which shocked and saddened us all, I ordered a comprehensive review of policies and procedures at LAX and airports across the country," said TSA Administrator John S. Pistole. "The report released outlines the actions TSA took immediately following the shooting and new procedures to enhance the safety and security of TSA employees nationwide, especially those who work on the frontlines each and every day to protect the travelling public."

The report released takes into account the results of both internal and external working groups, reflecting extensive feedback and participation by TSA employees, industry stakeholders, law enforcement, airport operators, the American Federation of Government Employees, and various travel-related associations, including members of the TSA Aviation Security Advisory Committee.

"We sought the input of all TSA employees through a variety of mechanisms such as town hall meetings and the online Idea Factory. Ideas were submitted from all levels of the organisation, to include our frontline officers and Federal Security Directors," said Pistole. "Many of these ideas were endorsed and incorporated into our action plan. We continue to welcome stakeholder and workforce feedback to improve safety and security at airports nationwide."

Immediately following the shooting, TSA increased the visibility of uniformed officers by ensuring that state and local airport law enforcement agencies increased deployment of uniformed officers in and around security checkpoints. This action included redeploying certain TSA Visible Intermodal Prevention and Response (VIPR) teams to the aviation sector. The agency also provided grief counselling to employees with ongoing follow up.

Since the shooting, the agency has implemented several significant actions focused on improving officer safety and security. These actions include: (1) mandating active shooter training and exercises for TSA employees and requiring biannual evacuation drills; (2) acquiring additional duress alarms to close existing gaps; (3) ensuring that all airports have explicit maximum response times; and (4) continuing to have an increased VIPR team presence at airports. SP

BSNL to start cyber security training

State-run telecom major BSNL has started work on establishing a technical university that will offer engineering and management courses.

The PSU expects to approach All India Council for Technical Education (AICTE) as well as University Grants Commission (UGC) for formal approval within next eight months.

BSNL has formed a committee under its Senior General Manager G.C. Manna to work on the detailed project report. BSNL Director (Consumer Mobility) Anupam Shrivastava said at present he cannot share the exact number of seats that BSNL's technical institute will have but said the company's campus will have a capacity to train 1,500 to 3,000 students at one time.

BSNL will add formal courses on cybersecurity at the centre to contribute in government's target of creating five lakh professionals skilled in this domain by 2018. "Cybersecurity is an emerging concern. We have the infrastructure to train people. Today, we have a crunch of cybersecurity experts. This initiative will not only help us but also other organisations with skilled workforce. It will be a dynamic course and its format will decided after due deliberations," Shrivastava said. SP

'Red Herring' vs Heartbleed

US cybersecurity researchers have developed a technique that fights the Heartbleed virus, and detects and entraps hackers who might be using it to steal sensitive data.

The Heartbleed bug, which became public last week, has set alarm bells ringing across the globe, including India, for fear of exposing millions of passwords, credit card numbers and other sensitive information to hackers.

Researchers at the University of Texas at Dallas created the sophisticated technique, dubbed 'Red Herring,' which automates the process of creating decoy servers, making hackers believe they have gained access to confidential, secure information, when in fact their deeds are being monitored, analysed and traced back to the source.

"Our automated honeypot creates a fixed web server that looks and acts exactly like the original—but it's a trap," said Dr Kevin Hamlen, an associate professor of computer science in the Erik Jonsson School of Computer Science and Engineering, who led the team which created the technique.

"The attackers think they are winning, but Red Herring basically keeps them on the hook longer so the server owner can track them and their activities. This is a way to discover what these nefarious individuals are trying to do, instead of just blocking what they are doing," said Hamlen, a member of the UT Dallas Cyber Security Research and Education Institute (CSI).

The Heartbleed bug affects about two-thirds of websites previously believed to be secure. These are websites that use the computer code library called OpenSSL to encrypt supposedly secure Internet connections that are used for sensitive purposes such as online banking and purchasing, sending and receiving e-mails, and remotely accessing work networks. SP

PHOTOGRAPH: Wikipedia

UK Government unveils CERT UK

The Government has unveiled that the UK Computer Emergency Response Team (CERT UK) will form a key part of the UK's cyber defence strategy. Please see the comment below from Martin Sutherland, Managing Director of BAE Systems Applied Intelligence welcoming the launch.

"The cyber threat is constantly evolving and presenting the security community with new challenges. Highly sophisticated groups of adversaries—whether criminal or state-sponsored—are becoming increasingly well organised and developing ever more complex tools with which to attack their targets. There has rarely been such a far-reaching menace with the ability to threaten every aspect of society—critical infrastructure, business, and the economy as a whole.

"In the face of this, it is vital that the government takes a strong lead and provides an efficient infrastructure that allows the security community to collaborate and share vital information. It's only by working together that we will rise to the challenge the cyber threat presents and the establishment of CERT UK is a positive step forward, which emphasises the importance of effective incident response and information sharing to protect vital UK assets. CERT UK will also be valuable in increasing international collaboration on cyber incidents.

"To achieve these goals it's essential that CERT UK develops a clear and effective model for industry engagement, both in terms of the private sector as a whole and cyber security suppliers specifically. We look forward to working closely with our partners in government, through our roles in the Cyber Incident Response Scheme and the Cyber Security Information Sharing Partnership, to ensure that the new infrastructure provide by CERT UK is as successful as possible." SP

Collier Trophy to X-47B team

The National Aeronautic Association (NAA) has selected the X-47B Unmanned Combat Air System Demonstration (UCAS-D) team to receive the 2013 Robert J. Collier Trophy, aviation's highest honour.

Comprised of leaders in government, business and industry, the NAA voting committee awarded the US Navy, Northrop Grumman and industry partners for "developing and demonstrating the first unmanned, autonomous air system operating from an aircraft carrier."

On May 14, 2013, the X-47B was the first unmanned, tailless aircraft to catapult launch from an aircraft carrier, the USS George H.W. Bush (CVN 77). Three days later, the aircraft made the first carrier-based touch-and-go landings. On July 10, 2013, the X-47B made history again on CVN 77 by being the first unmanned, tailless aircraft to make an arrested landing aboard a carrier.

Conferred annually, the Collier Trophy recognises one team or individual who has made "the greatest achievement in aeronautics or astronautics in America" during the previous year. Past recipients of the trophy include Howard Hughes (1938), Neil Armstrong (1969), the B-2 (1991), Global Hawk (2000) and SpaceShipOne (2004). SP

PHOTOGRAPH: US Navy

Brazilian Army inaugurates Sisfron Command and Control Center

Savis Tecnologia e Sistemas S.A., the lead company of the Tepro Consortium, hired by the Brazilian Army to integrate and implement the Sisfron (Integrated Border Monitoring System) Project, recently concluded the delivery of the Military Operations Center of the Western Military Command, in the city of Campo Grande, Mato Grosso do Sul.

This is Sisfron's first Command and Control Center, which incorporates cutting-edge equipment and will make it possible to analyse the data collected by the sensors, to have situational awareness, and to support decisions and the communication of instructions for the operations under the responsibility of the military command of that area.

Savis is a wholly-owned subsidiary of Embraer Defense & Security, dedicated to integrating and managing systems for border monitoring and control and protecting strategic structures and natural resources, in strict adherence to guidelines of the Brazilian National Defense Strategy. Its objective is to meet needs in of the defence and security sector by stimulating technological development, including future exports and business partnerships, thus strengthening the country's industry and trade balance. SP

Sagem teams up with Sant'Anna School of Advanced Studies of Pisa

Sagem (Safran) signed an agreement recently with Percro, the Perceptual Robotics Laboratory of the Sant'Anna School of Advanced Studies of Pisa, Italy, to jointly develop exoskeleton technologies.

An exoskeleton is an independent electromechanical structure worn by a person, capable of multiplying physical capabilities to enhance load carrying capacity, mobility and precision. While the exoskeleton is not a new concept, it can now take advantage of exciting new technology breakthroughs in digital processing, miniature sensors and control devices.

Sagem will be responsible for the physiological and biomechanical evaluation of these new exoskeleton systems, while Sant'Anna School of Advanced Studies of Pisa will focus on research into control, applied mechanics and mechatronics. The partnership will lead to the development and construction of prototypes for testing by about 2017.

Sagem will bring to this partnership its expertise in autonomous energy management, along with platform control and stabilisation technologies. The project will call on both European funding through the Horizon 2020 (1) research and innovation programme, and investments by Safran. SP

Lockheed Martin opens new office in Israel

Lockheed Martin Chairman, President and CEO Marillyn Hewson officially opened the company's office in Israel to support the Corporation's growing presence in that important country. The new office further demonstrates the Corporation's commitment to supporting the Israeli Defense Force and their "Move to the South" campaign.

Former Israeli Air Force Brig. General Shelly Gotman was recently appointed as Managing Director of Israel for the company's Information Systems & Global Solutions (IS&GS) business and will lead the office.

Lockheed Martin's IS&GS business has been the number one provider of information technology solutions and services to the US Government for the past 19 years. It has been growing its international presence with major operations in the United Kingdom, Europe, and Australia. Current IS&GS customers include NATO; British air traffic management organisation NATS; the Australian Tax office; and the United Kingdom Ministry of Justice. SP

Navantia and Synergy Group MoU in Brazil

Navantia Synergy Group has signed a memorandum of understanding (MoU) to start the process of creating a Strategic Defense Company (EED) in Brazil, which will combine Navantia's latest technology in military shipbuilding with the Synergy Group's manufacturing capabilities.

The new company that will be formed through this collaboration will be known as Construções Navais of Defesa do Brasil, and will promote Navantia products in Brazil in order to become a supplier of record of the Brazilian Navy, Marinha do Brasil. SP

Crowd management simulation from SGIL

Recreating real-world environments is challenging, costly and dangerous. Utilising games based learning and simulation in the military sector ensures employees are equipped with the vital skills required to deal effectively with a diverse range of scenarios.

UK-based Serious Games International (SGIL) has developed i-Crowd, a crowd management simulation for the police and security services incorporating crowd dynamics to support in the effective dispersal of a crowd.

The challenge is to prevent mass public gatherings escalating into major incidents through the successful training of in crowd management via a dedicated 3D simulator.

SGIL has worked with public order training experts from the Metropolitan Police (London UK) to turn their current training programme into a fully interactive simulator. The i-Crowd platform is designed as a command and control simulator (Gold and Silver commanders) and is delivered on a large multi-touch interactive table. Specifically the simulator uses crowd dynamics which alter the reaction of the crowd depending upon the users input.

The features include: Pre-Deployment planning and briefing; Rapid replication of any worldwide urban area in 3D; Multiple scenarios for training purposes (damage to property, individuals); Crowd communication tools; Location of dispersal routes; Deployment of police assets (horses, dogs, helicopters, armed response); Post event evaluation; Full individual training records; Justification for the deployment of specific assets.

SGIL has also launched Vista, a cutting-edge innovative tactical firearms training solutions for specialist firearms professionals in law enforcement and special operations to train in a variety of virtual scenarios, incorporating single/multiple person tactical assault, decision-making and situational awareness training.

The challenge was to create a cutting-edge, mobile, cost-effective and innovative training solution for the police and military to train in a variety of virtual scenarios, combining marksmanship with situational judgement.

SGIL created a virtual reality head mounted display system

combining with sensor technology to replicate any scenario within an immersive training environment. The solution consists of:

Training and de-briefing facility; Briefing tool for training and operational – view layout, floor plan, set call signs – plan operation, lessons learned etc; In-simulation kit – choice of night vision, different firearms as required; Full motion capture analytics to track each user within the simulation; Multiple scenarios (boat, high rise building) complete with hostage situation assault IED, key target search, terrorist attack; Multiple environmental options (night, day, smoke, noise); Use of trigger sensor on real weapons, deactivated or replica as required; Decision-making in simulation (judgement testing for taking a shot in a critical situation) thought process in a very complex and stressful situation. "Shoot or No Shoot" – ability to de-escalate a situation by not shooting. SP

Remote troops to have high-speed wireless networks on UAVs

Missions in remote, forward operating locations often suffer from a lack of connectivity to tactical operation centres and access to valuable intelligence, surveillance, and reconnaissance (ISR) data. The assets needed for long-range, high-bandwidth communications capabilities are often unavailable to lower echelons due to theater-wide mission priorities. The Defense Advanced Research Projects Agency's (DARPA) mobile hotspots programme aims to help overcome this challenge by developing a reliable, on-demand capability for establishing long-range, high-capacity reachback that is organic to tactical units.

The programme is building and demonstrating a scalable, mobile millimetre-wave communications backhaul network mounted on small unmanned aerial vehicles (UAVs) and providing a one Gb/s capacity. DARPA performers recently completed the first of three phases in which they developed and tested key technologies to be integrated into a complete system and flight tested in subsequent phases.

"We're pleased with the technical achievements we've seen so far in steerable millimetre-wave antennas and millimetre-wave amplifier technology," said Dick Ridgway, DARPA Program Manager. "These successes—and the novel networking approaches needed to maintain these high-capacity links—are key to providing forward deployed units with the same high-capacity connectivity we all enjoy over our 4G cell-phone networks." SP

PHOTOGRAPH: Wikipedia

PHOTOGRAPH: Wikipedia

Snowden's security breach to cost billions

A top US military official has stated that the cost of changing tactics and coping with the security breach, post Edward Snowden, could cost the US in billions of dollars. Edward Snowden who exposed government surveillance will have roughly 1.7 million documents affected and that includes top-secret military capabilities, operations and tactics.

The cost of changing those tactics and coping with the security breach could total billions of dollars, Chairman of the Joint Chiefs of Staff Martin Dempsey told the House Armed Services Committee recently. The US Defense Department officials, along with officials from other agencies, are still investigating the documents Snowden took and determining how to blunt the risks they pose to US security, Dempsey said.

"The mitigation task force will need to function for about two years—that's the magnitude of this challenge," Dempsey said. "I suspect it could cost billions of dollars to overcome the loss of security that has been imposed on us." SP

Gaping hole in President Jacob Zuma's residence

While there has been much fuss about the security at South African President Jacob Zuma's personal abode at Nkandla, things have fallen apart on that front at his official provincial residence in KwaZulu-Natal.

There is a gaping hole in the 4-metre-high, multimillion-rand bullet-proof security fence erected in 2009 to beef up security around the historic John L. Dube House – formerly King's House – in Morningside, Durban.

The fence, part of an installation that was believed to have cost taxpayers R50 million, has been in that state since Christmas, according to readers who tipped off *The Independent*. One of the many panels it is made up of has come loose and collapsed beside a clump of bamboo trees on the Eastbourne Road side of the property. The electric wiring running along the top of the fence has also been damaged. The special fence, set 10.7 metres away from the much lower exterior fence, was deemed necessary for Zuma's safety, according to the Department of Public Works.

DA spokeswoman on Safety and Security, Diane Kohler Barnard, said it appeared that there was no security left at the residence. It gives the indication that if the fencing is allowed to collapse, there's no security. The place could have been broken into and vandalised. "We don't know. Certainly, there's no security left."

John L. Dube House, which is on a 5.26-hectare property, dates back to 1872, according to the website of the Presidency. "King's House lived up to its name from the beginning. In 1906 it welcomed its first royal guests when their royal highnesses the Duke and Duchess of Connaught and Princess Patricia paid a quick visit to Durban," read the site.

"On May 17,2012, President Zuma renamed King's House Dr John L Dube House, after the highly regarded educationist, journalist and first President of the ruling ANC, Dr John Langalibalele Dube." SP

Judge fines for safety breaches on worksite

Matthew Skeet (19) and Kevin Ruffles (57) were killed when the gable wall of a barn conversion they were working on in Worlingworth collapsed and fell on them on October 21, 2010. Ipswich firm Elliston Steady & Hawes, the site contractor, and Barry Potts, 65, a structural engineer from Freston, appeared before Ipswich Crown Court, having previously pleaded guilty to health and safety offences at an earlier hearing.

The incident was investigated by the Joint Norfolk and Suffolk Major Investigation Team, working closely with the Health and Safety Executive.

Last June Potts was summonsed to court for two counts of manslaughter by gross negligence and one offence under the health and safety act, and legal representatives for a local building were issued summons for two offences under the health and safety act. At a hearing at Southwark Crown Court in December, guilty pleas were offered on behalf of Potts and ESH in relation to health and safety breaches.

Justice Rabinder Singh acknowledged there was never any suggestion ESH's failing had caused the two men's deaths, and said no cause could be proven with Potts' failings. However, he said, Potts had fallen "well below the standards expected by him of the health and safety at work act" and fined him £15,000, ordering him to pay a further £5,000 in costs.

And although he agreed that ESH was "entitled to rely upon" Potts to carry out the work safely, Singh said its failure to ensure that written statements were provided, constituted a "serious breach" and fined the firm £45,000, ordering it to pay a further £15,000 in costs. SP

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