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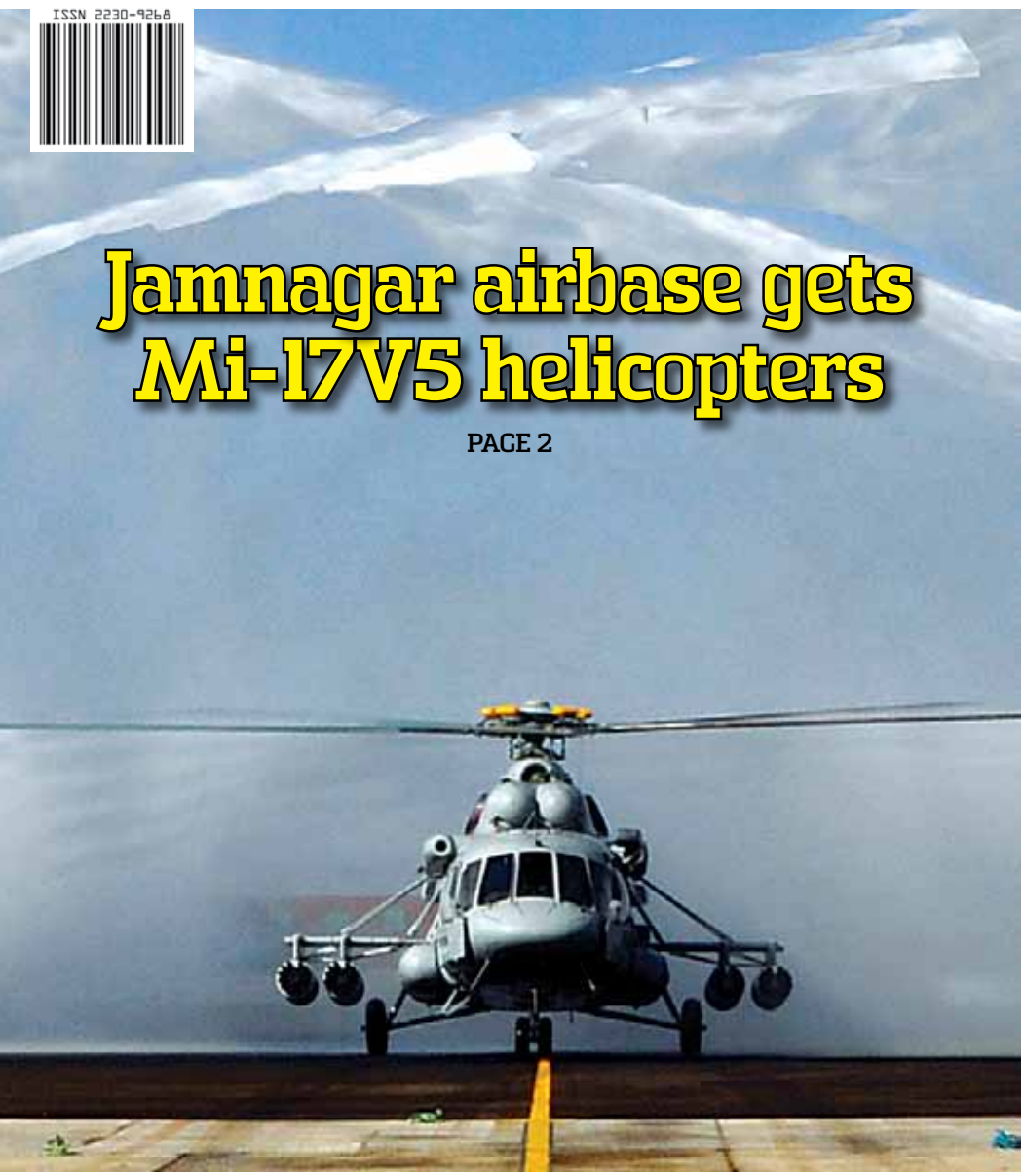

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Jamnagar airbase gets Mi-17V5 helicopters

It was a proud moment for the Helicopter Unit at the Air Force Station in Jamnagar, when state-of-the-art Mi-17V5s were formally inducted at the base on March 19. The unit was raised almost 42 years ago on March 3, 1972, at Guwahati and has been operating the Mi-8 helicopters, the workhorse for the IAF.

Air Marshal Daljit Singh, Air Officer Commanding-in-Chief of South Western Air Command, handed over the formidable helicopters to the unit in a ceremony. To mark the occasion the helicopters rolled through the water cannon, keeping up with the traditional welcome for new inductions. The event was also graced by the senior officers from Headquarters South Western Air Command and Air Commodore P.R. Navalkar, Air Officer Commanding, Air Force Station, Jamnagar.

Speaking on the occasion, the Air Marshal expressed confidence in the potential increase in capabilities of the unit in undertaking multifarious missions in its area of responsibility, especially Saurashtra and Kutch regions of Gujarat. The unit has the proud distinction of having served across the length and breadth of country and across the spectrum of helicopter operations since its raising. The unit has been doing yeoman service in providing succour and relief during natural calamities in Gujarat since it relocated at Jamnagar in 1990. The unit has been an integral part of relief operations carried out during the massive earthquake at Bhuj and unforeseen tragedies like flash floods, shipping accidents, etc.

PHOTOGRAPH: PRO Defence

The multi-purpose Mi-17V5 is equipped with state-of-the-art avionics and navigation systems like on-board weather radar and autopilot. It also has advanced night-vision equipment and a glass cockpit. The Mi-17 V5 chopper is a medium-lift helicopter which can carry over five tonnes of load. SP

Cover:
The multi-purpose Mi-17V5 is equipped with state-of-the-art avionics and navigation systems like on-board weather radar and autopilot. It also has advanced night-vision equipment and a glass cockpit and can carry over five tonnes of load.

Cover images: PRO Defence, Indian Navy, Boeing

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China's duplicity continues

At a time when the political battles are hardening and voices are getting shrill in a political slug fest, Australian journalist Neville Maxwell has released a highly classified report which shows how Jawaharlal Nehru, then India's Prime Minister, botched up during the Indo-China War of 1962. The release of the confidential Henderson Brooks report by Maxwell has provided further ammo to political parties, targeting the Congress and intensifying the debate on Prime Minister Nehru and Home Minister Sardar Patel as to who worked more for national security.

While the report may not contain significantly new revelations about the poor state of India's forces during the war, it discusses "how the Army was ordered to challenge the Chinese military to a conflict it could only lose," according to Maxwell. Sardar Patel had, in his letter to Nehru, had cautioned about the duplicity of China.

The Henderson report continues to be considered classified by the Indian Government. As late as April 2010, the Minister of Defence A.K. Antony told Parliament that the contents of the report are "not only extremely sensitive but are of current operational value." Even now, we happen to witness incursions along the border. For India, the threat is on two fronts—western and north-east. In his column, Lt General (Retd) P.C. Katoch has underscored the importance of understanding the evil designs of China and how India needs to work out its strategy.

Having said that what India has to post-haste take up is military modernisation if we have to talk about defence preparedness. For this the government has to invest substantially in force modernisation. The recent scams in defence deals have kind of put brakes on the process and it is hoped that after the elections, it will get sorted out quickly, in the interest of the security of the nation.

In this issue, we have focused on a couple of technological developments that are taking place in the universities in the West, sadly though not in India. These path-breaking technologies impact the soldier on the front. The University of Florida is conducting research on how to eliminate waste and streamline the process of distributing the US Army's legendary Meal, Ready-to-Eat (MREs). Research is underway on testing the longevity of MREs, along with first strike rations (FSRs) for front-line troops and Special Forces. The research provides a system to insure that military rations delivered to US soldiers around the world will have good quality.

Elsewhere at the Vanderbilt University's Institute for Software Integrated Systems, along with the Defense Advanced Research Projects Agency (DARPA), are working on a programme called Transformative Apps, an effort designed to develop a family of military-relevant software apps. The programme is aimed at improving the security or information assurance technology of smartphones in order to allow for their use in rugged, tactical combat environments where there are often no fixed infrastructures such as cell towers. It is being experimented in Afghanistan.

SP's M.A.I. endeavours to get information on technological developments from across the world in the hope that it would positively impact on the developments here, though tardy.

Happy reading!

Jayant Baranwal
Publisher & Editor-in-Chief

LT GENERAL (RETD)
P.C. KATOCH

Facilitation of Defence Offsets

Perhaps there is need to provide higher multiplier values to extremely critical technologies required by DRDO in order to attract foreign vendors. It may be helpful if MoD assigns multiplier values on a case to case basis, based on criticality, importance, requirement and urgency.

Defence Offsets Management Wing (DOMW), Department of Defence Production (DoDP), the Ministry of Defence (MoD) has issued an office memorandum on February 14, notifying operationalising of a Facilitation Cell-DOMW at Central Marketing, Scope Complex, Lodhi Road, New Delhi. The objective is to enhance transparency and facilitate free and easy access to industry participants to approach the DOMW for discussion on any matter pertaining to the offset policy and speedy redressal of grievances. Establishment of a Facilitation Cell by DOMW is a welcome step but it needs to be remembered that the DOMW was preceded by the Defence Offset Facilitation Agency (DOFA) that was established in 2006 but had to be shut down as it could not deliver upon what was expected. The Parliament was informed in August 2012 that Indian companies had signed 19 offset contracts with foreign vendors until mid-2012; IAF procurements generated 80 per cent of all offsets and naval procurements accounted for the other 20 per cent. The Army signed its first offset contract in March 2013 for thermal imaging integration for the BMP–II vehicles. According to the new guidelines, the responsibility of defence offsets is divided between two organisations: the Defence Acquisition Council (DAC) will evaluate the offset proposals and finalise the contracts whereas the DoDP will be responsible for implementation of offset contracts, including monitoring the progress of the contracts. The newly established DOMW has been assigned the responsibility of offset contract management.

India has emerged amongst the largest importers of defence equipment. According to the Stockholm International Peace Research Institute (SIPRI) fact sheet of 2013, India is among the top 10 countries in terms of military expenditure. Our defence sector has investments primarily from Russia, Israel, UK and USA. The 13th Indo-Russian summit (December 2012) led to $5 billon investment by Russia. US aerospace major Boeing plans $30 million investment as "offsets" for the four additional P-8I long-range maritime patrol aircraft that India intends to buy. Recent and potential defence deals include: $10.4 billion 126 Rafale aircraft for medium multi-role combat aircraft; $3,000 million deal for 197 light observation/utility helicopters; $3,500 million deal for 7 Scorpene submarines; $7,600 million deal for 12 stealth frigates; and $1,000 million deal for 16 multi-role helicopters. Defence offset obligations are applicable to all capital acquisitions where the indicative cost is ₹300 crore ($50 million approximately) or more and the schemes are categorised as: 'Buy (Global)' involving outright purchase from foreign/Indian vendors; and 'Buy and Make with Transfer of Technology (ToT)' i.e. purchase from a foreign vendor followed by licensed production in India. Obligation: value of the offset obligations prescribed under the Defence Offset Guidelines (DOG) is 30 per cent of the estimated cost of the acquisition in 'Buy (Global)' category acquisitions and 30 per cent of the foreign exchange component in 'Buy and Make with 'ToT" category acquisitions. Offset obligations may be discharged by any one or a combination of the following methods: Direct purchase of, or executing export orders for, eligible products manufactured by, or services provided by Indian Offset Partners and Indian Enterprises, i.e. defence public sector undertakings (DPSUs), Ordnance Factory Boards (OFB), etc; FDI in joint ventures with Indian enterprises (equity investment) for the manufacture and/or maintenance of eligible products and provision of eligible services; investment in 'kind' in terms of ToT to Indian enterprises for the manufacture and/or maintenance of eligible products and provision of eligible services: through joint ventures or through the non-equity route for coproduction; ToT should be provided without licence fee or restriction on domestic production, sale or export; Investment in 'kind' in Indian enterprises by providing equipment through the non-equity route for the manufacture and/or maintenance of eligible products and provision of eligible services (excluding ToT, civil infrastructure and second-hand equipment); Provision of equipment or ToT to government institutions and establishments engaged in the manufacture and/or maintenance of eligible products and provision of eligible services, including DRDO; Technology Acquisition by the DRDO in areas of high technology.

For any country to be strong, a vital element is a strong defence-industrial base. Our Defence Research and Development Organisation (DRDO), OFBs and DPSUs have been trying to fulfill their mandate to master the science of designing, developing and manufacturing cutting edge military technologies ever since. However, what has been achieved is "pockets of excellence", as acknowledged by high placed DRDO officials themselves. India has adopted numerous methodologies like licensed production, ToT, JVs and indigenous research and development to acquire and absorb critical defence technologies. However, 67 years after inde-

pendence we continue to import over 77 per cent of our defence needs which is a shame. To say that we are lagging behind the envisaged goals of realising a sustainable indigenous defence manufacturing industry would be a gross understatement. Offset practices in the global defence industry have been instrumental in influencing the defence related decision-making of several countries with varying results and degrees of success. Defence offsets encompass a variety of compensation arrangements mandated by foreign governments as a condition on the purchase of defence equipment, weapons and services. Often, the aim of the process is to even-up a country's balance of trade. Offsets generally include technology transfer, foreign investments, joint ventures, co-development, and co-production and the like with the aim of enhancing indigenous industrial growth. Countries use offsets to obtain critical military technology, to ease the burden of large defence purchases on their economy, to increase or preserve domestic employment and to promote targeted industrial sectors. The key objective of the defence offset guidelines was to leverage capital acquisitions to develop the defence industry, improve defence research and encourage development of synergistic sectors like civil aerospace and internal security. These guidelines were last revised in August 2012 and the latest Defence Procurement Procedure 2013 came into effect on June 1, 2013. The first offset contract was signed for the purchase of medium power radars in 2007.

The application of offsets against acquisitions in defence is a progressive step towards making India self-reliant. Over the last two decades, offsets have become a common feature of major defence acquisitions all over the world, unleashed by the forces of liberalisation and globalisation. More than 100 countries have incorporated an official offset policy as a part of their foreign military procurement deals. Countries use various incentives like multipliers; offset banking, credits for R&D and ToT to attract foreign vendors. There is no particular template which suits the requirements of every country. A country needs to define the offset concepts and procedures in accordance with its specific aims and requirements. The present offset policy, incorporating many changes, came into effect from August 1, 2012. After much speculation, the revised policy brought some clarity to the defence offset procedures while trying to strike a balance between the demands of the foreign original equipment manufacturers (OEMs) and the interests of the domestic defence industry. The offset policy which began its journey in 2005 appears to have reached a sustainable degree of effective operationalisation. In India, all contracts above ₹300 crore require 30 per cent of offset. Indian firms and JVs are exempted from offset obligations provided the indigenous content is over 50 per cent. India also accepts subcontracting in outsourced services, such as engineering and defence software. The new offset guidelines promote investment in micro, small and medium enterprises (MSMEs) by applying a multiplier factor of 3.0 to the offset calculations. It also facilitates technology acquisition from a select list, by the DRDO. The offset discharge banking period is extended to seven years. Period of execution of offset contracts is now allowed up to two years beyond the period of main procurement contract.

PHOTOGRAPH: BAE Systems

According to reports, the total amount of offset contracts signed by India so far is around $5 billion. With the emphasis on modernisation of the defence forces, the scope and value of offset contracts are expected to rise exponentially. Different stakeholders have differing opinions on the level of success of offsets to deliver on the key result areas of defence procurement.

The report of the Comptroller and Auditor General of India (CAG) of November 2012 is the latest review on the subject, throwing light on the performance of offset projects but details of the status of offset contracts and the names of Indian offset partners are not available in the public domain. The CAG report that was tabled in Parliament in November 2012 indicated certain shortcomings in the offset contracts signed till mid-2012. The report highlighted that most of the offset contracts had not adhered completely to the DPP guidelines. The report also questioned the waivers given by the MoD to certain foreign vendors in fulfilling the offset obligations.

It would be prudent for DOMW to draw lessons from the DOFA fiasco and not repeat them. Some of the major issues that merit consideration are: despite signing about 20 offset deals, the status of most of the contracts is still not known. It is difficult to understand the rationale behind concealing the details and progress of offset contracts. This by itself militates against the repeated claims of transparency by MoD; what constitutes a legitimate offset are questions still searching for answers. The physical valuation of offsets is complex. Value of parts locally sourced could be straightforward, but cost of ToT and helping set up industrial base could be vague. Coproduction and subcontracts are the best forms of direct offsets; offset/industrial partnership management has become a specialised field and partnership management organisations, like Offset India Solutions (OIS) have come up. Whether DOMW can perform such function on its own or not only time will tell; there have been provisions for ToT in earlier defence procurement programmes but the experiences of indigenous industry in absorbing and utilising the technology received from foreign OEMs have fallen short of expectations in the past, two examples being the Bofors guns and the BEML-Tatra deal. Lack of technology absorption capability has been the main reason for non-under-utilisation of ToT from foreign sources. Though the ToT provision seems promising, there is no guarantee that India will be able to make full use of it, considering its inability to do so in the past; defence contractors are not only worried about intellectual property rights or the technology moving to unintended sources, but also about some of the recipients developing technologies and later becoming competitors at their expense; definition of multiplier values may not help India in gaining critical defence technologies. The foreign companies which invest considerably in R&D may not be comfortable in sharing those high-end critical technologies with India at a multiplier value of as low as 2. There are no specific incentives to share high-end technologies and foreign OEMs can get the benefit of multipliers by sharing comparatively non-critical technologies for the same multiplier value. Perhaps there is need to provide higher multiplier values to extremely critical technologies required by DRDO in order to attract foreign vendors. It may be helpful if MoD assigns multiplier values on a case-to-case basis, based on criticality, importance, requirement and urgency; DOMW should ensure there is no ambiguity in the process including through a fully automated system that will monitor, account for, and audit offsets in real time, which should be preferably web-based; and, DOMW must provide accurate and detailed information about the status of offset contracts and the technology/capability received from each contract to help stakeholders undertake cost-benefit analysis, facilitating mid-course corrections. SP

LT GENERAL (RETD)
P.C. KATOCH

Lessons from 1962

India failed to read Chinese intentions despite Chinese ousting nationalists from Manchuria in 1948, sweeping into Tibet in 1951, occupying Sinkiang and shelling Taiwan in 1954, occupying Aksai Chin from 1955 to 1957, butchering own 30-40 million population during the 'Great Leap' and occupying Tibet in 1959 breaching promises made.

Leakage of the Henderson Brooks report by Australian journalist Neville Maxwell has created considerable commotion not that the facts the report brings out were not known. A number of books and articles have been authored on the 1962 Sino-Indian War. The commotion is more because of the approaching elections and highlighting of Prime Minister Jawaharlal Nehru's follies. The Ministry of Defence (MoD) has responded with a terse comment that the report being Top Secret, it would be inappropriate to comment. More leaks may follow. We need to take stock of what the lessons are from the 1962 Sino-Indian War.

There could have been no one better to warn Nehru of China's intentions than Sardar Patel. In his letter dated November 7, 1950, Patel said: "We have to consider what new situation now faces us as a result of the disappearance of Tibet, as we knew it, and the expansion of China almost up to our gates. Throughout history we have seldom been worried about our north-east frontier....We had a friendly Tibet which gave us no trouble....Chinese irredentism and communist imperialism are different from the expansionism or imperialism of the western powers. The former has a cloak of ideology which makes it ten times more dangerous. In the guise of ideological expansion lie concealed racial, national or historical claims. The danger from the north and north-east, therefore, becomes both communist and imperialist...We shall now have to reckon with communist China in the north and in the north-east, a communist China which has definite ambitions and aims and which does not, in any way, seem friendly disposed towards us."

Historians agree that Chou-en-Lai's guile completely outwitted Nehru who believed that China and India could live peacefully with open borders and not recognising that economic growth and national security are symbiotic. Military preparedness continued to be wholly neglected. Nehru continued to support China's control over Tibet. The 1954 Panchsheel Agreement produced visions of everlasting peace. UN Security Council seat offered to India was magnanimously given to China. Chou-en-Lai sang peace during his visit to India in 1960, which was lapped up by Nehru and Defence Minister Krishna Menon appointing B.M. Kaul (an ASC officer) to head the Corps facing the Chinese battlefront. Krishna Menon went to the extent of rubbishing a war game conducted by the military in Lucknow in 1961 that assessed how the Chinese would attack. In September 1962, Krishna Menon addressed the National Defence College (NDC) in Delhi and when queried about possibility of China attacking India, told the audience to shut up, saying if such was the thinking then NDC should be shut down.

A.G. Noorani in his book *Two Sides of Nehru* says that it was Nehru who "shut the door to negotiations on the (India-China) boundary on July 1, 1954," and his refusal to negotiate plus the 1960 rebuff to Chou-en-Lai....may well have sowed the seeds of the 1962 India-China War. What happened in 1962 is well known including Nehru's missive to an ill-prepared and ill-equipped army to occupy forward positions and throw the Chinese out of Thagla Ridge. We fought a superior enemy in 1962 not because of the size of China but because we lacked strategic forethought, were unable to read the enemy, had poor political and military leadership and with an army that was armed, equipped and trained very poorly.

Nehru died a disillusioned man after telling the nation that "a powerful and unscrupulous opponent had responded with evil to our good".

The lessons of 1962 can be summarised as follows: China duped India at the highest political level into believing that China would never attack; India failed to read Chinese intentions despite Chinese ousting nationalists from Manchuria in 1948, sweeping into Tibet in 1951, occupying Sinkiang and shelling Taiwan in 1954, occupying Aksai Chin (38,000 sq km) from 1955 to 1957, butchering own 30-40 million population during the 'Great Leap' and occupying Tibet in 1959 breaching promises made; military advice was totally ignored by India's hierarchy; Thagla Ridge incident was mere excuse for the People's Liberation Army's (PLA) already planned pre-emptive strikes across a vast frontier creating massive shock action; China timed the offensive coinciding with the Cuban missile crisis to divert attention of US and USSR; PLA employed human wave tactics and envelopment to force capitulation; Indian positions with adequate fighting potential that could have been re-supplied by air were ordered to withdraw; IAF could have been successfully used, but was not; and, appointing B.M. Kaul as Corps Commander and making him responsible for NEFA was a huge mistake. SP

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

GSL-designed and built INS Sumedha joins Indian Navy

The maritime security of India got a significant boost recently with the induction of state-of-the-art new generation Naval offshore patrol vessel (NOPV), INS 'Sumedha', indigenously designed and built by Goa Shipyard Limited. The vessel was formally commissioned into the Indian Navy by VAdm Anil Chopra, FO C-IN-C East on March 7.

VAdm Anil Chopra said "the timely delivery of Sumedha is truly testimony to the Navy's twin pronged commitment to indigenous design and ship construction".

Congratulating Goa Shipyard for meeting the timelines of the ship's delivery to the Indian Navy, as well as for the quality of work, VAdm Chopra said "the warship-building process is recognized the world over as one of the most challenging feats of engineering, from design through hull construction, outfitting, integration of diverse equipment, setting to work and finally, the delivery acceptance trials. INS Sumedha, is a fine example of this complex process".

This 105 metre Vessel is the third in the series of four New class of NOPVs designed and built by GSL for the Indian Navy. INS 'Sumedha' is the 200th Vessel built by GSL and marks yet another significant milestone in the nation's journey towards indigenisation and self-reliance.

RAdm (Retd) Shekhar Mital, NM, CMD GSLsaid "even before delivery of ongoing four NOPVs, we have improved upon our own design and CG OPVs with higher head space, larger beam, higher stability, better ship handling capability, higher fuel efficiency (at cruising speed 15 per cent less powering requirement than NOPVs) are under construction. I strongly feel that Indian Navy may like to gain from this advance design by a 'repeat' order. Further as per naval requirement, we can add on anymore weapons/modules in this improved design. Repeat order will optimise cost for Navy, as we will not include any R&D charges on the project and will pass benefit of available improved design to Navy".

INS 'Sumedha' will help meet the increasing requirement of the Indian Navy for undertaking ocean surveillance and surface warfare operations in order to prevent infiltration and transgression of maritime sovereignty. This vessel is suitable for monitoring sea lanes of communication, defence of offshore oil installations and other critical offshore national assets. Besides, the Vessel can be deployed for escorting high value ships and fleet support operations.

CMD GSL further said "keeping in view the Maritime Capability Perspective Plan of Navy and Coast Guard, GSL has embarked upon a massive modernisation programme aimed at creating new facilities and infrastructure, while augmenting existing ones. We have spent Rs. 300 crore from our own reserves on account of anticipated MCMV project. further modernization Phase III, at cost of ₹400 crore is progressing rapidly and is expected to be completed by Jul 2015. This will enable us to deliver quality ships/MCMV project at a competitive cost, with shorter construction periods and will increase our production capacity and product mix."

"It is intriguing to me that against 45 naval ships under construction in the country at various shipyards, GSL has only one vessel in hand. I am sure it is our turn to get the attention of Navy and MoD. I am certain that policy makers at MoD and Navy will leverage these strategic assets/ship building capabilities built over the years at GSL", CMD GSL added. SP

Self-healing paint could halt rust on military vehicles

A new additive could help military vehicles, including the Marine Corps variant of the joint light tactical vehicle (JLTV), heal like human skin and avoid costly maintenance as a result of corrosion, officials announced on March 18.

Developed by the Johns Hopkins University Applied Physics Laboratory in partnership with the Office of Naval Research (ONR), polyfibroblast allows scratches forming in vehicle paint to scar and heal before the effects of corrosion ever reach the metal beneath.

Polyfibroblast is a powder that can be added to commercial-off-the-shelf paint primers. It is made up of microscopic polymer spheres filled with an oily liquid. When scratched, resin from the broken capsules forms a waxy, water-repellant coating across the exposed steel that protects against corrosion.

While many self-healing paints are designed solely for cosmetic purposes, polyfibroblast is being engineered specifically for tactical vehicles used in a variety of harsh environments.

From rainstorms to sunlight, tactical vehicles face constant corrosion threats from the elements. Corrosion costs the Department of Navy about $7 billion each year. About $500 million of that is the result of corrosion to Marine Corps ground vehicles, according to the most recent Department of Defense reports.

Vehicles transported and stored on ships also are subject to salt spray from the ocean, a leading cause of problems for military hardware. In one laboratory experiment, polyfibroblast showed it could prevent rusting for six weeks inside a chamber filled with salt fog.

"We are still looking into how to make this additive even more effective, but initial results like that are encouraging," said Scott Rideout, Deputy Program Manager, Light Tactical Vehicles, Program Executive Officer Land Systems, which is overseeing continued development on polyfibroblast for potential use on the Marine Corps variant of the JLTV. "Carry that out of the lab and into the inventory, and that translates to improved readiness and big savings." SP

PHOTOGRAPH: Indian Navy

BlackShark selected as heavy weight torpedo for Project 75

WASS clarified that the Blackshark torpedo has been selected by the Ministry of Defence for the Scorpene submarine after rigorous selection process. All the negotiations have been completed and WASS is waiting to be called for final signatures. Any news to the contrary can only be attributed to its competitors, to derail the process and rob Indian Navy in getting the best and most advanced HWT in the world.

During this period WASS has established long-term relationships with Indian industry, both private and public. It has entered into number agreements to manufacture critical parts of WASS products not only for Indian contracts but also for its international business. SP

Indigenisation: WASS ahead of its competitors

Since its entry into India in 1976, with the sale of LWT A244s, WASS has remained ahead of its competitors in indigenising its products. WASS opened a liaison office in 1997 to facilitate growing business in India, understand the procurement process and potential of Indian industry. Having understood the Indian market it opened a wholly-owned subsidiary in 2010, much before the issue of DPP 2013 (which forces OEM's to indigenise). Today most of the foreign industries are publicising their effort to find an Indian partner, on the contrary WASS "has already made", strict relationship with Indian companies such as BDL, HEB, Tata Advanced System, Larsen & Toubro, etc. It has entered into a number of agreements to manufacture critical parts of its products not only for Indian market but also for its international business. WASS treats India as its domestic market and is committed to offer India the latest and the best state-of-the-art products. SP

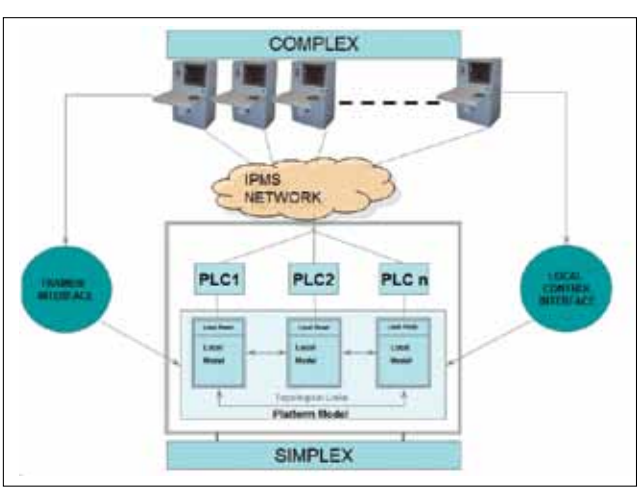
Navantia gets a new contract in Australia

The Royal Australian Navy has contracted an extension of the supply of the Integrated Platform Management System, with the target of incorporating an advanced training system on board: On Board Training System (OBTS).

The OBTS consists of a software of simulation that provides to the crews a training facility, thanks to the simulation of the equipments and systems connected to the IPMS, as well as his dynamic response to the actions of the operator.

The software implements a dynamic coherent real-time simulation and allows the operators of the IPMS consoles, to connect to a virtual ship with the same behaviour that the real one, for individual and in-groups training.

The OBTS is a complement of the IPMS that provides a high degree of training to the crews in order to respond to any possible situation in real navigation. The OBTS is implemented on the basis of the technology COMPLEX/SIMPLEX developed by Navantia Sistemas.



The value of this extension of supply is of approximately 3.1 million euros, and will be developed during a term of 24 months.

Australia has a strategic importance for Navantia, country where besides the successes obtained in the area of the naval construction, it has managed to be a reference in the systems area, as the supply of the Integrated Platform Management System of the ships.

Navantia is also initiating activities in the area of life cycle support, where it foresees to be a relevant actor, not only in the maintenance of the supplied ships, but also in the maintenance of the systems and equipments integrated in the platforms: ALHD, LLC and AWD. SP

PHOTOGRAPHS: WASS, Navantia

LT GENERAL (RETD)
P.C. KATOCH

Uighurs strike back

Chinese analysts say the most potent threat to China is that of Islamic fundamentalism that defies all borders and is already emanating in the heart of China spearheaded by the ETIM. What they do not mention is that this threat itself or at least directional guidance and support most likely comes from within Pakistan's radical core.

Ürümqi is a major industrial centre within Xinjiang

PHOTOGRAPH: Wikipedia

The recent knife attack at Kunming Train Station in China that left 29 people dead and seriously injured 143 indicates the mounting unrest within China, particularly in the Xinjiang region. Police shot dead four of the assailants but were searching for at least five more of the black-clad attackers including two women.

The attack was the deadliest violence attributed to Uighur-Han conflicts since riots in the Xinjiang capital of Urumqi in 2009, in which Uighurs stormed the streets of the city, targeting Han people in seemingly random violence that included the killing of women and children. A few days later, Han vigilante mobs armed with sticks and bats attacked Uighurs in the same city. Nearly 200 people had died. Xinjiang is home to a simmering rebellion against Chinese rule by some members of the Muslim Uighur population and the government has responded there with heavy-handed security.

Uighurs, predominant group of some 20 million population of 13 ethnic groups of Xinjiang, consider Chinese presence imperialist and seek independence. Uighurs have strong links with their counterparts in Central Asia. Xinjiang had declared independence in 1933 creating the Islamic Republic of East Turkestan and kept coming under China and declaring independence, till in 1949 China conquered the region. Uighurs abhor Chinese presence in Xinjiang especially because of the Chinese Communist Party (CCP) strategy of overwhelming them demographically by settling Han Chinese in this region in large numbers aimed at throttling the Uighur culture, customs and traditions of the locals and recourse to strong-arm measures wherever they see resistance. Yet, many resistance groups continue to put up a fight for Xinjiang's independence, most prominent one being the East Turkestan Islamic Movement (ETIM). Interestingly, a 600-strong special unit of ETIM is hiding in Pakistan.

The resentment in Uighurs apart from the much wealthier Han migratory invaders includes disparities in hiring wages, reduced employment avenues, reduced access to natural resources like water, agricultural land and irrigation. Deliberate effort by the Chinese Government to ignore economic disparities

has naturally led to ethnic tensions between the Han Chinese and the Uighurs. But the CCP that bulldozes her own citizen's homes in the heart of the Chinese mainland without recourse to alternatives and even ignores their suicides, doesn't care. Recently, a dozen Chinese citizens consumed pesticide in Beijing to protest against the demolition of their homes, having travelled 1,070 km from Wuhan in Hubei province after local authorities showed indifference to an earlier threat of mass suicide. Ironically, they had been protesting since 2010 when local authorities razed their homes and gave little or no compensation in return. The incident highlighted the growing resentment across China over demolition of homes and forcible seizure of property belonging to ordinary people. Such barbaric actions by the CCP are commonplace in China and so why would they spare Uighurs whom they want to subjugate totally. Exiled Uighur leader Rebiyah Kadeer has been raising voices against Chinese attempts to refashion cultural identity and fierce repression of religious expression by the Uighurs.

Uighurs have been rebelling against Chinese occupation since the 1990s and every time the Chinese Government has reacted with a heavy hand. Thousands have been arrested over the years, many vanishing altogether. During 2009, 156 people were killed and some 800 injured in bloody clashes between Han Chinese and Uighurs in Xinjiang's capital Urumqi as a reaction to killing of some Uighurs in Guangdong province of China. The Uighur rebellion has been gathering pace since the 1990s. China alleges that the ETIM has links with Al Qaeda but then China herself has had links with Taliban since over a decade and China has armed the United Wa State Army (USWA) of Myanmar as her deadliest proxy.

Uighurs at a market, Khotan

The heart of the Xinjiang uprising is not localised as is evident from the attack in Kunming. Restiveness is all over the country, and the leaders know it. Their intense consternation is not without reasons. Chinese have implemented a series of tough policies including the forced transfer of teenage Uighur women to China's Eastern cities like Tianjin, Jiangsu, Qingdao, Shandong, Zhejiang and others in the guise of providing employment opportunities. In 2006 alone there had been 2,40,000 cases of Uighur girls being forced to shift from the Kashgar region. The plight of these girls is reportedly miserable and they are also not allowed to return freely to their hometowns. This policy, aggressively pursued to bridge the economic gap by the authorities has raised pent-up anxieties among the Uighurs as these girls are often used as slave labour and sex workers in Chinese cities. Cultural assimilation is another motive apart from the sinister design to obliterate the size of the Uighur population.

Since Xinjiang shares borders with Tibet and Mongolia aside from India, Afghanistan, Russia, Kazakhstan, Kyrgyzstan and Tajikistan, most dangerous for China would be coordinated response from Xinjiang, Tibet and Mongolia against Chinese aggression and repression albeit that possibility appears remote presently. It may look far-fetched today but certainly cannot be completely ruled out since dissent in these individual regions has come up primarily due to Chinese policies that are getting more and more belligerent by the day.

Uighur activist Rebiya Kadeer wrote in April 2008, "The world has watched in horror recently as Tibetan monks, nuns and laypersons engaged in peaceful demonstrations have been met with brutality by the Chinese People's Armed Police. Tibet's descent into chaos and violence is heartbreaking. As has been made clear by His Holiness the Dalai Lama, who has dedicated his life to peacefully promoting the Tibetan people's legitimate aspirations for cultural autonomy and survival, lasting peace and meaningful change must be achieved through non-violent means. In watching recent coverage of the demonstrations in Tibet and their bloody aftermath....I had no choice but to speak out against the Chinese Government's policy of cultural destruction and its human rights abuses."

Since the 2009 bloody clashes in Xinjiang were preceded few months earlier by the widespread rioting in Tibet, the sum total appears less because of religion but more an ethnic war by native inhabitants against the Han Chinese. *The New York Times* of July 7, 2009, had reported that a group of several hundred Uighur women told visiting journalists that Chinese don't respect lifestyle of Uighurs, are limiting religious practice, phasing out Uighur language instruction in schools and reinforcing better economic opportunities for the Han, from businesspeople to migrant workers. Through CCP officials, it is the Han Chinese who are holding total power in Xinjiang and Tibet. Tibetans may be six million but Uighurs are over 10 million and China may yet have to pay the price of repression in future.

Chinese Police in Xinjiang region shot dead eight Uighurs on December 30, 2013, when a knife and explosives wielding group attacked a police station though Dilxat Rexit, a Sweden-based spokesman for the World Uighur Congress, said he believed Uighurs had come to the police station to protest against poor treatment, and denied that they were armed. This incident came just two weeks after 16 Uighurs were killed in a clash between Chinese police and ethnic Uighurs near the city of Kashgar, in the same vicinity. It may be recalled that in October last year a Uighur family drove a car into Tiananmen Square and set themselves on fire and in mid-November 2013, 11 Uighurs were killed in Bachu county, also near Kashgar. And so the bloodbath continues.

Then are the possibilities of covert foreign assistance to individual movements akin to the Soviet Union backing the Uighur movement during the 1940s. Russia and China have fought wars in the past and the dynamics of geopolitics can hardly rule out conflict in future with some analysts already predicting Russia and China headed in that direction, Shanghai Cooperation Organization notwithstanding.

Chinese analysts say the most potent threat to China is that of Islamic fundamentalism that defies all borders and is already emanating in the heart of China spearheaded by the ETIM. What they do not mention is that this threat itself or at least directional guidance and support most likely comes from within Pakistan's radical core. It is for such reasons that China wants to establish PLA bases inside Pakistan and has established in Gilgit-Baltistan. Then of course are the aggressive and hegemonic designs of China in scant regard to neighbours, less her two nuclear protégés – Pakistan and North Korea. So, the world may just as well think about cutting to size Chinese expansionist designs by helping her implode, proxy forces being the order of the day. For starters, if the knife attackers in Kunming had assault rifles instead, body count in the massacre would have been manifold. SP

PHOTOGRAPH: Wikipedia

The 3,500th Mi-17 delivered to India by Rosoboronexport and Russian Helicopters

Russian Helicopters, a subsidiary of Oboronprom, part of State Corporation Rostec, has built the 3,500th export version of the Mi-17 at Kazan Helicopters. The helicopter will be delivered to the Indian armed forces as part of a contract signed by Rosoboronexport in 2012.

A contract for 80 military transport Mi-17V-5 helicopters was signed by Rosoboronexport in 2008, and all obligations have been met by the Russian side. In 2012-13, India ordered a further 71 helicopters, which are currently being built by Russian Helicopters to the agreed schedule.

"South and South East Asia are a core region for promoting Russian manufacturing. Our helicopters are well-known here and demand has remained constant," Russian Helicopters CEO Alexander Mikheev said. "Today more than 250 helicopters built at our facilities are operational in India. They are used for flight training, personnel-carrying, search-and-rescue and medevac missions, and providing assistance in emergencies. Thanks to their unique abilities they can operate in even the most adverse weather conditions, and complete their missions with distinction."

In summer 2013 Russian-built military transport helicopters were involved in evacuating people after torrential rains caused severe flooding in Uttarakhand. In February this year Mi-17V-5 helicopters evacuated about 200 residents of villages in the northern state of Jammu and Kashmir in the Himalayas after they became cut off from the rest of the region following cold weather and heavy snowfall.

The Mi-17V-5s being delivered to India are part of the legendary Mi-8/17 series, and are built on the construction solutions of previous generations of the series. All of the helicopters are fitted with a KNEI-8 avionics suite and a new PKV-8 autopilot, which helps reduce pilot workload and provides comprehensive information to enable pilots to complete complex missions.

In addition, the helicopters being supplied to India are fitted with modern powerful engines, significantly expanding their capabilities for transporting heavy and bulky loads, particularly in the high mountain terrain characteristic of northern India.

Soviet- and Russian-built helicopters have operated successfully in India for more than half a century. The first Mi-4s were delivered in January 1961; in the decades since, Mi-26s, Mi-24/35s, Mi-8/17s have all been supplied to India. SP

Russian fifth-generation jetfighter T-50 flight tests

PHOTOGRAPHS: Russian Helicopters, Sukhoi

The Russian Air Force is getting down to the official testing of their T-50 fifth-generation jetfighter in what is evidence that the aircraft is actually ready and can soon be passed into service. The T-50 flight tests have been scheduled to start at the Akhtubinsk flight test centre in March or April this year.

Five aircraft are due to be tested, with the fifth T-50 having taken off in October 2013. Just a month later, the overall number of flights exceeded 450. Once the Russian Air Force gets six or eight experimental T-50 jetfighters, the number of flights could easily reach 400 to 500 per year, which provides for carrying out the flight test programme of 2,000 flights in a matter of three to four years. The first few T-50 jetfighters are due to arrive at the Lipetsk training centre of the Russian Air Force for retraining Russian military pilots in 2015.

T-50 will become the first new-generation jetfighter that the Russian Air Force has adopted for service since the late 1980s, when the Su-27 was commissioned. 50 to 60 T-50 jetfighters are due to be bought by the Russian Air Force by 2020, while the overall number of T-50 to be adopted for service will make up 200 to 250. It is held that the first combat manoeuvre unit will be combat ready by 2017 or 2018.

The new jetfighter should largely boost the Russian Air Force combat potential by replacing the now obsolete Su-27 and partly Su-30, and ensuring supremacy in hypothetical air combat clashes with the enemy who relies on updated fourth-generation and even fifth-generation jetfighters, such as the F-35 or the F-22, which is currently used by the US Air Force. SP

Raytheon awarded $655-million contract for Patriot

Raytheon Company has received a $655-million contract for new-production fire units of the combat-proven Patriot Air and Missile Defense System for Kuwait. These units are an addition to the Patriot fire units Kuwait currently owns to counter current and evolving threats.

Awarded by the US Army Aviation and Missile Command, Redstone Arsenal, Alabama, as a foreign military sale agreement, the contract includes new Patriot fire units with increased computing power and radar processing efficiency, improved man-machine interface and reduced life-cycle costs.

Work under this contract will be performed at Raytheon's Integrated Air Defense Center, Andover, Massachusetts, supported by a global team of Patriot system suppliers. SP

Airbus Defence and Space introduces the Orlik MPT trainer

Airbus Defence and Space rolled out the PZL 130 Orlik MPT (multi-purpose trainer), a new version of the twin-seat aircraft with glass cockpit. This solution is a development of the Orlik TC II Garmin already in service in the Polish Air Force. The presentation of the aircraft was held in the Warsawa Okeçie factory, to a senior audience of the Polish administration and armed forces.

The Orlik MPT offers the flight parameters and systems essential for military pilot training in the 21st century at a significantly lower cost compared with other aircraft of this class. The upgrade, focused on an integrated "glass cockpit" and additional systems, greatly increases the scope of applications in military pilot training, including basic tactical training and lead-in to combat training. The aircraft's efficiency, low flight-hour cost and range of training capabilities will position the Orlik for the international marketplace.

In September 2011, Airbus Defence and Space (the former Airbus Military EADS PZL Warszawa-Okecie) and the Air Force Institute of Technology (Instytut Techniczny Wojsk Lotniczych - ITWL), as well as other Polish institutions signed the agreements to upgrade the Orlik TC II to the new MPT standard.

The investment for the Orlik MPT prototype presented has reached 40 million zlotys. The new version is currently entering the test phase, in preparation for certification by the Polish airworthiness authority ULC.

The improved performance and equipment of the Orlik MPT offers a cost-efficient solution for the basic and advanced training needs within the syllabus of the world's air forces. The global trainer fleet is estimated at 10,000 aircraft, with a potential demand of 16,000 new trainers in the next ten years. SP

Aero shipped the first rear fuselage for Embraer KC-390

The biggest aerostructure ever made in the Czech Republic by Aero will be delivered to the Brazilian customer by one of the world's largest cargo airplanes – almost seventy metres long AN-124 Ruslan.

For Embraer, third biggest aerospace manufacturer in the world, Aero delivers rear fuselage, cargo ramp, all cabin doors and wing fixed leading edge (FLE) for the state of the art, military transport aircraft, the KC-390. It is also responsible for the design and development of the FLE. The rear fuselage which was sent today is – with the dimensions of 6.5x4.5x3.3 metres – the biggest aerostructure ever made in the Czech Republic.

For this reason, even the transportation of the rear fuselage is a challenge. The rear fuselage will be delivered to Brazil by An-124 Ruslan, manufactured by Ukrainian company Antonov, which is one of the world's largest serial-produced cargo airplanes. This four-engine high-wing aircraft has a cargo space over a thousand cubic metres and can carry up to 150 tonnes of payload. SP

Singapore selects Airbus A330 MRTT, firm order for six aircraft

Airbus Defence and Space has been selected by Singapore to supply six A330 MRTT new generation air-to-air refuelling aircraft for the Republic of Singapore Air Force (RSAF). The aircraft will be delivered under the terms of a firm contract which has already been signed.

Singapore's choice of the A330 MRTT makes it the sixth nation to select the type following Australia, Saudi Arabia, the United Arab Emirates, and the United Kingdom which have ordered a total of 28 aircraft, and India which is in the final stages of contractual negotiations for six aircraft. A total of 17 aircraft are currently in service with the first four nations.

The A330 MRTT is derived from the highly successful A330 commercial airliner and proven in-service as a tanker/transport with multi-role capability.

Airbus Defence and Space Head of Military Aircraft, Domingo Ureña Raso said: "We are greatly honoured by the selection of the A330 MRTT by Singapore. The decision confirms the A330 MRTT's status as unquestionably the world's most advanced tanker/transport aircraft as well as its pre-eminent suitability for the Asia-Pacific region."

The Airbus Defence and Space A330 MRTT is the only new generation strategic tanker/transport aircraft flying and available today. The large 111 tonnes basic fuel capacity of the successful A330-200 airliner, from which it is derived, enables the A330 MRTT to excel in air-to-air refuelling missions without the need for any additional fuel tank.

The A330 MRTT is offered with a choice of proven air-to-air refuelling systems including an advanced Airbus Defence and Space aerial refuelling boom system, and/or a pair of underwing hose and drogue pods, and/or a fuselage refuelling unit.

Thanks to its true wide-body fuselage, the A330 MRTT can also be used as a pure transport aircraft able to carry up to 300 troops, or a payload of up to 45 tonnes. It can also easily be converted to accommodate up to 130 stretchers for medical evacuation.

To-date, a total of 28 A330 MRTTs have been ordered by four customers (Australia, Saudi Arabia, the United Arab Emirates, and the United Kingdom), with one (Saudi Arabia) having already placed a repeat order. SP

PHOTOGRAPHS: Airbus Defence and Space

25,000 hours of Eurofighter in Air Force

The Spanish Air Force's fleet of Eurofighter EF-2000 aircraft has completed its first 25,000 flight hours during the month of February, to which three units equipped with this weapon system have contributed: 11 Wing at Air Base Morón de la Frontera in Seville, 14 Wing at Los Llanos Air Base in Albacete and the Armaments Logistics and Experimentation Center (CLAEX) at Torrejón de Ardoz airbase in Madrid.

The Eurofighter, which in the air force carries the designation C.16, entered service in our armed forces in October 2003. Since then, it has been assigned to the 11th Wing, operating mainly from Morón Airbase, in order to fulfill its primary mission of interception and air defence.

Since May 2012, it also has been operated by 142 Squadron of 14 Wing, as has the CLAEX, where it is operated for the development of operating software and weapons integration.

The primary mission of the Eurofighter units is to provide the Air Force with the required defensive and offensive air capability, to meet both national missions, as well as commitments arising from the Spanish participation in international organisations. It is equipped with latest-generation precision weapons that allow the Eurofighter to launch bombs and guided weapons with centimetric accuracy. Combined with the vast potential of its radar and air-to-air armament against aerial threats, the possibilities of this weapon system are multiplied.

The Air Force, which has 41 Eurofighter, reached this milestone with the assurance that the performance of these first 25,000 hours of flight confirms the operational and industrial success of the Eurofighter programme, which has enabled the European aerospace industry and its armed forces to design, build and operate one of the best fighter planes that have plied the skies. SP

Taiwan gets six more Apache choppers

A shipment of six AH-64E Apache attack helicopters from the United States arrived in Taiwan in mid-March. Six helicopters arrived at the port of Kaohsiung on March 17. The helicopters will be permanently stationed in northern Taiwan in the future, the official said.

The shipment is one of five batches of six helicopters being delivered to Taiwan as part of a 30-helicopter order from the US that is costing Taiwan more than $2 billion.

The process has not been without snags. Taiwan was notified by the United States in mid-December of a main transmission failure on an Apache AH-64E in service in the US, forcing Taiwan to ground the first six Apache choppers it had received in November.

It also did not fly the next six Apaches that arrived in January, instead using ground transport to get them to the airbase. Taiwan's military has since replaced the main transmission boxes of all 12 aircraft as a precaution.

The final two batches of six choppers each will be delivered to Taiwan with the new transmission boxes and are expected to arrive in May and July, respectively.

The model E is the latest in the Apache attack helicopter series. The US and Taiwan are the only two countries that use the latest Apache helicopter model so far. SP

Sikorsky and Turkey sign Black Hawk helicopter agreements

Sikorsky Aircraft Corp. has signed agreements with the Turkish Government and key Turkish aerospace contractors that licence Turkey's aerospace industry to manufacture 109 T-70 helicopters (Turkish variants of Sikorsky's S-70i International Black Hawk helicopter) for operation by the Turkish Government, and to assemble 109 S-70i helicopters for Sikorsky.

The agreements licence the transfer of certain manufacturing technology to Turkish industry, and provide for the potential to produce up to a total of 600 aircraft, including both T-70 units for Turkish indigenous use and S-70i aircraft for export over the next 30 years. The agreements are subject to requisite export approvals.

"This programme is unprecedented in Sikorsky's 90-year history," said Sikorsky President Mick Maurer. "We have signed contracts that collectively will raise our already strong supplier and customer relationships in Turkey to levels that we expect will endure for decades. We are very pleased that these agreements also will potentially open additional markets for the world's leading utility military helicopter while strengthening Turkish industry's position as a world-class aerospace provider." SP

PHOTOGRAPHS: Spanish Air Force, Wikipedia

39 Squadron Reaper landmark

Reaper has passed a new milestone, with 39 Squadron reaching 50,000 hours of flying in support of Operation Herrick. 39 Squadron operates Reapers over Afghanistan alongside XIII Squadron, using ground control stations at the Royal Air Force (RAF) Waddington and Creech Air Force Base in Nevada. RAF pilots, sensor operators and ground crew also support the aircraft at a launch and recovery element at Kandahar.

83 Expeditionary Air Group (83 EAG) provides command and control of Reaper in Afghanistan. Air Officer Commanding 83 EAG, Air Commodore Al Gillespie congratulated the Reaper force on its achievement.

He said: "Almost every day Reaper provides UK and the International Security Assistance Force (ISAF) forces with a battle-winning capability which has undoubtedly saved coalition lives and tipped the scales in their favour in the most difficult of circumstances.

"Since Reaper arrived in Afghanistan the aircrew, intelligence professionals and support staff of 39 and XIII Squadrons have proven themselves to be superb war-fighters and diligent operators." SP

UK Army cleared to fly next-gen eye-in-the-sky

PHOTOGRAPHS: MoD UK, ADS

Approval has been given for the British Army's own pilots to begin live-flying the unarmed Watchkeeper from Boscombe Down in Wiltshire; up until now it has been only trialled by industry.

Gathering crucial information from the battlefield, Watchkeeper will provide UK troops with life-saving surveillance, reconnaissance and intelligence. It will also give personnel on the ground much greater situational awareness, helping to reduce threats.

Over the coming weeks, highly skilled 1st Artillery Brigade pilots will be trained to fly Watchkeeper in a restricted airspace over the Salisbury Plain Training Area. The flights, which will take place between 8,000 feet and 16,000 feet, will be overseen by military air traffic controllers.

Minister for Defence Equipment, Support and Technology Philip Dunne said: "Watchkeeper will provide real-time information for troops conducting operations on the ground, allowing them to understand better and thereby overcome threats they may face. The 'release to service' is a major milestone in this important programme.

"Watchkeeper is the first unmanned aerial system developed and built in the UK to become operational. Watchkeeper will be a significant surveillance and reconnaissance capability for the Army for years to come and there is no doubt that it will prove to be a battle-winning technology."

Since its first UK flight in 2010 by Thales UK, Watchkeeper, which has a wing span of 35 feet, has already completed over 600 flying hours from West Wales Airport. SP

Mexico buys two Dominator UAVs

Israeli manufacturer Aeronautics Defense Systems (ADS) has confirmed a report in the Spanish website Defensa.com that it has signed a contract to supply two air Dominator XP unmanned systems to the Armed Forces of Mexico. Based on the Diamond DA42 twin-engined private aircraft, the Dominator XP has a flight range of 28 hours and a payload of 300 kg.

The modified aircraft can be flown at altitudes of up to 30,000 feet (9,150 m) and has a maximum speed of 190 kt (351 kmph).

In mid-2011, after it obtained permission from the Israeli Ministry of Defense, ADS made the first export sale of the system, signing a contract to supply two Dominator XP UAVs to Turkey.

Mexico currently operates two Schweizer SA-2-37s donated by the United States and integrated into the Integrated Air Surveillance System (SIVA) of the Mexican Air Force. SP

US Army on tipping point of UAS capabilities

[By **David Vergun**]

"We're on the tipping point of unmanned aerial systems' ability to deliver capability to the Soldier," said Colonel Thomas von Eschenbach.

The unmanned aerial/aircraft system, or UAS, is no longer seen by Soldiers as a new system and as the months and years pass, it will "not just be used by a few, but will become integral to the army fabric and how it fights and is used and understood," said Eschenbach, who is the UAS Capability Manager for US Army Training and Doctrine Command.

Eschenbach and others spoke recently at a media roundtable at Redstone Arsenal, Alabama, where a celebration was held marking the Army's milestone of two million UAS flight hours.

Colonel Timothy Baxter, Project Manager, UAS, noted that it took 20 years for army unmanned aircraft systems to reach one million flight hours. That milestone came in 2010. With increased use of those systems, it took just a few more years to reach the two million flight-hours milestone.

He said what is most impressive is that 90 per cent of total UAS flight hours were logged in direct support of combat operations.

"Every one of those hours has meant something to a commander on the ground overseas engaged in combat," Baxter said.

Baxter noted that of the total two million flight hours, Shadow UAS logged 9,00,000 of those. However, as more Gray Eagles are fielded, he said he expects it to be the system with the most impressive mileage.

Rich Kretzschmar, Deputy Project Manager, UAS, said that reaching three million flight hours may take longer than it did to get from one to two million because the operations tempo in theatre has now leveled off.

And, as more UAS systems return to the US from overseas, there could be fewer opportunities to fly them because of restricted airspace flight rules, Baxter added.

But the UAS will play a crucial part of the army's aviation restructure initiative, Eschenbach said.

As brigade combat teams (BCTs), shrink from four to three per division and as manoeuvre battalions are reinvested back into other BCTs, three Shadow UAS platoons will be put inside of each attack reconnaissance squadron, he said. That would add a total of 30 platoons of Shadows into the combat aviation brigade structure. Those squadrons will also contain AH-64E Apache helicopters.

Future UAS flight path

Don't expect to see a lot of new UAS models, Baxter cautioned.

"Our platforms are the platforms we're going to have for the foreseeable future in the army," he explained. Instead, he said, future efforts will be in the area of new technologies for advanced payloads and improvements in man-to-unmanned teaming.

As to unmanned vs manned, Kretzschmar pointed out that UASs are not replacing pilots. Rather, he said, they are the "extension of the commander's ability to do things, extend reach, reduce risk and get better situational awareness on the battlefield."

Also in the cards for UAS is something not too sexy, but important nonetheless to a budget-challenged Army: sustainment costs.

Baxter said the UAS community has moved away from contractor logistics support to "green-suiter" maintainers, as Soldiers get their own military occupational speciality and become more proficient. In the next war, the Army may not have the luxury of setting up forward operating bases teeming with contract support.

Another cost savings, he pointed out, is through applying "performance-based logistics" to contracts, so as to "incorporate better buying power."

Since Eschenbach is with TRADOC it's not surprising he sees doctrine as well as the operational environment dictating the vision of where UASs are headed.

The RQ-7B leaves its launcher

Eschenbach thinks UASs have capabilities that go far beyond the current state of reconnaissance, surveillance, security and precision strikes. His team of planners is already looking at UAS employment in "Force 2025," where UAS will vastly extend the network, meaning the reach that commanders have on the ground.

As this takes place over the coming years, he said, army leaders will need to better understand the capabilities of UASs and what they can do for them.

"We're asking warfighters in a smaller, leaner Army to be more expeditionary, lethal and survivable, focused on the next thing our nation asks us to do," Eschenbach concluded. In that environment, there's "plenty of future for UAS." SP

Source: www.army.mil

PHOTOGRAPH: US Army

India assisting in search ops for Malaysia Airline

With a request for help from the Government of Malaysia in tracing the missing Malaysia Airline aircraft, the focus of the search has shifted westward towards Andaman Sea. A formal request in this regard was received from the Indian High Commissioner in Kuala Lumpur. With the search expanded to cover an area stretching from South China Sea to Andaman Sea, the Indian Navy, Air Force and Coast Guard have been pressed into service for the search of the missing aircraft.

The air effort for searching the area extensively will include two C-130 Super Hercules aircraft, one Mi-17 V5 helicopter of the Indian Air Force and Dornier and P-8i, maritime reconnaissance aircraft of Indian Navy. In addition ships of Indian Navy and Coast Guard will be combing the area to locate the possible crash site. Both Navy and Air Force are also ready to reinforce their assets on short notice.

The Commander-in-Chief Andaman and Nicobar Command has been nominated as the Overall Force Commander and Headquarter Integrated Defence Staff is coordinating the entire effort between the Ministry of Defence (MoD) and Services. Indian Navy has been designated the lead Service. The Headquarters Andaman and Nicobar Command being the nodal agency will assist Malaysia in all possible manner for the search in the area of Andaman Sea. The area indicated by Malaysia lies in the South Andaman Sea and is west of Great Nicobar Island. Meanwhile the Defence Crisis Management Group is also being activated to monitor the progress of the search operations at Headquarters Integrated Defence Staff. SP

Director General of Railway Protection Force

Krishna Chaudhary, IPS, presently working as Director General, Fire Services, Civil Defence and Home Guards, has been appointed to the post of Director General, Railway Protection Force, Railway Board, with effect from the date of his joining of the post and till the date of his superannuation, i.e. up to June 30, 2017 or until further orders, whichever event takes place earlier.

Rajan Gupta, IPS, presently DG, BPR&D, will hold the additional charge of the post of Director General, Fire Services, Civil Defence and Home Guards (FSCD&HG) with immediate effect till an incumbent to the post of Director General FSCD&HG is appointed on regular basis, or till further orders. SP

Accident at Vizag shipyard

An accident occurred recently while Larsen & Toubro, an industrial partner, was undertaking preparatory activities of hydro pressure test of a tank inside a building at the Ship Building Centre, Visakhapatnam. The test of the component was part of the standard industrial process being carried out by the industrial partner at the facility.

The accident led to the unfortunate death of a worker and injury to two other workers of Larsen & Toubro. Immediate medical attention was provided and the injured workers are now stable. No defence personnel was involved in the accident. The accident is in no way related with any nuclear-related activity.

A release said that the submarines are safe and the accident does not adversely affect the project activities or the activities of Indian Navy or the Defence Research and Development Organisation. Work related to the pressure system involved in accident has been suspended till the cause is established and mitigating measures are put in place. An inquiry has been ordered by the Department of Defence R&D to investigate the accident. SP

Pakistan formulates internal security policy

Pakistan has formulated its first ever National Internal Security Policy (NISP) to protect national interests by addressing critical security issues as well as concerns of the nation.

It is based upon principles of mutual inclusiveness and integration of all national efforts and includes three elements viz, (i) dialogue with all stakeholders, (ii) isolation of terrorists from their support systems, (iii) enhancing deterrence and capacity of the security apparatus to neutralise the threats to internal security of Pakistan. This requires integrated efforts through an institutionalised monitoring framework under democratic leadership to elicit support and cooperation of local and international stakeholders.

The policy said that global terrorism and armed conflict in Afghanistan have changed the internal security paradigm of Pakistan. Pakistan's economy has suffered a loss of more than $ 78 billion in last 10 years only. More than 50,000 Pakistanis, including civilian, armed forces and law-enforcement agencies (LEAs) personnel, were affected or sacrificed their lives. This challenges the resolve and resilience of people of Pakistan for peace.

The internal security environment is dominated by non-traditional threats of extremism, sectarianism, terrorism and militancy. In present form, the internal security apparatus is inadequately equipped and enormously strained to tackle these threats. This elucidates the dire need for a comprehensive and inclusive response plan, as no single state agency is capable of dealing with such threats on its own.

In its scope it said that it is critical to define the composite picture concerning threats to the national security, NISP essentially remains focused on internal security, (NIS) paradigm. However, this would be incomplete without identifying its linkages with the external diplomatic initiatives and various other dimensions of human security, in some parts of the country hostile networks have also challenged the writ of the state. Nonetheless, national security apparatus including the Ministry of Defence (MoD) is dealing with this situation under political oversight. Other, relevant state institutions will address social, economic, environmental and external security aspects.

The policy vision is to create a safe environment where life, property, civil liberties and socio-economic rights of the citizens are protected and the people of Pakistan are able to live and prosper in harmony, freedom, respect and dignity as enshrined in the Constitution of Pakistan.

Pakistan is facing serious traditional and non-traditional threats of violent extremism, sectarianism, terrorism and militancy. This has adversely affected economic stability and social harmony and continues to instil a sense of insecurity among the people at large.

The widespread spectrum of internal threats is a critical impediment to economic development and social cohesion. Traditionally, the entire internal security apparatus acts in a reactive rather than proactive manner. SP

PHOTOGRAPH: gisert.com

Cyber security drill much ahead of 2020 Olympics in Japan

Japan held a government-wide cyber security drill recently in a bid to improve coordination among public agencies and major businesses, as Tokyo prepares to host the 2020 Summer Olympics. The mock cyber attack for the first time brought together 21 government departments and firms in 10 business sectors, including utilities, banking and aviation.

"Cyber attacks have grown increasingly sophisticated, highly developed and internationalised," said the Chief Cabinet Secretary Yoshihide Suga. "It has become ever more important that the government strengthens its ability to counter attacks," he said.

About 100 people took part in the mock drill which saw various government ministries come under attack, including computer viruses. The government has said it faces a cyber attack every 30 seconds, on average. The exercise had participants sharing information, gathering data and analysing the attacks as well as the extent of the damage. Others prepared press releases and statements from government ministers to keep the public informed.

Earlier this month, Minister of Technology Policy Ichita Yamamoto cautioned that Tokyo must beef up its preparedness ahead of the 2020 Games. "In the area of cyber security, various measures are possible as we prepare for the Tokyo Olympics and Paralympics in six years' time," he said. SP

Kochi tops in cyber crimes

The Kochi police in 2013 received almost 45 complaints of cyber crimes every month. But surprisingly, only about 10 per cent of them were registered as victims were mostly reluctant to lodge an FIR. Police said that in a majority of cases they were forced to let the accused go with a "strict" warning.

According to the police, Kochi registered a 33 per cent increase in cyber crimes in 2013 compared with the previous year. From 403 complaints in 2012, the number went up to 538 last year. The number of such complainants was 322 and 255, respectively, in 2011 and 2010. Police said that 90 per cent of the complaints were lodged by women and girls, including college students, and almost the same percentage was related to creating fake profiles in social networking sites. Complaints were filed mainly to remove fake profiles from social networking sites.

As per the data, police have also received over 20 complaints related to online frauds last year. Meanwhile, City Police Commissioner K.G. James said, "Cases are registered on almost all the complaints received by the police. But in some cases complainants don't prefer to register cases." He added that to check cyber crimes awareness programmes were frequently organised in city schools. SP

$500 billion to be spent on cyber security worldwide

Enterprises worldwide are expected to spend nearly $500 billion this year to deal with problems related to malware and data breaches, a new study says. According to the joint study conducted by IDC and the National University of Singapore (NUS), enterprises may have to spend $127 billion on security issues and $364 billion dealing with data breaches.

Global consumers, on the other hand, are expected to spend $25 billion and waste 1.2 billion hours this year because of security threats and costly computer fixes stemming from malware on pirated software.

The study, titled "The Link Between Pirated Software and Cybersecurity Breaches" found 60 per cent respondents (consumers) saying their greatest fear from infected software is loss of data, files or personal information. This is followed by unauthorised Internet transactions (51 per cent) and hijacking of email, social networking and bank accounts (50 per cent).

"Cybercriminals are profiting from any security lapse they can find, with financially devastating results for everyone," Microsoft Cybercrime Center Executive Director and Associate General Counsel David Finn said.

The study was released as part of Microsoft's 'Play It Safe' campaign, a global initiative to create greater awareness of the connection between malware and piracy. The study stated that nearly two-thirds of enterprises surveyed said they could lose $315 billion at the hands of organised criminals. Nearly 20 per cent of the pirated software in enterprises is installed by employees, it added.

About 28 per cent of enterprise respondents reported security breaches causing network, computer or website outages occurring every few months or more with 65 per cent of those outages involved malware on end-user computers.

"Using pirated software is like walking through a field of landmines: You don't know when you will come upon something nasty, but if you do it can be very destructive," IDC Chief Researcher John Gantz said. SP

Saab builds for expansion in the naval domain

Defence and security company Saab is expanding its activities in the naval arena. Saab is therefore recruiting new employees to strengthen and develop its naval capabilities.

Today, Saab is one of the leading companies within the naval arena. It is a provider to the Swedish Navy, the major contractor to the Thai Navy and is responsible for development, integration and support of the Combat Management Systems on Australia's ANZAC class frigates. Saab is now preparing to take a full responsibility within the naval domain.

Business area Security and Defence Solutions (SDS) will maintain its overall responsibility while strengthening its organisation with additional skills. SDS is managing an order from the Swedish Defence Materiel Administration (FMV) to study the prerequisites for a consolidated strategy to support the underwater domain.

Saab currently provides the integrated ship control management and monitoring systems for Norway's Ula class submarines and Australia's Collins class submarines. Saab is delivering electronic warfare systems for submarines in several countries and recently further contracts were signed to deliver autonomous anti-submarine warfare targets. Saab is also a world leading provider of autonomous military and civil underwater vehicle systems (AUVs and ROVs).

"Saab is today a leading provider of naval systems, and this initiative will enable Saab to strengthen and develop its naval capabilities," says Gunilla Fransson, Senior Vice President and Head of Security and Defence Solutions.

"Saab is looking for employees who want to continue to develop naval products for Sweden and the global market. Saab offers its employees great opportunities to practise their knowledge, to develop it further and contribute to strong and competitive products for future customers," says Gunilla Fransson. SP

Finmeccanica approves new project

The Board of Directors of Finmeccanica, convened under the chairmanship of Gianni De Gennaro, examined and approved the project for a New Group Organisational and Operating Model applying to the Aerospace, Defence and Security sectors (A,D&S).

The new organisational model is in line with similar initiatives promoted by our main competitors aimed at effectively tackling the challenges posed by the transformations affecting the international scenarios of reference. These transformations mainly relate to the reduction of domestic budgets, the gradual completion of programmes funded by the Governments and the increase of competitiveness requirements.

The model will enable to value the human capital, increase the return on invested capital and ensure higher profitability, sustainability and cash flow generation. It represents a further significant step towards strengthening the Groups's governance, thus executing Finmeccanica's strategic plan as at May 2013, with the following key objectives:

- Restructuring, re-launch and development of A,D&S, through relevant consolidation and industrial reorganisation initiatives.
- Concentration in A,D&S, through the disposal of Ansaldo Energia and the expected deconsolidation of the transportation.
- Enhancing of Governance, through a number of targeted initiatives aimed at shortening the reporting lines, increasing the organisation's effectiveness and improving management efficiency.

Finmeccanica is active in the following sectors: Helicopters (AgustaWestland), Defence Electronics and Security (Selex ES, DRS) and Aeronautics (Alenia Aermacchi) – which represent its core business – and it is also well positioned in the sectors of space (Telespazio, Thales Alenia Space), defence systems (Oto Melara, WASS, MBDA) and transportation (Ansaldo STS, AnsaldoBreda, BredaMenarinibus). SP

L-3 acquires Data Tactics Corporation

L-3 Communications announced that it has acquired Data Tactics Corporation. The business, renamed L-3 Data Tactics, is a specialised provider of Big Data analytics and cloud computing solution services, primarily to the US Department of Defense.

Headquartered in McLean, Virginia, Data Tactics employs approximately 200 people, including more than 150 data scientists, engineers, architects and developers, most of whom possess US Government security clearances. Its highly tailored solutions are used by the US military and government agencies, including public safety and law enforcement organisations. The business is expected to generate sales of approximately $50 million for the year ending December 31, 2014.

"Data Tactics adds key capabilities in Big Data analytics to L-3's portfolio, a very attractive and specialised domain that immediately enhances L-3's existing National Security Solutions business and supports its growth as a solutions integrator for the national security and international markets. It also creates adjacent opportunities for L-3's ISR business," said Michael T. Strianese, L-3's Chairman, President and Chief Executive Officer. "This acquisition supports our strategy of providing differentiated technologies and solutions that enable market share gains and distinguish L-3 from our competitors."

"Data Tactics will immediately add synergies to our business and enable us to pursue new opportunities in data analytics, data engineering and secure cloud solutions," said Les Rose, President of L-3's National Security Solutions Group. "The addition of Data Tactics' talented workforce and differentiated technologies to our existing portfolio will also enhance solutions and efficiencies for our customers." SP

Astronics acquires EADS North America Test and Services division

Astronics Corporation (ATRO), a leading provider of advanced technologies for the global aerospace and defence industries, announced that it completed on February 28, 2014, the acquisition of substantially all of the assets and liabilities of Airbus North America's Test and Services division (EADS T&S) for approximately $53 million in cash plus a preliminary net working capital adjustment of $17 million. EADS T&S will be reported in Astronics' Test Systems segment.

Astronics had previously announced that it entered into a definitive agreement to acquire EADS T&S on January 21, 2014.

EADS T&S, located in Irvine, California, is a leading provider of highly engineered automatic test systems (ATS), subsystems and instruments for the semiconductor, consumer electronics, commercial aerospace and defencwe industries. SP

Excalibur prototype extends reach of high-energy lasers

High-energy lasers (HEL) have the potential to benefit a variety of military missions, particularly as weapons or as high-bandwidth communications devices. However, the massive size, weight and power requirements (SWaP) of legacy laser systems limit their use on many military platforms. Even if SWaP limitations can be overcome, turbulence manifested as density fluctuations in the atmosphere increase laser beam size at the target, further limiting laser target irradiance and effectiveness over long distances.

Recently, the Defense Advanced Research Projects Agency's (DARPA) Excalibur programme successfully developed and employed a 21-element optical phased array (OPA) with each array element driven by fibre laser amplifiers. This low power array was used to precisely hit a target 7 kilometres away. The OPA used in these experiments consisted of three identical clusters of seven tightly packed fiber lasers, with each cluster only 10 centimetres across.

"The success of this real-world test provides evidence of how far OPA lasers could surpass legacy lasers with conventional optics," said Joseph Mangano, DARPA Program Manager. "It also bolsters arguments for this technology's scalability and its suitability for high-power testing. DARPA is planning tests over the next three years to demonstrate capabilities at increasing power levels, ultimately up to 100 kilowatts—power levels otherwise difficult to achieve in such a small package."

In addition to scalability, Excalibur demonstrated near-perfect correction of atmospheric turbulence—at levels well above that possible with conventional optics. While not typically noticeable over short distances, the atmosphere contains turbulent density fluctuations that can increase the divergence and reduce the uniformity of laser beams, leading to diffuse, shifted and splotchy laser endpoints, resulting in less power on the target. The recent Excalibur demonstration used an ultra-fast optimisation algorithm to effectively "freeze" the deeply turbulent atmosphere, and then correcting the resulting static optically aberrated atmosphere in sub-milliseconds to maximise the laser irradiance delivered to the target.

These experiments validated that the OPA could actively correct for even severe atmospheric distortion. The demonstration ran several tens of metres above the ground, where atmospheric effects can be most detrimental for army, navy and marine corp applications. In addition, these experiments demonstrated that OPAs might be important for correcting for the effects of boundary layer turbulence around aircraft platforms carrying laser systems.

The successful demonstration helps advance Excalibur's goal of a 100-kilowatt class laser system in a scalable, ultra-low SWaP OPA configuration compatible with existing weapon system platforms. Continued development and testing of Excalibur fibre optic laser arrays may one day lead to multi-100 kilowatt class HELs in a package 10 times lighter and more compact than legacy high-power laser systems. Future tests aim to prove the OPA's capabilities in even more intense environmental turbulence conditions and at higher powers. Such advances may one day offer improved reliability and performance for applications such as aircraft self-defence and ballistic missile defence.

"With power efficiencies of more than 35 per cent and the near-perfect beam quality of fibre laser arrays, these systems can achieve the ultra-low SWaP required for deployment on a broad spectrum of platforms," said Mangano. "Beyond laser weapons, this technology may also benefit low-power applications such as laser communications and the search for, and identification of, targets." SP

Boeing Phantom Swift selected for DARPA X-plane competition

Phantom Swift, a prototype Boeing initially built in less than a month, has been accepted to be part of the Defense Advanced Research Project Agency (DARPA) vertical takeoff and landing (VTOL) X-plane programme.

DARPA is trying to mature a new aircraft configuration capable of both efficient hover and high-speed cruise. "Proving these capabilities in a single aircraft has been the holy grail for tactical military aviation," said Dan Newman, Boeing Phantom Works Advanced Vertical Lift capture team lead. "We're confident that Phantom Swift could be the solution."

Through a $17 million agreement with DARPA's Tactical Technology Office, Boeing intends to continue developing its technology for an aircraft that takes off and lands vertically, hovers and efficiently flies at speeds up to 400 knots.

"Designing an aircraft to perform a vertical takeoff, while maintaining adequate low-speed control, is challenging. Sustaining efficient hover is also difficult, and adding a high cruising speed is even more challenging," Newman added.

After a 22-month effort involving several competitors, DARPA plans to select a model for fabrication and flight demonstration.

Phantom Swift features two large lift fans – inside the fuselage – that provide efficient vertical lift. Once the aircraft transitions to cruise mode, the fans are covered. It also features smaller ducted fans on the wingtips that provide forward thrust, and provide additional lift and control in hover.

Last year, Phantom Works used rapid prototyping and additive manufacturing techniques, such as 3-dimensional printing, to quickly design, build and fly a scaled-down Phantom Swift. SP

PHOTOGRAPH: DARPA

Vanderbilt University working on securing military smartphones

Soldiers in Afghanistan are experimenting with smartphones engineered to better protect operational data designed by scientists at Vanderbilt University's Institute for Software Integrated Systems (ISIS). Vanderbilt experts and researchers are working with the Defense Advanced Research Projects Agency (DARPA), on a programme called Transformative Apps, an effort designed to develop a family of military-relevant software applications, or apps. Douglas Schmidt, professor of computer science, is quoted.

The programme is aimed at improving the security or information assurance technology of smartphones in order to allow for their use in rugged, tactical combat environments where there are often no fixed infrastructures such as cell towers.

"One of the things you find when you move into a tactical environment is that you cannot rely on any kind of fixed infrastructure," said Douglas Schmidt, Professor of Computer Science at Vanderbilt University, ISIS.

The army has worked on a programme called Nett Warrior to get smartphones in the hands of soldiers in combat. Currently, soldiers with the 10th Mountain Division are using them on a deployment to Afghanistan.

Findings from the Transformative Apps programme would be fed to the Nett Warrior programme to better secure those devices, Schmidt said.

Schmidt said his laboratory has been working on developing enhanced software and middleware that better protects information.

"There are people in Afghanistan using our software. We found ways to connect the smartphone to military-grade radios so they have a secure link. Then the radio as a communications channel allows the soldiers to use the smartphone for chat, blue force tracking, video and text – while on patrol," Schmidt said.

Schmidt said his laboratory developed a small cable that connects the smartphone to the radio, allowing the phone to be tethered to the radio, Schmidt explained.

"The radio is used for secure communication and the smartphone is used to give soldiers the same type of smartphone experience we have come to take for granted here in the US," he said.

The radios are connected to one another through mobile ad hoc networking. Last year, Vanderbilt's ISIS research lab received about $25 million in funding, about two-thirds of which came from DARPA and the Defense Department, Schmidt said.

"DARPA's big goal is to bridge the gap between fundamental research — crazy pie in the sky stuff — and the needs of the warfighter. They work to demonstrate the feasibility of technologies," Schmidt said. SP

Source: Vanderbilt University

Florida University research on reducing waste in military meals

University of Florida (UF) Researcher Jeffrey Brecht is leading a team of scientists working to eliminate waste and streamline the process of distributing the US Army's legendary Meal, Ready-to-Eat (MREs). In a five-year, $6.7 million study, Brecht, the Director of the UF Institute of Food and Agricultural Sciences' Research Center for Food Distribution and Retailing, and colleagues tested the longevity of MREs, along with First Strike Rations (FSRs) for front-line troops, including Special Forces.

"These rations were originally developed with a shelf life of three years for MREs and two years for FSRs – but at 80 degrees," Brecht explained. "However, when they send them to the Middle East, they could be exposed to temperatures as high as 140 degrees, at which point the shelf life could be 4 weeks or less, instead of the three years."

That degradation, Brecht said, costs the US military millions of dollars a year in lost rations.

They also developed a temperature-monitoring system that relies on radio frequency identification (RFID) technology for wireless information transfer, which allows for remote monitoring and prediction of remaining shelf life for rations and perishable products.

The research shows that the RFID system can facilitate smarter decision-making at all points in the MRE supply chain in terms of which rations should be discarded, which should be shipped first, and where rations can be shipped with confidence that quality won't suffer when they arrive.

Former UF Professor Jean Pierre Emond and Ismail Uysal, an Assistant Professor at the University of South Florida who was a post-doctoral associate at UF at the start of the project, helped develop the RFID system, while fellow researcher and UF Professor Charlie Sims provided the sensory data to develop the shelf-life prediction model, and verified that the system works.

"This research provides a system to insure that military rations delivered to our soldiers around the world will have good quality," Sims said. "This system will enable the military to predict the quality or shelf life left in a food after being stored under any condition."

Former UF Assistant Professor Cecilia Nunes, now on the faculty at the University of South Florida, measured the physical and chemical changes in the rations at the different storage temperatures, including the colour and texture, the water content, and the taste-related and nutritional composition. Extending the shelf life and how to best handle fresh fruits and vegetables were also tested.

These aren't your granddad's combat rations, eaten in the villages around Saigon. Out of 30 days of complete menus, the menu items tested include: bacon cheddar sandwiches, filled french toast, honey BBQ sandwiches, Italian-style sandwiches, carbohydrate-enhanced applesauce, beef ravioli in meat sauce, nut raisin mix, chipotle snack bread, and pork sausage in cream gravy.

Each year, the US Army's Combat Feeding Directorate at the Natick Soldier Research, Development and Engineering Center in Massachusetts develops, tests and evaluates new items for all operational rations designed to optimise the cognitive and physical performance of warfighters, while addressing the military's unique constraints. The Defense Logistics Agency buys approximately 30 million MREs annually for all of the US armed forces, said Joseph Zanchi, a logistics management specialist at the centre.

"These efforts, when effectively integrated within the supply chain, can help ensure that warfighters continue to receive high quality, highly acceptable rations with minimal product losses," Zanchi said. He added that the MREs meet the Army Surgeon General's strict requirements for nutrition in operational rations, providing about 1,300 calories, composed of 169 grams of carbohydrates, 41 grams of protein, and 50 grams of fat – the requirements are much different from those suggested for civilians. SP

Source: University of Florida

PHOTOGRAPH: Wikipedia

Amanda Seyfried and her Swiss knife

American actress, singer and model Amanda Seyfried took to Twitter recently sharing a picture of her Swiss Army knife which she unknowingly took on a flight with her after she forgot about having it in her possession and it went undetected by security.

Posting her snap of the knife, Amanda hit out at the Transportation Security Administration and wrote: 'Dear TSA: This Swiss Army knife wasn't detected through security and I unknowingly carried it on board. Scary!' Comments from her Twitter followers were largely full of shock and terror including 'Oh My Gosh' and 'I'm scared'. SP

Inmate's escape from Twin Towers

A security lapse at the Twin Towers Correctional Facility in downtown Los Angeles that helped allow an inmate to escape earlier this week has been rectified. The inmate, 37-year-old Christopher Lee Brown, remained at large for days, after he walked out of the inmate release area. He had been sentenced earlier in the day to four years, eight months in jail after being convicted of burglary and identity theft.

Authorities said they believe Brown impersonated another inmate as part of his effort to escape. He was discovered missing during an inmate count that night.

"As a result of the inmate's actions, and that it appears that mandated security practices may not have been followed, the inmate was able to escape through the jail Inmate Reception Center release area door," said Los Angeles County Sheriff's Captain Mike Parker. SP

Mystery of Malaysia Airlines

The mystery of what happened to Malaysia Airlines Flight MH370 continues to deepen, with claims of a past cockpit security breach by one of the pilots cropping up now and adding to the theories floating. An Australian news programme had mentioned about the security breach involving the co-pilot of the airline.

The claim came as military data revealed the missing plane had changed course and made it to the Malacca Strait—hundreds of kilometres from the last position recorded by civilian authorities.

Adding another question mark to the flight's disappearance was the allegation by the Channel Nine network that the First Officer Fariq Abdul Hamid, 27, had, along with another pilot, violated airline rules in 2011 by allowing two young South African women into their cockpit during a flight.

The report included photos of the women in the cockpit, with one appearing to show them posing with a man resembling Fariq. It is claimed the breach took place during a one-hour flight from the Thai beach resort of Phuket to Kuala Lumpur, Malaysia's capital.

"Malaysia Airlines has become aware of the allegations being made against First Officer Fariq Abdul Hamid which we take very seriously. We are shocked by these allegations," a statement by the airline said.

"We have not been able to confirm the validity of the pictures and videos of the alleged incident. As you are aware, we are in the midst of a crisis, and we do not want our attention to be diverted," the airline said. SP

Teenager scales IGI airport

A 16-year-old boy recently scaled the Indira Gandhi International (IGI) airport boundary near Kapashera Crossing in the wee hours and took a half-hour jog along an active runway before he was spotted. The perimeter intrusion detection system (PIDS) installed at the IGI airport reportedly didn't work when the boy sneaked in.

The CISF is asking the Delhi International Airport Limited (DIAL) to rectify the errors in the PIDS. Explaining the flaws in the PIDS, an official said, "CCTVs installed at the airport show poor picture. Due to poor lighting and inactive cameras, we are unable to use the anti-intruder system. At least 10 times, we have apprised the DIAL of the problem, but the authority rectified the issues temporarily".

The boy's interrogation had revealed that he is mentally challeged, but he had managed to give some details about his family which was then contacted. SP

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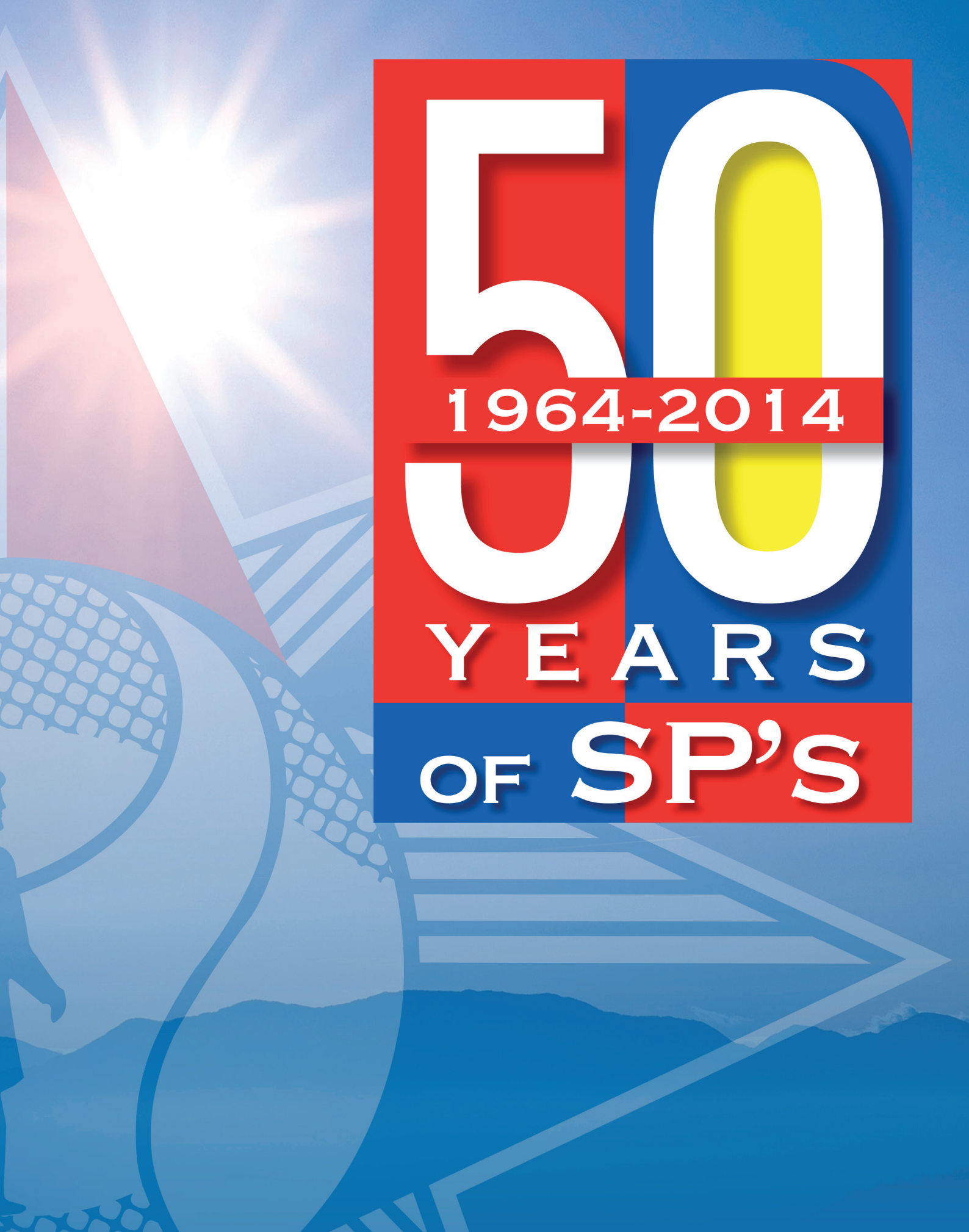
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